REVISING THE FORMAL, RETRIEVING THE HIDDEN:

UNDERGRADUATE CURRICULAR REFORM IN MEDICINE AND THE
SCIENTIFIC, INSTITUTIONAL, & SOCIAL TRANSFORMATION OF THE CLINICAL TRAINING ENVIRONMENT

by

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ABSTRACT

In 2004, members of the McGill University Faculty of Medicine began implementing a new curriculum for undergraduate medical education entitled, *Physicianship: The Physician as Professional and Healer.* The initiative underscores the idea that physician training entails cultivating not only scientific knowledge and technical skill, but a mindset guided by intrinsic principles of doctoring. Although the McGill case exemplifies a wide-spread paradigm shift in medical teaching, there is a dearth of analysis concerning the degree of congruency between the objectives of formal undergraduate curricular revision and the so-called 'hidden curriculum' of the hospital training environment. With Physicianship as a point of departure, this dissertation maps evolutionary patterns in clinical medicine and, using qualitative methods, analyzes the perspectives of twenty physician-educators on curricular reform and the transforming clinical training environment.

Physicians interviewed were generally supportive of the new curricular initiative. Concerns were raised, however, that many recent changes within the teaching hospital environment interfere with students' cultivation of professional and healer attributes. These changes were organized into three main themes: scientific, institutional, and social. Physicians expressed concern that what is often considered beneficial for patients is often detrimental for medical training. For example, increased use of diagnostic technologies has improved patient care but reduces opportunities for trainees' clinical skill development. Concern was raised that the concept of selfless service has been undermined through recent shift-work regulations and a culture gap between older and younger generation physicians. Alternatively, some perceived new policies of the clinical environment to be more conducive to physicians' self-care and quality of life. Younger trainees were often described as more competent in managing medical information, more open to diversity, more candid about their needs, and more apt to challenge dogmatic or ethically substandard practices.

The complexity of the transforming clinical environment is used to justify a rationale for developing the concept of Phronesis (practical wisdom) as a pedagogical framework. The concepts of 'acuity of perception' and 'mastery of emotion' are grounded in the data and analyzed for the development of Phronesis, to advance the field of medical education and support curricular initiatives such as the Physicianship program.

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CHAPTER ONE: INTRODUCTION

The overarching structure of undergraduate medical training is based on a curricular blueprint drafted almost one hundred years ago (Flexner, 1910). Considered by many as the founder of modern medical education, Flexner standardized medical education in North America and adapted medical school curricula to better integrate the scientific revolutions of the early 1900s. From his vision emerged the contemporary medical curriculum: a four year, scientifically oriented, university affiliated program divided into two pre-clinical years in classroom and laboratory, and two clinical years of hospital-based training.

Members of the medical profession are increasingly of the opinion that Flexner's blueprint for training doctors is challenged by the changing demands of contemporary clinical practice (Boudreau, Cassell, & Fuks, 2007; Dornan, 2005). They argue that the scientific, institutional, and social developments of the 20th century necessitate review and revision of the traditional training structure. These developments include the expansion and specialization of scientific knowledge; the development and increased use of medical technologies; the social and cultural changes within the medical profession and the public sphere; the growth of bureaucratic, political, and institutional infrastructures affecting healthcare; and an array of academic and popular critiques of medicine's philosophical foundation and practical application. Reiser and Rosen (1984) write:

> Once upon a time, being a doctor must have seemed easier. Now it is more difficult than ever. The onslaught of new information at all levels of the systems hierarchy has accelerated at an astonishing rate. These are not trivial advances but major new trends, fundamental and far-reaching discoveries that the doctor must integrate and understand (p. 33).

This dissertation comprises research investigating factors altering the contemporary clinical context and undergraduate medical training. The objective is to organize evidence from academic literature and empirical research to facilitate theory development in medical pedagogy and curriculum reform.

Three main questions guide the research:

a) What are the multifarious factors involved in the movement for reforming medical education?
b) What framework best describes the evolution in thinking about physician training and the approach to doctoring?
c) What concepts, ideas and theories can enhance the structure of undergraduate medical programs, given the insightful critiques of biomedicine and traditional medical pedagogy of the past century?

The research goals are also three-fold:

a) To communicate theoretical insight into the nature of medical practice and training from medical education, sociology, and humanities literature;
b) To interview twenty clinician-educators using qualitative research methods and to analyze their perceptions on curricular renewal and the changing scientific, institutional, and social factors that impact medical training;
c) To develop ideas to further curriculum development given the realities of the evolving clinical paradigm.

Background of the Author

My interest in this research area first arose in 1996, during graduate coursework at the School of Health Education, Dalhousie University. I discovered then that, particularly since the 1970s, a paradigm shift was taking place in the health sector which involved redefining the concept of health. A significant development to that end occurred in 1986, when the World Health Organization co-sponsored the First International Conference on Health Promotion in Ottawa, Canada. From that conference emerged a highly influential document entitled, *The Ottawa Charter,* which defined health in terms outside the traditional biomedical perspective:

> Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the

> responsibility of the health sector, but goes beyond healthy life-styles to well-being (World Health Organization, 1986).

The endorsement of the health promotion concept at an international level signalled a widespread departure from the traditional approach defining health as the absence of disease. Under the revised framework, assessing health required an understanding of 'the interactions and relationships of individuals with the social, cultural, economic, and physical environments within which they conduct their everyday lives' (LaFaille & Fulder, 1993, p. xi).

My initial Master's thesis proposal was a qualitative study to investigate the perception of physicians on their role in health education, health promotion, and disease prevention. The premise was to understand how the health promotion movement had impacted medical practice given the fact that the structure of medical training has developed from an older and more positivist paradigm defining health and disease. The research proposal was never actualized due to anticipated barriers in accessing the physician population at that time.

However, since graduating from a Master of Arts in Health Education in 1998, I have been working in the field of undergraduate medical education and gaining invaluable experiences for the current dissertation research. For six years beginning in 1999, I was employed by the University of British Columbia (UBC) Faculty of Medicine to assist in their undergraduate training program. My task was to act as a weekly group facilitator and follow a cohort of eight students over two years in a newly implemented course entitled, *Doctor, Patient, and Society*. The course provided students a forum to explore the broad social, cultural, political, institutional, and economic aspects of health, illness and medical practice. On a weekly basis I attended lecture hall presentations and facilitated small group discussions to help students focus on and delve further into the various topics concerning the broad determinants of health. During that time, I was also hired as an invigilator for the mandatory Objective Structured Clinical Exams (OSCE) for UBC medical students. In these exams, various stations were set up to test medical students on clinical skills building through their interactions with mock-patients in a simulated clinical encounter. The students were typically asked to take a medical history, conduct a physical exam, or address a socially or ethically challenging situation. I was assigned to the ethics stations and evaluated their performance according to preset criteria.

In July 2004, I began work at the McGill University Faculty of Medicine. At that time, the medical school had recently implemented a new undergraduate component to their curriculum entitled, *Physicianship: Physician as Professional and Healer.* I was hired through the Office of Curriculum Development to conduct qualitative research with patients at the McGill University Hospital Centre (MUHC) on their ideas and recommendations for enhancing medical training. Fifty-eight patients in seventeen hospital units of the MUHC were consulted in that study. My involvement in the project was the immediate precursor to this dissertation and served as a major source of information and inspiration.

Background Study:
Patients' Perspective on the Physician as Professional and Healer

In early 2004, the McGill University Faculty of Medicine released a task force report on curriculum reform. The document included a set of twenty-three recommendations for updating the undergraduate medical course base (McGill University Task-Force Report, 2004, p. 20). The report proposed that a new curricular component entitled, 'Physicianship: Physician as Healer and Professional' be developed to replace a number of old courses and to add new aspects to the existing curriculum. The report proposed the development or revision of educational objectives in areas such as the patient-physician relationship, professionalism, ethics, cultural competence, communication skills, the medical interview, physical examination, and healing. The integration of a longitudinal approach to evaluating students' professional and self-reflexive behaviours was recommended. The importance of teaching professionalism and healing through the framework of the clinical method was also stressed.

The report identified numerous factors creating an impetus for curricular reform. First cited was an accreditation report from the Liaison Committee on Medical Education (LCME), a North American accrediting authority for medical education programs. The LCME evaluated the McGill undergraduate medical program in the year 2000 and noted that the curriculum lacked programming which addressed ethical, spiritual, and economic issues in medicine. The report also identified a number of social, professional, institutional, and pedagogic imperatives for change. The most important factors identified were:

a) The changing topography of health care delivery, especially the shift from in-patient to ambulatory care settings;
b) A shift in disease epidemiology from acute illness to chronic diseases & disability;
c) The rapid expansion and development of medical technologies;
d) Changing dynamics in doctor-patient relationships.

A number of influences, external to the profession, were also identified. The report indicated that many organizations had been urging the medical profession to renew its commitment to professional values such as social responsibility and advocacy. Also acknowledged was the concern that medical education often 'diminished many of the attributes and values associated with good doctoring, for example, compassion, reflexivity, curiosity, altruism, self-effacement, and social responsibility.' The report cited studies suggesting that the public has been increasingly choosing alternative and complementary therapies over standard medical therapies and that patient complaints against doctors are often rooted in patient perceptions of the treating physicians as lacking in empathy, not listening, and treating the illness rather than treating the person. Finally, the report suggested that a concerted effort be made to understand the perspective of the main stakeholders in medical education: the patients, students, and teachers (Task-Force Report, 2004, page 30).

In accordance with the task force report, a steering committee was struck to guide a research project investigating the perspective of patients on these issues. The project was entitled "Soliciting the Patient's Perspective on the Physician as Professional and Healer" and was guided by an interdisciplinary steering committee of four McGill faculty members with backgrounds in Medicine, Education, Psychology, and Medical Anthropology. I was hired as the research assistant for the study to assist in aspects of the study design, implementation, data collection, analysis, and publication.

Patients were asked to describe what it means to be healthy and ill, and to provide personal examples of positive and negative experiences with medical care. They were asked to define the concepts of 'professional and profession' and 'healer and healing.' Other questions solicited their thoughts on what doctors should always/never do with patients; their advice and recommendations for students in medical training; and to respond to the metaphor: the body is a machine and the doctor's role is to fix that

machine when it breaks down. (For the complete interview script, see Appendix A). Data collection took place from September 2005-May 2006. A summary of relevant findings from the study is detailed below. A complete description of the study can be found elsewhere (Boudreau, Jagosh, Slee, MacDonald, & Steinert, 2008).

Patient Perspectives Study Findings

Concerning patient perspectives on teaching medical students under the new educational banner, 'Physicianship: Physician as Professional and Healer,' the majority of patients were in favour of the idea and were encouraged by the curricular renewal efforts. Some participants had negative associations with the key curricular terms 'professional' and 'healer'. For example, some patients did not respond positively to the idea of the physician as a 'professional' because it inferred a style of doctoring that is cold, distant, and clinical. Some patients did not respond positively to the concept of the physician as a 'healer' because to them it meant someone who is 'a quack' or 'a charlatan' rather than a medical doctor. Despite the negative associations some patients ascribed to the labels, there was overarching resonance between how patients described their vision of an ideal doctor and the professional/healer model developed by members of the medical faculty at McGill University (see appendix B). Patients described good doctoring as offering humanized, respectful, honest, and competent care. They spoke at length about the need for partnership between doctors and patients; the importance of communication between doctors and the health care team (some patients included themselves on that team); the need for the doctor to establish rapport with patients; the need for doctors to be technically and medically competent, as well as responsive to patients' individual needs. Patients commented about the changing nature of the doctor-patient relationship: that with the advent of the internet and easy access to health information, gone are the days when the doctor was considered to have all the knowledge and the patient's role was to obey orders. Numerous patients described the doctor-patient relationship in terms of sharing: the patient sharing personal information with the doctor and the doctor sharing medical information with the patient. Solutions are to be derived from the integration of these knowledge bases. Juxtaposing multiple patient voices, a theme emerged concerning the balancing between opposite or diverse physician attributes. For example, patients wanted doctors to have the right balance of attributes -- not to be professional to the point of being cold and emotionless but at the same time not to coddle patients or act as though the medical encounter is only about the patient and his or her personality.

Patients commented that the medical encounter has to be both about the disease and about the person with the disease.

Of all the desired physician attributes, the ability to listen was the most frequently identified quality among patients. Numerous reasons were given as to why listening was crucial. Patients said that attentive listening by the doctor demonstrates empathy and understanding; that listening speeds up the healing process; that listening to the patient is half the cure because it relieves fear and mental stress. One participant remarked that to be listened to by a doctor encourages patients to take control of their health, because prioritizing the patient's perspective on their health motivates them to take care of themselves. On a pragmatic level, patients stated that doctors need to listen to obtain vital information for medical decision making. One patient commented that observing that the doctor is listening attentively means greater assurance that the illness has been properly diagnosed, and as a result, increases patient compliance with prescriptions and other treatments.

Although patients identified listening as a priority attribute, very little data emerged about how to teach listening and other personal attributes that patients sought in physicians. Participants commented that good physicians were good because they were born that way or had good upbringings. These participants were skeptical that an undergraduate training program could make much change in that regard. Other participants were more optimistic about the potential for personal and professional development through training.

The perspective acquired through my involvement in this study brought further insight to my pre-existing interest in studying the juxtaposition of biomedical and health promotion models of health and illness. The concept of health in the medical domain is changing. It bears increasing resemblance to the health promotion model of health. However, medicine at its core is still a system of health knowledge based on the centrality of the concept of health as the absence of disease. This biomedical conception of health is not universally contested by patients. What is contested is the apparent effect of training physicians from the biomedical perspective on health and illness, which impact on physicians' clinical performance related to professional conduct, healing, and the doctor-patient relationship. The research with patients demonstrates that there is a need for medical educators to teach from an understanding of the dramatic shift in the

nature of the relationship between doctors and patients that has occurred in recent decades.

Clinician-Educator Perspectives on the Physicianship Program and Curricular Reform

The qualitative research component of this dissertation was developed from the findings of the patients' perspective study. It was a continuation of the multi-phase research process of consulting the main stakeholders in medical education (patients, teachers, and students) on the new curriculum reform initiatives at McGill University. Thus a substantial amount of interview time was allocated to discussing issues pertaining to the McGill medical context. Participants for the study were recruited through contacts established by the Director of the Physicianship program, Dr. Donald Boudreau, as well as a few by word of mouth. Twenty physicians were recruited, ten men and ten women. The sample included a range of years of career experience, from less than ten to more than forty. Ten participants had no involvement with the Physicianship program, while the other ten had various degrees of involvement from curriculum development to teaching and mentoring. Four main research questions guided the development of the interview script (for interview script see appendix D and appendix E). These questions were:

a) What relevance do the concepts 'professional' and 'healer' have to physicians, the practice of medicine, and medical training?
b) What do clinician-educators have to say about the importance of 'listening to the patient' in clinical encounters with patients?
c) What do physician-educators identify as critical factors that facilitate or hinder the establishment of healthy doctor-patient relationships, given numerous scientific, technological, institutional, and social factors that are changing the nature of medical practice?
d) What aspects of medical training provide the foundation for excellence in medicine?

The empirical component to the dissertation served as a foundation upon which I have furthered my comprehension of the critiques of modern medicine. It has also elucidated perspectives on health and illness that can provide ideas for dealing with the numerous

philosophical and ethical dilemmas in contemporary medicine. The details of these findings can be found in Chapters four to six.

The dissertation is laid out in the following way: Chapter two introduces a framework to understand how medical science and practice have evolved over time. This involves a major literature review of philosophical and practical challenges to clinical thinking and biomedical practice. Chapter three is a presentation of a literature review on key concepts for the development of the Physicianship curriculum in undergraduate medical training programs. In chapters four and five I present a thematic analysis of the qualitative interviews with twenty clinician-educators. The data set is organized in five sections. They are:

a) Impacts of scientific advancements in medical training;
b) Institutional factors affecting medical training;
c) Social factors in medical training;
d) The Physicianship Program, curriculum development, and medical pedagogy;
e) The cultivation of Phronesis (practical wisdom) and self-development during medical training

Chapter five, Revisiting Phronesis, is focused on building a theoretical framework to support the Physicianship model. Chapter six is a synthesis, summary, and conclusion of the dissertation.

CHAPTER TWO:
AN EVOLUTION IN CLINICAL THINKING

The Clinical Method Concept in Transition

The central framework around which the physician gathers information about patients and organizes his or her clinical thought process is called the clinical method. This framework explains the procedure for retrieving, documenting, and analyzing the necessary information concerning the patient's health, illness, or reason for consultation. A background paper to the McGill Physicianship program defines the clinical method as "the process by which the physician establishes patient-physician rapport; gets to know the patient; gathers information and works with that information to arrive at a diagnosis; determines the patient's goals and the values at stake; plans for treatment; estimates a prognosis; and reports the data' (Cassell & Boudreau, 2004, p. 3). These authors compared their definition to a definition written forty years prior, from an influential textbook entitled, *The Clinical Approach to the Patient* (Morgan & Engel, 1969). Clinical methodology therein was defined as 'the steps used to acquire, analyze, and report clinical data derived from the patient' (Cassell & Boudreau, p. 3).

Comparing the older and newer definitions reveals a significant conceptual shift in thinking about the doctor's role. The traditional definition directs the physician to work as a clinical scientist. The scientist observes and translates the patient's mental and physical state into reductive derivations and facts that are then used to decide the course of diagnosis and treatment. In this paradigm, the patient's narration, emotion, mood, and body language remain largely outside the scope of that which is considered useable clinical data. The newer definition proposes a model requiring the physician to engage the clinical method at the level of the patient's subjective experience, which then incorporates the patient in the clinical decision-making process. The newer approach directs the physician to the dual nature of doctoring, involving the cultivation of both *scientific* and *social* competencies in training. Both the old and new definitions demonstrate the need for competency in scientific thinking, to which medical training is already oriented. Only the new definition, particularly the components involved in 'establishing patient-physician rapport', 'getting to know the patient', and 'determining

the patient's goals and values at stake' demonstrate the need for trainees to develop social relatability.

The juxtaposition of the older and newer definitions of clinical methodology is exemplified in the following anecdote by physician and medical philosopher, George Engel, who accompanied a colleague to a patient's bedside. He writes:

> A middle-aged woman with a history of intermittent drinking and fatty liver had been abstemious for several years. She had been feeling relatively well until 6 weeks before admission when anorexia, fatigability, weakness, and loss of pep and interest abruptly developed. Her physician concurred with her concern that perhaps her liver trouble had flared up; he admitted her to the hospital for liver studies including biopsy.
>
> All the laboratory findings proved unremarkable, and her doctor was now coming to report the results of the biopsy. As a visitor I was accompanying my host on his morning rounds. Approaching the bedside together, he gave me a thumbnail sketch of the case, adding: 'I am sure she will be glad to know the outcome of the liver biopsy.' He greeted her with a cheerful smile and wave of his hand saying, 'Good news, Mrs. Jones, the biopsy shows only a *little* fat in the liver, so you can leave the hospital in the morning. I'm sure you'll be glad to get home to your family.
>
> The patient smiled faintly but said nothing as the doctor began to efficiently palpate her abdomen while asking, 'And how *are* you today?' After momentary hesitation she responded rather wanly, 'Pretty good, I guess,' at the same time frowning slightly and raising, then letting fall, her right hand in a gesture of helplessness.
>
> 'Good,' said the doctor, 'I'm glad to hear that,' and walked out of the room with a smile.
>
> The patient looked so disconsolate that I lingered behind, commenting, 'you don't seem so happy about this.' She burst into tears. Encouraged by my interest, she readily reported that the anorexia, fatigability, weakness, and decrease in energy had begun abruptly when she learned that her husband of 25 years was leaving her for another woman. She acknowledged feeling rejected, hurt, but denied that she had resumed drinking. She had hoped to be able to share this information with her doctor, but, she claimed, he gave her no opportunity. When I subsequently inquired of him, he expressed surprise at the information and amazement at how readily she had expressed it to me. (Engel, 1984, p. 63).

The passage exemplifies the narrow parameters of the older approach to clinical methodology, which excludes the subjective and contextual aspects of the patient and her illness. Within these narrow parameters, the physician had initially considered his approach successful in acquiring, analyzing, and reporting the clinical data derived from the patient. Yet by the standards of the newer definition, he failed to establish rapport, get to know the patient, and understand her goals and values at stake. What the anecdote demonstrates is that the rationale behind the revision of clinical methodology involves more than the issue of treating patients with respect. That is certainly one goal. Moreover, as in this example, information derived from the patient through the bonding process is demonstrated to be vital to the direction of subsequent diagnoses and treatments. Had his clinical methodology been structured to encourage the patient to disclose her personal turmoil about the breakdown of her marriage, that conversation could have altered the decision for biopsy testing or other courses of clinical intervention. What this suggests is that the paradigm shift in medical education today has a main characteristic of emphasizing the importance of cultivating social know-how in order to connect with patients, within the expanded framework for clinical data gathering. The movements promoting professionalism and healing education are associated with this conceptual shift.

The Evolutionary Pattern in Medicine

> The theory and practice of medicine is strongly influenced in any era by the dominant theory of knowledge and by societal values. Medicine is always a child of its time (McWhinney, 2003, p. 17).

The conceptual transition of the clinical method is but one example of larger-scale paradigmatic shifting taking place in the field of medicine. Understanding the evolutionary pattern by which the paradigm shifts is the key to understanding how medical education should be reformed. This pattern can be broken down into various determinants. For example, it could be said that the emergence of new paradigms of doctoring is the result of the interplay between scientific, institutional, and social factors that influence clinical practice. Thomas Kuhn's theory concerning patterns of scientific change can offer insight into this process (Kuhn, 1970). According to Kuhn, once a paradigm is established and accepted by members of a given scientific or professional community, its implicit rules remain intact and resistant to change until they produce undesired, unexpected, unintended or anomalous findings or consequences. He writes,

> Normal science can proceed without rules so long as the relevant scientific community accepts without question the particular problem-solutions already achieved. Rules should therefore become important and the characteristic unconcern about them should vanish whenever paradigms or models are felt to be insecure (Kuhn, p. 47).

Although Kuhn was making reference primarily to basic sciences such as physics and chemistry, his idea of the concern over 'rules' during periods of 'paradigmatic insecurity' is particularly useful in understanding the development of the clinical application of medicine. Kuhn defines the concept of paradigm as 'the coherent tradition of research that spring from a particular set of laws, theories, applications and instrumentations' (p. 10). Periods of paradigmatic security create what Kuhn calls 'normative periods' in a given profession's history. As scientific progress advances under undisrupted conditions, the materials and culture of the practice advance and the profession becomes increasingly resistant to change. Counter-intuitive as it may appear, Kuhn argues that this resistance to change is necessary so that the appearance of anomalies can push the system into evolution. He writes,

> The construction of elaborate equipment, the development of an esoteric vocabulary and skills, and a refinement of concepts that increasingly lessens their resemblance to their usual common-sense prototypes -- that professionalism leads, on the one hand, to an immense restriction of the scientist's vision and to a considerable resistance to paradigm change...By ensuring that the paradigm will not be too easily surrendered, resistance guarantees that scientists will not be lightly distracted and that the anomalies that lead to paradigm change will penetrate existing knowledge to the core (p. 64).

Kuhn observed that anomalies inevitably arise at some point during stable conditions of progress. Anomalies are observations, results and findings that challenge the rules of the existing paradigm. They may be mysterious, surprising, or unexplainable. Kuhn states, 'awareness of anomaly...[is] the recognition that nature has somehow violated the paradigm-induced expectations that govern normal science' (p. 52). Initially held suspect, anomalous cases eventually bring into view the implicit rules of the practice. Once made explicit, the rules are altered, the paradigm shifts, and practices are re-established in such a manner that those anomalous cases are subsequently subsumed as normative scientific finding.

Kuhn noted that the initial characteristic of a paradigm shift is the observation, reflection and debate over the basic assumptions of its practice. The anecdote provided by George

Engel in the preceding section exemplifies the emergence of anomaly and paradigm shift in clinical medicine. The anomaly in the anecdote was the discovery by the attending physician that the accepted, standard, reified approach to clinical data gathering failed to achieve an appropriate level of patient care and patient satisfaction. From the collective witnessing of this kind of anomaly by members of the medical profession over a long period of time has emerged a significant movement to observe, reflect, and debate the basic assumptions underlying clinical practice.

For Kuhn, witnessing anomaly in physics and chemistry was an activity limited to the community of relevant scientists -- an isolated event in the laboratory and in relative distance from the social world. By contrast, anomalies of the clinical paradigm are not only observed by physicians, but also by other health care professionals, administrators, patients and their family members, community groups and the media. It is the identification of anomalies by all of these stakeholders that has created the impetus to transform the clinical method and explicate the roles of doctoring.

Social theorists have articulated an inherent struggle in medicine which propels the system to evolve. Mishler (1990), for example, calls this the struggle between the voice of medicine and the voice of the life world. Similarly, Parsons (1951) identifies characteristics of medicine that create tensions to which there is constant seeking of solutions. He writes,

> The engineer deals primarily with non-human impersonal materials which do not have 'emotional' reactions to what he does to them. But the physician deals with human beings, and does so in situations which often involves 'intimacies,' that is, in contexts which are strongly charged with emotional and expressively symbolic significance, and which are often considered peculiarly 'private' to the individual himself [or herself] (p. 451).

The intense, emotionally charged, and intimate nature of clinical activity creates struggle that is unique to medical practice. Parsons explains this as instances when physicians conclude an illness to be incurable, when uncertainty prevails in situations in which there is strong emotional interest in success, and through the privilege of having intimate access and knowledge of the patient's body. Parsons suggests that these characteristics create the potential that clinical anomalies will arise that require 'a whole series of specific mechanisms [to be] developed...as ways of meeting the strains and overcoming the obstacles to effective practice' (p. 454).

Banuri's (1990) framework for the critique of modernity provides an added dimension to capture the complexity of 'anomaly', 'struggle' and 'tension' that characterize medicine's evolutionary impulse. Banuri identifies the co-existence of intellectual and social pressures throughout the social sphere that critique the principles of modern thinking. His framework can be applied to medicine. He writes,

> Internal critiques of modernization include: (1) *intra-paradigmatic* criticism, i.e. the questioning of the assumption and proposition of theories within the framework of a given paradigm; and (2) *inter-paradigmatic* debate, i.e. the criticism of writers in different disciplines who may share the world-view of the impugned paradigm though not all of its maintained assumptions. External or 'alternative' critiques, on the other hand, are resistant to assimilation into modernization theories because they reject the basic notions...implicit in such theories, particularly those deriving from a presumed superiority of Western values and institutions. These can either be purely (3) *intellectual* challenges to modernization, or examples of (4) *socio-political resistance* and protest, which undermine the certitudes of the regnant theories (p. 36).

Applied to medicine, Banuri's classification system is a framework encompassing the diversity of positions that have potential impact on the historical process of medical paradigmatic change. *Intra-paradigmatic* critique is the identification of anomalies from physicians through their immediate, firsthand experiences working with the clinical paradigm. *Inter-paradigmatic critiques* are voiced from three groups of people: (a) recipients of healthcare, who develop a critical perspective based on their experiences as patients, yet whose personal worldview is aligned with the underlying philosophy of treatment; (b) 'allied' professionals, whose work is outside the field of medicine but who share with physicians a similar institutional environment and philosophy on health and healthcare; and (c) humanities academics such as sociologists, anthropologists, historians, linguists, and philosophers, who develop intellectual critiques of medicine but share cultural beliefs and values that resonate with medical practice. *External critiques* are derived from the multicultural perspectives of practitioners and patients of numerous medical knowledge systems outside the modern medical paradigm, (e.g., naturopathic, humoral, homeopathic, Chinese traditions, etc.). Finally, *socio-political resistance and protest* can come from anywhere in the social system, but is characterized by an outright rejection of the fundamental procedures or tenets of the established medical tradition without necessarily ascribing to another. This includes for example, political protest by liberation movements against unequal access to healthcare or

counter-culture movements such as the 'mad pride' movement that protest against psychiatric institutionalization (Morrison, 2003; Burstow & Weitz, 1998).

The development of the medical industrial complex is one other major influence on the way medicine evolves. This factor incorporates the influences of 'hospitals, pharmacies, insurance companies, governmental departments, university faculties, the multinational pharmaceutical industry and national regulatory agencies' (Fabrega, 1997). Recently, increased attention has been paid to the role of institutional forces on doctoring. Nadelson (1996) for example, writes about the potential conflicts between obligations to patient welfare and institutional support structures. He writes,

> The covenant that has bound physicians to their patients even in the worst of circumstances is no longer as it was for the past generations. The changing structure of accountability and the pressures on physicians to attend to interests other than those of their patients is deeply disturbing and may have unintended repercussions for patients...A major dilemma for medicine, and society as a whole, is how to reconcile conflicting expectations of physicians. The role of public advocate is not the same as that of patient advocate. Just as a lawyer cannot argue both for the defense and the prosecution, a physician cannot advocate for patients and regulators or insurers simultaneously (p. 30).

Whereas the scientific and social factors causing anomaly are typically visible in the physician-patient encounter, institutional factors remain largely unseen. Taking for example the anecdote by Engel in the preceding section, the physician's degree of competency in scientific thinking and social communication is apparent in his handling of the visit with the patient. More challenging to uncover is the extent to which institutional structures influenced his clinical thought process. Unless uncovered, various institutional factors including physician fee structures and the presence of pharmaceutical and medical technology industries in the medical context play an invisible role in shaping the parameters of the doctor's role. Thus, in addition to training for scientific and social competencies, medical trainees benefit from developing competencies that enable them to successfully navigate the array of institutional factors surrounding the clinical role.

The multifarious scientific, institutional, and social developments in medicine lead to the conclusion that medicine today is in a period of paradigmatic instability. The academic medical literature from the 1970s onward is replete with evidence that paradigmatic

insecurity and the accumulation of unresolved anomalies characterize the state of clinical medicine. Wulff, Pedersen, and Rosenburg (1986) write,

> The paradigmatic basis of clinical practice seems to be much less settled today than it was only a few decades ago, and although we shall not predict a Kuhnian revolution, it is justified to say that clinical medicine has entered a period of paradigmatic instability (p. 7).

For experimental medical science conducted in the laboratory, an established paradigm might last only a few years before an anomalous finding dissolves and re-establishes the rules of research. By contrast, the clinical application of medicine is much more resistant to change. Clinical medicine has not experienced a radical epistemological departure from its evolution throughout the course of a three hundred year period. Through its resistance to change, the kinds of anomaly witnessed today stimulate the explication of the deepest aspects of its epistemology. The benefit, as Kuhn suggests, is that the greater the resistance to change, the more profoundly the accumulation of anomalies will have their effect. Whether this accumulation will eventually lead to what Greaves (2004) calls 'a new medical cosmology'[1] (p. 136), or whether anomalies will be accommodated by smaller paradigm shifts within the existing framework remains to be seen.

The Clinical Paradigm in Transition: From Dissociation to Re-construction

Necessary in uncovering the implicit rules of a given clinical tradition is making known the particular assumptions concerning the relationship between mind, body, and universe upon which it is based. The configuration of this triad is its medical cosmology and establishes the character of its clinical method and approach to the patient. I identify two distinct paradigms influencing the culture of a clinical tradition. The first is what I call the paradigm of dissociation in which all illnesses arising from physiological, psychological, and environmental factors are investigated and treated as though they are solely bodily manifestations of disease. The clinical method of this tradition is based on a search for disease etiology in the body and the displacement of the patient's emotional

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[1] Greaves suggests the concept of 'medical cosmology' might be more suited to understand medicine's evolution, pointing out that Kuhn's idea of 'paradigm' may not be adequate when conceptualizing modern medicine's three hundred year history. He writes, 'Kuhn described the historical replacement of one dominant paradigm by another in terms of 'paradigm shifts' which usually take place relatively rapidly (often in a period of a few years), whereas dominant cosmologies change much more slowly over decades and centuries'. (Greaves, 2004, p. 151)

state, suffering, and subjective life experience as factors in clinical data gathering. The second paradigm I call the *reconstructive paradigm* in which the dissociation approach is combined with an approach to treating the 'personhood' of the patient. Personhood is attended to for two purposes: (a) to take into account patients' subjective experience to enhance the accuracy and quality of diagnosis and treatment, and (b) to relieve the patients' psychological and existential suffering. The biopsychosocial model (Engel, 1977), the patient-centered clinical method (Stewart et al., 2003), narrative medicine (Charon, 2001) and Kearney's (2000) conception of medical (reductive) and healing (holistic) methods working simultaneously are examples of reconstructed clinical methodologies. The healing potential of the doctor-patient relationship is also deeply explored in these approaches. Using the dissociation and reconstructive paradigms as organizing categories, the remainder of this chapter maps an extensive medical philosophy literature review documenting historical, philosophical, and sociological perspectives of medicine as a system of knowledge and a professional practice. The purpose of presenting a diversity of perspectives is to clarify concepts related to the crisis of modern medicine and to support a theoretical perspective on medical system evolution.

Critiques of the Biomedical Model

Critiques of the biomedical model often involve the idea that medicine employs a 'mind-body dualism' and a 'reductionism' that preclude (or at least impede) the development of a clinical approach to healing. For example, Engel (1984) writes,

> As a scientific framework within which to elaborate the disordered bodily mechanisms involved in disease, the biomedical model has been extraordinarily fruitful. However, its underlying reductionism and dualism have served to deflect scientific attention from the more personal, human psychological, and social aspects of health and disease (p. 44).

Capra (1983) presents a similar argument:

> By concentrating on smaller and smaller fragments of the body, modern medicine often loses sight of the patient as a human being, and by reducing health to mechanical functioning, it is no longer able to deal with the phenomenon of healing. This is perhaps the most serious shortcoming of the biomedical approach. Although every practicing physician knows that healing is an essential aspect of all medicine, the phenomenon is considered outside the scientific framework; the term

"healer" is viewed with suspicion, and the concepts of health and healing are generally not discussed in medical schools (p. 124)

The criticism of biomedicine's philosophy of 'duality' and 'reduction' is in large part an explication of the negative repercussions of dissociating mental disposition from bodily affliction. Yet despite the clearly identified hazards of such an approach, the proposed alternatives remain underdeveloped. This is because these key concepts within the biomedical critique disorient the effort to reconstruct modern medicine in terms of a 'holistic' or systems-based approach. In other words, the critical discourse creates difficulties in making sense of the medical reform process involving ideas such as 'integrated medicine', 'wholeness' and 'healing.'

For example, the critique of biomedicine's dualistic treatment of the mind and the body leaves the question unanswered as to how better to conceive of the relationship between mind and body. Mind and body are not one and the same[2]. In fact, a more lucid perspective would suggest that the mind-body connection is naturally and inherently a dual-natured phenomenon, and the issue in understanding the challenges of medicine is to comprehend the extent to which a medical tradition aligns or dissociates the mind from the body. The key concept is not dualism but dissociation. Similarly, although the problem of the 'reductive' approach in biomedicine has been clearly identified in the structure of its clinical method, the critique is moot considering that all medical systems which involve a clinical method necessarily require some form of reduction. This point is demonstrated though a quotation from the empirical data collected for this study (for details concerning the empirical data, see Chapter Four). Arneault (pseudonym) described what could be considered the inescapable reality of reduction in clinical methodology. He states:

> [Person A]:We are going to go to a field, you and I, and it's going to be filled with growing things and I want you to tell me about this field. [Person B]: "Well, what do you mean? In what way? Because if you want me to tell you everything about that field, we will never leave there will we?" [Person A]: So this viewpoint about why people are sick and what diseases they have helps narrow down the perceptual field. Otherwise there is no end to it.

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[2] For example, the mind can be understood in terms of cognition (sensory function), recognition (interpretive function), reaction (emotion), and memory. The mental structure operates in tandem with the physical structure.

Arneault's image suggests that any method of clinical data gathering is subject to a process of reduction that, once achieved, enables the practitioner to proceed with relative efficiency in diagnosis and treatment. As such, reductionism per se is not the issue, but the nature of the reduction: what information is reduced and what is left out of the equation.

The Paradigm of Dissociation

Particularly since the early part of the 20th century, modern medicine has evolved into a system of knowledge in which health is conceptualized as the absence of disease and disease is conceived as the malfunctioning of mechanistic bodily functions. The drive to uproot disease is parallel with 'reductive' methods to uncover the smallest of bodily structures and organisms deemed responsible for pathology: organs, cells, genes, and molecules. The diverse critiques of the biomedical model have one characteristic in common: They all demonstrate the dissociation between elements of the medical knowledge system. Dissociation is exemplified in a number of ways. The mind is dissociated from the body; various bodily systems and structures are dissociated from each other; reductive health knowledge (e.g., knowledge of disease pathology) is dissociated from holistic concepts of health such as the concept of *vitality*; abstract concepts of disease are dissociated from subjective lived experiences of patients; and the body of biomedical science is dissociated from its philosophical underpinnings.

Engel (1984) demonstrates a key mode of dissociation of the biomedical approach, which is to treat health by subsuming mental and psychological factors into biological pathways. He writes,

> The biomedical model not only requires that disease be dealt with as an entity independent of social behaviour, it also demands that behavioural aberrations be explained on the basis of disordered somatic (biochemical or neuro-physiological) processes. Thus the biomedical model embraces both reductionism, the philosophic view that complex phenomena are ultimately derived from a single primary principle, and mind-body dualism, the doctrine that separates the mental from the somatic (p. 130).

Common efforts to understand how the dissociation of the mind and body emerged as a defining feature of biomedicine, often implicate René Descartes of 17th Century France. Yet a number of medical historians argue that the historical separation is not at all uni-factorial. Engel (1984) for example, suggests that mind-body separation was significantly facilitated through the support of the established Christian orthodoxy of the 17th century,

when Church leaders agreed to lift the prohibition against dissection of the human body provided that physicians agreed to limit their attention to the body and leave the soul, morals, mind, and behaviour to the Church. Other authors point out that Descartes himself was much less 'Cartesian' than the science that has evolved since his time. Capra (1983) states,

> The union of body and soul was the principal subject of [Descartes'] correspondence with one of his most brilliant disciples, Princess Elizabeth of Bohemia. Descartes did not hesitate to diagnose her affliction as being largely due to emotional stress, as we would say today, and to prescribe relaxation and meditation in addition to physical remedies. Thus Descartes showed himself to be far less 'Cartesian' than most of today's medical profession. (p. 127).

Greaves (2004) similarly states that the mind-body link in medical epistemology was actually broken long after Descartes. He states, 'vitalism and the spiritual dimension...gradually lost ground as more and more emphasis came to be placed on the mechanical, physical and biochemical dimension, until the link between them was finally broken in the second half of the nineteenth century through the rise of biomedical orthodoxy' (p. 13).

Capra (1983) and Reading (1977) discuss dissociation from another angle, which is that research was advanced by the favouring of investigations of disease processes rather than disease origins. Capra writes,

> The main error of the biomedical approach is the confusion of disease processes with disease origins. Instead of asking why an illness occurs, and trying to remove the conditions that lead to it, medical researchers try to understand the biological mechanisms through which the disease operates, so that they can then interfere with them (p. 150)...the origins of disease will generally be found in several causative factors that must concur to result in ill health. (p. 151).

With a similar idea, Reading (1977) suggests that the medical approach has traditionally remained an unexamined epistemology of reduction to disease pathology. He states:

> Much of the scientific enterprise [of medicine] has been built upon implicit, basic assumptions that have themselves never been subject to scientific scrutiny. Modern 'scientific' medicine, for instance, is based largely on a paradigm whose validity has been taken for granted over the years without question or examination. Simply stated: Illness is the result of disease and is best dealt with by treating the underlying disease (p. 705).

Other authors note that the primary focus on bodily health and disease at the expense of psychological, emotional or spiritual dimensions coincided with the dissociation of medicine from its philosophy and epistemology. Philosophical dissociation is documented by numerous authors. Svenaeus (2000), states,

> Medicine and philosophy enjoyed a rather close partnership until the emergence of modern medicine around 1800. What happened at that point can be envisaged as a radical *philosophectomy* in medicine. Philosophy is cut off as a useless and even dangerous speculative approach to questions of health and illness—questions which can only be answered through sober empirical research' (p. 4).

Similarly, Nandy and Visvanathan (1990) suggest that medicine's 'philosophectomy' meant that practices and beliefs of medical science were dissociated from healthy skepticisms and self-criticisms of previous traditions. They write,

> ...modern medicine, which was one of the last sciences to grow out of the traditional sciences in Europe and consolidate itself as a 'proper' science in the nineteenth century, was the first major system of healing to try to do away with this element of skepticism and self-criticism. Some amount of skepticism and criticism survived in the popular culture, but it did not easily translate into philosophical doubt within the system....once medicine became a positivist science, it also became philosophically and culturally less self-critical. (p. 147)

In tandem with philosophical dissociation, the rise of positivism (Giddens, 1975; Mises, 1951) in modern medicine has been identified as a barrier to cultivating the physician healer role. Positivism is an epistemological position that favours empirical evidence over philosophical grounding and was the basis through which the scientific method was developed. Numerous authors explain the positivist character of modern medicine. Leder (1990) writes,

> Medicine is frequently viewed through the lens of a positivist philosophy of science. The doctor is portrayed as an impartial investigator, who builds diagnoses via a process of induction and experimental verification (p. 9).

For Montgomery (2000), positivism in medical science is an outdated paradigm. She writes, 'the common understanding of 'science' in medicine is Newtonian, a relic of nineteenth-century positivism: the replicable and invariant description of physical reality' (p. 58). Montgomery is among many authors whose critique suggests that the

dissociative aspects of the biomedical tradition have had negative repercussions on practice, training and patient satisfaction. She writes:

> The assumption that medicine is a science—a positivist what-you-see-is-what-there-is representation of the physical world -- passes almost unexamined by physicians, patients, and society as a whole. The costs are great. It has led to harsh, often brutal education, unnecessarily impersonal clinical practice, dissatisfied patients, and disheartened physicians' (p. 6).

Another characteristic of the paradigm of dissociation has been identified as the division of abstract medical knowledge from particular subjective patient knowledge. Temkin (1963) writes:

> There is no science of the individual, and medicine suffers from a fundamental contradiction: its practice deals with the individual while its theory grasps universals only (p.635).

Temkin's theory suggests a two-fold character of sickness: it is at once the experience of illness as subjective knowing on the part of the patient, but it is also an abstracted interpretation linked to general categories of disease by outsiders to the experience. Temkin writes,

> When [persons] are ill, that is, when [they] feel disease, they have experiences which are partly their own, and partly open to others. This is their individual sickness which in exactly this particular form with all its details will never repeat itself in others or even in themselves. But the sick [person], his family, and neighbours, the physician, all will try to understand what is happening to him. ...Speaking of 'sickness or 'illness' or 'disease', we have introduced a conceptual denominator uniting many such individual events. The individual may not think of himself as being ill or diseased. But in labelling him, his friends, physician or society have classified his experience (p. 629).

The dissociation between the subjective experience of patient illness and the abstract, objectified nature of disease categorization is a major theme in the literature. Mount (2003) states, 'our patients come to us complaining, not of disease, but of their subjective experience of illness' (p. 40). Mishler (1981) identifies biomedicine as a separation of medical knowledge from social contexts of meaning. He states,

> The biomedical model strips away social contexts of meaning. Illness is then viewed as an autonomous entity, defined by standard universal criteria, isolated from the lives and experiences of patients and physicians (p. 2).

Svenaeus (2000) furthers this idea by suggesting that modern medicine lacks a systematic way to bridge the communication gap between medical knowledge and understanding of disease from the patients' perspective. He writes, 'even if experienced practitioners know that…medicine is not only science, but primarily dialogue and understanding, they presently lack a language for articulating this knowledge in a systematical way" (p. 5). Other authors theorize on the dichotomy between objective and subjective knowing. The solution for Baron (1985) is to reconfigure, or re-associate, the various elements that make up the dominant health model. He writes,

> A great gulf exists between the way we think about disease as physicians and the way we experience it as people. Much of this separation derives directly from our basic assumptions about what illness is. Our medical world view is rooted in an anatomicropathologic view of disease that precludes a rigorous understanding of the experience of illness. What we need to remedy this problem is not just the admonition to remember that patients are people, but a radical restructuring of what we take disease to be (p. 606).

Reading (1977) also contemplates the restructuring of the disease conception. From his perspective, disease and illness are two separate events that do not always coincide with each other. He writes,

> Illness tends to be used to refer to what is wrong with the patient, disease to what is wrong with the body. Illness is what patient[s] suffer from, what troubles [them], what [they] complain of, and what prompts [them] to seek medical attention. Illness refers to patients' experience of ill health. It comprises their impaired sense of well being, their perception that something is wrong with the body, and their various symptoms of pain, distress, and disablement. Disease, on the other hand, refers to various structural disorders of the individual's tissues and organs that give rise to the signs of ill-health. These are, for the most part, not accessible to patients and not experienced by them. Disease may thus exist for considerable periods of time without the patient knowing. Illness, in contrast, exists only by virtue of the patient's awareness of it (p. 704)

Accordingly, illness is a personal and subjective experience which is not always amenable to verification. Disease, on the other hand, affects the physical structure, and is 'potentially an objective and public event capable of consensual validation' (p. 704). Many authors point out the challenge of merging the subjectivity of illness with the standardized and abstracted concepts of disease of the mind-body dissociation model. McWhinney (2003), for example states,

> Abstraction gives us great predictive power and provides us with our taxonomic language. It enables us to apply our therapeutic technologies with precision: but it comes at a price. The power of generalization is gained by distancing ourselves from individual patients and all the particulars of their illness...If we are to be healers, we need to know our patients as individuals: they may have their diseases in common, but in their responses to disease, they are unique (McWhinney, 2003, p. 22).

Cassell (1997) also suggests that there is a contradiction between the 'kind of knowledge by which physicians know disease—the science of medicine, and the kind of knowledge by which they know and act on their patients as particular individuals' (p. 44). He argues that conflict arises due to the fact that medical and societal values uphold quantitative and measurable scientific systems of disease investigation and disparage the qualitative, non-measurable, and subjective requirements of knowing about people. The result is a style of practicing medicine by which the physician consciously or unconsciously sees the patient as a barrier rather than an asset in achieving medical success. He states

> ...Different, even contradictory kinds of thought are required of [physicians] when thinking about the science of medicine and thinking about the individual patient. In fact, knowledge of a particular patient is necessarily the exact opposite of scientific knowledge—the former being immediate and perceptual, and latter being a knowledge based on abstraction, and generality (p.45).

Cassell further stresses the importance of physicians bridging the gap between 'people knowledge' and scientific knowledge, given current disease trends:

> Knowledge of persons is particularly important today because what most clearly distinguishes chronic disease from acute disease is that it takes place over a long period of time, [such] that the nature of the person has an undeniable influence on the unfolding narrative of the disease and the disease influences the further development of the person (p. 82).

For Cassell, the confluence of the two knowledge bases--of disease and of people-- generates the capacity of the physician to effectively assist patients in prevention, diagnosis, treatment, and healing. Body and disease knowledge is primarily harnessed through medical training, medical texts, biomedical research, development of diagnostic and curative technologies, and media which publicly report on medical research. People knowledge develops through the experience of personal life events (including being a patient), studying humanities literature, engaging with patients in the clinical setting and

developing emotional awareness, empathy, and compassion. Disease knowledge is often characterized as factual, reductive, abstract, generalized, rational, and objective. Patient knowledge on the other hand is sensory based, holistic, context-bound, case specific, intuitive, and subjective. It requires the practitioner to develop skill at building rapport and communication, establishing an environment of comfort, trust and kindness to facilitate the communication necessary in gathering the psychological, spiritual, emotional, financial, and familial context of the disease. Patient knowledge requires the practitioner's development of a mental and sensory faculty capable of gathering and processing this information.

The Reconstructive Paradigm

> Neglect of the mind-body link by technological medicine is actually a brief aberration when viewed against the whole history of the healing arts." (Seigel 1986, p. 65).

> A shift is taking place in medicine away from a primary concern with diseases and toward a focus on sick persons (Cassell, 2004, p. 76).

Reconfiguring the biomedical model of health to integrate subjective patient experience with abstract disease knowledge has coincided with the re-introduction of philosophical studies in medicine. Philosophy makes explicit medicine's implicit rules and provides theory as to why medicine has simultaneously made significant advances in certain disease areas, but has failed in improving overall population health and solving disease problems of a chronic and degenerative nature. The paradox of medicine's success is articulated clearly by Wulff et al. (1986) who write:

> We have won the struggle against a large number of diseases, especially the infectious ones, but instead we are facing other health problems, especially degenerative diseases, malignant disease and the so-called psychosomatic disorders, which are much more difficult to treat and at present impossible to prevent. Anybody who follows the development of medicine will know that progress continues in a large number of fields, but at the same time it is impossible to suppress the suspicion that the major health problems of the day cannot be solved within the conventional framework of ideas....medical progress has not stopped but it seems to have lost its impetus, and an increasing number of doctors in many countries, who are worried about this state of affairs, are taking interest in the philosophical basis of medical thinking (p. 10).

In addition to the failure to address chronic, degenerative, and psychosomatic conditions, the authors also note that the dualisms in modern medicine preclude the physician's capacity to relieve suffering and engender healing. Cassell (2004) writes, 'attempting to understand what suffering is and how physicians might truly be devoted to its relief will require that medicine and its critics overcome the traditional dichotomy between mind and body, subjective and objective, and person and object" (p. 31). Given these critiques, numerous approaches have been undertaken to reconstruct the clinical paradigm.

Despite the debate over how clinical medicine should be reconstructed, what is certain is that the framework of modern medicine conceiving the relationship between health, disease, the body, the person, and his/her environment has remained intact over a three-hundred-year period. At the same time, elements of the system have evolved. In the absence of a radical break in epistemology, medicine has recently developed into a system which layers an interpretive-philosophical framework on top of its traditional positivist approach. The new medical reform initiatives involve educating on the role and relevance of professionalism and healing and adopting revised models of clinical methodology including patient-centeredness and the biopsychosocial models. These new initiatives involve the development of an interpretive framework. Medicine's interpretive turn is not a turn toward diminished scientism. The shift does, however, challenge what has traditionally been considered legitimate knowledge in the domain of clinical methodology. The concept of interpretation as a medical process is also not new. What is new is an explicit attempt to study the theoretical and practical implications of interpretation as a medical practice. Daniel (1990) writes,

> Interpretation in medicine is both old and new; old in the traditional medical practice and new in conceptual theory. Physicians in every culture have built reputations on a skillful reading of signs and symptoms of their fellow humans, but only recently has there arisen shared scholarly reflection on the nature of interpretation as practiced by clinicians (p.5).

Academic literature since the 1970s has expanded on this idea of interpretation in medicine. Flourishing humanities sub-disciplines such as medical hermeneutics and medical phenomenology are at the centre of theoretical approaches to medicine's interpretive turn. These areas have explored ideas related to the interpretive meaning in clinical encounters (Daniel, 1986; Leder, 1990; Svenaeus, 2000).

Re-incorporating the patients' subjective experience in diagnosis and treatment has stimulated a debate about how to interpret and make use of subjective accounts of illness in medical care. This movement involves two main aspects: re-associating philosophy into the medical domain and bridging the gap between patients' subjective experience of illness with the objective and general concepts of disease within the context of clinical care. Reconstruction efforts still acknowledge and endorse the advancements of science yet at the same time attempt to correct for those aspects of biomedical epistemology which are considered problematic. In this section, four separate initiatives (see Table 1) are identified as reconstructing the clinical method: (a) The Physician-Healer (Kearney, 2000); (b) The Patient-Centered Clinical Method (Stewart et al., 2003); (c) The Biopsychosocial Model (Engel, 1977) and (d) Narrative Medicine (Charon, 2000).

Table 1: Reconstructive Movements

Movement	Description
The Physician-Healer	Explores various ways in which the physician facilitates the prevention of, or recovery from illness (beyond scientific/technical approaches.) The paradigm has emerged from the palliative care movement and emphasizes spiritual/emotional dimensions of health and disease.
Narrative Medicine	Reconstructs the medical encounter by emphasizing the narrative aspect of doctor patient interactions. Re-contextualizes clinical data gathering by examining the linguistic, semiotic, and story-telling aspects of patient communication. Narrative medicine also refers to the inclusion of literature in medical training as a way of humanizing the educational experience.
The Patient-Centered Clinical Method	A step-by-step approach to clinical methodology that re-organizes the traditional power dynamic of the doctor-patient relationship. The approach is to 'weave back and forth' between scientific and patient-centered approaches. Emphasis is on improving communication and partnership between physician and patient for effective medical decision making.
The Biopsychosocial Model	A systems-based approach to understanding and incorporating the broad scope of factors that causes illness. The model is based on a hierarchy of factors, starting from molecules, genes, etc...to individual-level, community-level, cultural and bio-spheric factors. It emphasizes that effective clinical methodology must engage with an array of biological, psychological, social, and environmental factors that contribute to illness and disease.

The Physician-Healer

One approach to bridging the gap between subjective and objective aspects of clinical methodology has been to explore the dual roles of the physician as a scientist and as a healer. To this end, recent attention has been paid to clarifying the concepts and definitions of 'healer' and 'healing.' Egnew (2005) states that although medicine has traditionally been considered a healing profession, it has neither an operational definition of healing nor an explanation of its mechanisms beyond the physiological process related to curing. He suggests that 'healing may be operationally defined as the personal experience of the transcendence of suffering' (p. 255). Other authors have similar definitions. Mount (2003) defines healing as moving away from pain, toward a sense of wholeness, personal integrity, and inner peace. The concept of the physician-healer emphasizes the role of the physician as being aware of the healing potential of the doctor-patient bond and the use of that bond for patient recovery. Part of developing skill in this area is in acknowledging and healing his or her own wounds, personal challenges, and illnesses. Mount describes this concept as 'the wounded healer.' He writes, "the caregiver-healer negates the intrinsic power differential between caregiver and sufferer; recognizes his or her own personal needs and, with humility is open to an empathic interaction in the tradition of the wounded healer" (p. 42). He further states, 'healing interventions are those that support the discovery of meaning and connectedness, whether or not that is consciously intended' (p. 42). While on the one hand, the physician must address the illness, on the other, he or she addresses patient suffering. Trollope-Kumar (1996) identifies the challenge:

> As doctors, we develop a selective way of listening to patients' stories – we search for the disease in the illness narrative. Although this is an essential part of the process of medical diagnosis, we must be careful that we do not miss the suffering human being behind the symptoms. (p. 485).

Milstein (2005) puts forth a model of care in which curative (biomedical) and healing (psychosocial) aspects are used simultaneously. This is in contrast to what is called a 'series' approach in which 'curative measures are exhausted before palliative measures are initiated' (p. 563). Other researchers have adopted the term 'integrated medicine' to mean the merging of multiple medical paradigms to enhance care. For example, Kligler et al. (2004) defines integrative medicine as:

> ...an approach to the practice of medicine that makes use of the best-available evidence, taking into account the whole person (body, mind and spirit), including all aspects of lifestyle. Integrative medicine emphasizes the therapeutic relationship and makes use of the rich diversity of therapeutic systems, incorporating both conventional and complementary/alternative approaches (p. 522).

Kearney (2000) similarly suggests that rather than regarding healing as an extension of the medical model and of physician behaviour, the complete picture of healthcare is one in which two models, the healing model and the biomedical model, operate simultaneously. He writes, 'what we have are two very different systems working side by side; one with the ability to analyze, separate, and cure, another with the ability to understand, include, integrate, and heal.' (p. 16). To elucidate, he draws parallels in the study of classical versus quantum approaches in physics. Kearney sees the principles of Newton's scientific paradigm in modern medicine. He states (quoting Marshall and Zohar, 1997):

> [Newton's world] was thought to consist of many observable data that could be analyzed and reduced to a few simple laws and principles, or to a few basic components. The laws and principles became the basis for all-embracing general theories and sets of predictions that could be tested through experiments, which were conducted strictly in accordance with a new scientific method that viewed systems in isolation from their environments, breaking them down into their simplest component parts and using the behaviour of these parts to predict the unfolding future of the system. Simplicity, determinism, and predictability were the cornerstones of the Newtonian approach. Any system or object starting from some given state or position and acted upon by some given force would always behave in exactly the same way. Cause and effect reigned supreme, and there was always a direct, linear relationship between the force acting upon a body (the cause), and the deflection of that body from its original course (the effect). (p. 20).

The healing model by contrast corresponds to the 'new physics' of quantum mechanics, which is preoccupied with 'the micro-world within the atom, that is, the inner workings of everything we see and, at least, physically are' (Zohar, 1991, in Kearney, p. 21). From this perspective, Kearney suggests, the healing model is organized upon a knowledge that is not gathered from the Newtonian concept of atoms -- solid, billiard ball-like building blocks -- but from the knowledge that matter is both particle and energy wave. Thus what is seen with the human eye (and even the microscope) as discrete objects or particles, at the quantum physics level is discovered as energy or waves. Kearney

correlates the duality of particle and waves with the parallel systems of medicine and healing. He writes:

> Consideration of the wave aspect of the wave/particle duality brings us deeper into the essence of the healing model....the wave interweaves with the particle to connect and form an inclusive and whole reality, so the healing model works with, through, and alongside the medical model to allow those who suffer to become more fully themselves. And just as wave connectedness is not linear, but works in every direction, linking all in a vibrant, living matrix, so the dynamic of the healing model is one of inclusion and integration (Kearney, p. 23).

Kearney's model advances the reconstruction of the physician-healer by describing how to clinically explore the spiritual and emotional dimensions with sick patients. His approach, which emerged from the palliative care movement, is influencing other areas of medicine today.

Narrative Medicine

Narrative medicine is a movement that elucidates the importance of narrative in clinical data gathering. It is an approach that attempts to bridge the gap between the subjective and objective aspects of patient care through an understanding of the role of story in clinical methodology and the role of literature in basic medical education. Charon (2000) writes, 'literature and medicine is a flourishing sub-discipline of literary studies that examines the many relations between literary acts and texts and medical acts and texts' (p. 23). Charon examines the historical connection between medicine and literature and suggests that the growth and decline in medicine's attentiveness to the power of words can be 'used as a marker for medicine's degree of attentiveness to the individual patient's predicament' (p. 23). She further writes,

> the effective practice of medicine requires narrative competence, that is, the ability to acknowledge, absorb, interpret, and act on the stories and plights of others...Narrative medicine is proposed as a model for humane and effective medical practice. Adopting methods such as close reading of literature and reflective writing allows narrative medicine to examine and illuminate four of medicine's central narrative situations: physician and patient, physician and self, physician and colleagues, and physicians and society. With narrative competence, physicians can reach and join their patients in illness, recognize their own personal journeys through medicine, acknowledge kinship with and duties toward other health care professionals, and inaugurate consequential discourse with the public about healthcare. By bridging the divides that separate physicians from patients,

themselves, colleagues, and society, narrative medicine offers fresh opportunities for respectful, empathic, and nourishing medical care. (Charon, 2001, p. 1897).

The teaching of literature in medical schools has become a popular way of teaching students about the experiences of patients as well as the physician's own inner development (Hunter, Charon, & Coulehan, 1995). Bleakley (2005) writes, 'Science and narrative can be seen as two kinds of knowing, reflected in the distinction between evidence-based medicine derived from population studies and narrative-based medicine focused upon a single case' (p. 534). He adds 'while science concerns itself with the establishment of truth, the purpose of narrative is to endow experience with meaning' (p. 534) and that while narrative approaches in clinical education claim to increase understanding of the patient and empathy among medical students, such claims need to be empirically examined. Studies now focus on evaluating the efficacy of narrative medicine in medical education (e.g., Wear & Aultman 2005).

The Patient-Centered Clinical Method

In the 1980s, members of the Department of Family Medicine at the University of Western Ontario developed a theoretical framework for a clinical approach designed to better integrate the patient's subjective experience into the diagnostic process. What evolved became a widely adopted model called *the patient-centered clinical method* (Stewart et al., 2003). As with the physician-healer model, a re-organization of power in the doctor-patient relationship is central to this model. Stewart et al. write, 'the practitioner must be able to empower the patient, share the power in the relationship and this means renouncing control which traditionally has been in the hands of the professional' (p. 5). The approach focuses on gathering knowledge about the patient's main concerns and needs for information; seeking an integrated understanding of the patient's world, his or her emotional needs and life issues; finding common ground on what the problem is and mutually agreeing on management; enhancing prevention and health promotion; and enhancing the continued relationship between the patient and doctor. The authors identify six interactive components of the patient-centered process: (a) exploring both disease and the illness experience; (b) understanding the whole person; (c) finding common ground; (d) incorporating prevention and health promotion; (e) enhancing the doctor-patient relationship; and (f) being realistic. The patient-centered model has been widely adapted to undergraduate medical training.

The Biopsychosocial Model

The biopsychosocial model of medicine, which Engel (1977) refers to as *systems medicine*, expands the scope of what is considered illness to include factors that have traditionally been left out of the conventional medical framework. Biopsychosocial medicine is based on the idea that the clinician cannot effectively deal with illness without accounting for all factors in the systems hierarchy that influence, and are influenced by, states of health. For Engel, the system that medical practice ought to account for has, as its base, the most miniscule aspect of health – molecules. It then moves up a hierarchical chain of levels that are all connected (i.e., organelles, cells, tissues, organ systems, nervous system, person, two-person, family, community, culture-subculture, society-nation, and biosphere). Disturbance at any level of the systems hierarchy can either be absorbed and neutralized at the level in which it entered and cause no further damage, or disruption at one level can, if not adequately dealt with, then disrupt other levels. Engel (1984) writes,

> Overall health reflects a high level of intra- and inter-systemic harmony. Disruption of such harmony may be initiated at any level, be it cell, organ, person, or community. Whether the resulting disturbance is implicated, reflects the capacity of the initially affected system to adjust to the change, (i.e., to cope). Thus a modification in an individual's social environment (an imposed job change for example) impacts first on psychological functions. If the change is successfully accommodated at the psychological level, there will be no perceptible reverberations in other systems. For example, the individual may have no difficulty successfully handling the situation by thinking it through and resolving on a course of action – 'no sweat,' so to speak. Similarly, a molecular substance introduced into the body might be broken down, excreted, neutralized, or inactivated without implicating any but the particular molecular, cellular, tissue, or organ system required for its disposal. In both examples, the systems initially involved have the capacity to handle the imposed change without disruption. Under different circumstances, or in another individual with a different past history, the very same social change or the very same molecular substance may induce profound disruptions that involve many systems in the hierarchy. Such contrasts between smooth functioning and disruption provide the basis on which health, disease, illness, and disability may be differentiated. (p. 48).

Unique to Engel's model is the fact that it is not only the dynamic interrelations that determine relative degree of intra- and inter-systemic harmony or disruption, but also the fact that every change becomes part of the history of each system, rendering it different at each successive point in time. 'Health restored is not the same as the former

state of health; it is a different inter-systemic harmony than that which existed before the illness episode' (Engel, p. 48). In expanding on their work, Borrell-Carrio, Suchman and Epstein (2004) write,

> The biopsychosocial model is both a philosophy of clinical care and a practical clinical guide. Philosophically, it is a way of understanding how suffering, disease, and illness are affected by multiple levels of organization, from the societal to the molecular. At a practical level, it is a way of understanding the patient's subjective experience as an essential contributor to accurate diagnosis, health outcomes, and humane care (p.576).

Yet numerous authors, while not discrediting the theoretical merit of the biopsychosocial approach, identify a challenge in incorporating the approach in training and actual settings of clinical decision-making. Milstein (2005) for example writes, 'even though Engel's model was superior to the earlier [reductive] model in many ways, its implementation often remained inadequate, largely because the focus of care continues to be biological processes' (p. 563). Cassell (1997) similarly states,

> George Engel...who was an early contributor to understanding the place of emotional factors in physical illness, appealed in 1977 for an understanding of disease as a biopsychosocial entity. His paper was widely read. It is frequently quoted still, but it has had distressingly little impact on practice (p. 49).

That Engel's model has had little impact on practice may be due to the fact that student training in this system-based approach contradicts the remainder of their hospital training in which traditional forms of the biomedical clinical methods still dominate. Cassell suggests, 'students do not know how to see or hear the [expanded] information because it is outside the conceptual structure guiding their thinking and, therefore, their perception' (p. 60).

What differentiates the patient-centered clinical method from the biopsychosocial model is that the former outlines a method to improve physician performance by making the patient's subjective experience part of the clinical investigation. The patient-centered approach is to 'weave back and forth' (Stewart et al., 2003, p. 41) between biomedical disease concepts and patient illness experiences within a clinical encounter. By contrast, the biopsychosocial approach reconfigures the framework for knowing what disease actually *is*, thus problematizing the entire system upon which the traditional practice of medicine is built. Skeptics of the biopsychosocial approach argue that the expanded

systems approach to acquire knowledge of the disease and the patient imposes an impossible demand on physicians. On the other hand, the patient-centered model has achieved a considerable measure of popularity among physicians and physician-educators. However skeptics of the patient-centered model believe that the approach sets aside the fundamental problem of disease abstraction and reduction and thus leaves the paradox of modern medicine unresolved.

Debates and critiques concerning these reconstructive efforts have taken place in large part in academic medical circles and at the undergraduate medical training level. The following chapter is a review of the literature of the innovative ways in which undergraduate medical education had been adapted to address the philosophical underpinnings of the reconstructive paradigm. The literature addresses the challenge of incorporating insights from the vast critiques of biomedicine as cited in this chapter, into medical curriculum. One particular challenge identified in the literature is in developing research tools necessary to evaluate medical student training, reflective of the reconstruction paradigm. The pedagogical requirement of training for the expanded approach to clinical methodology is also an identified challenge.

CHAPTER THREE:
THE EVOLUTION OF MEDICAL EDUCATION

> A new revolution is occurring in medical education
> and concerns our increasing recognition that we
> need more effective methods to teach patient-
> centered communication, enhance cultural
> competence, and foster professionalism.
> (Braddock, Eckstrom, & Haidet, 2004, p. 610)

The Anatomy of Undergraduate Medical Training

Curriculum planners of undergraduate medical programs are met with the lofty task of realigning their curricula to the social, intellectual, and scientific revolutions of the past century. Reforming medical education to achieve these ends is a profound undertaking, as the revolutions themselves are profound, and medicine's professionalized and institutionalized structure creates an environment that is significantly resistant to change. Despite this, new forms of undergraduate curricula are emerging, with the intention of helping students cultivate the moral, psychological, self-reflective, and self-developmental requirements of doctoring. This movement has been manifested in the creation of new curriculum space for medical students to self-examine and reflect on their presumptions about doctoring through small group discussions and problem-based learning. Trends in medical education research involve explicating clinician-educator tacit styles of pedagogy and clinical reasoning as well as examining all factors of education that shape the identity, attitude, and competency of trainees.

Abraham Flexner believed physician training to have two aspects. He stressed the importance of scientific literacy, given the major advances in science occurring at the turn of the 20th century. Yet he also addressed another dimension. He wrote,

> Practitioners deal with facts of two categories. Chemistry, physics, biology enable them to apprehend one set; they need a different perceptive and appreciative apparatus to deal with other, more subtle elements. Specific preparation is in this direction much more difficult; one must rely for the requisite insight and sympathy on a varied and enlarging cultural experience. Such enlargement is otherwise

important, for scientific progress has greatly modified ethical responsibility (Flexner, 1910, p. 26).

Flexner recognized the personal development requirements of physicians in training, given the complicating effect of scientific advancement on the ethical treatment of patients. Yet only recently, after one hundred years of scientific progress and witnessing of anomaly in the clinical setting, have there been formal explorations of the ways in which to teach the subtle elements required for cultivating personal and professional development.

Challenges in Medical Education

A primary argument for curricular reform has been the issue that since the implementation of Flexner's blueprint, medical science has expanded to the point at which it is unreasonable to expect medical students to absorb the vast scope of knowledge from the increasing numbers of sub-specialty fields. This idea, coupled with the lack of contact with patients in preclinical training has, some argue, a detrimental effect on trainee outlook and perspective. Hunter (1997) states,

> In the 1980s, Henry Silver, a paediatrician well acquainted with the clinical signs of child abuse, observed a class of first-year students and noted familiar markers. By November, he reported, the collection of alert, intelligent faces had disappeared. Shoulders drooped and the light was gone from their eyes. They began to exhibit, he wrote, all the characteristics of abused children (p. 170).

Hunter suggests that 'in medicine for far too long, books and action, lecture and individual investigation have been segregated into unrelated chunks: first pass the science tests, students are told, then take care of the patients' (p. 171). Using alimentary metaphors, she articulates the challenge:

> ...medical students are force-fed. They cram information on human biology from lectures, textbooks, handouts, and labs. They struggle to digest the knowledge, metabolize the facts. Then, at test time, they regurgitate everything they have learned....despite the 'full plate' that students are served, they are metaphorically starving....And the difficult to achieve but imperative goal of medical education should be to put students in charge of their own eating and thereby produce intellectually curious, self-motivated, active, and 'well-nourished' physicians who know how to feed themselves in the right amounts and at reasonable levels, maintain a healthy skepticism about the information they consume and periodically check that information for freshness (p. 167).

Dornan (2005) similarly suggests that the traditional pedagogy of preclinical training, while justified along certain lines, has the potential to be problematic:

> Flexner espoused a biomedical epistemology of medicine that was sorely needed in this time, though later ran riot in the hands of pedagogues. He, I am sure, would not have approved of humiliating medical students for not being able to repeat from memory topographical anatomy that they had not yet seen applied in life. (p. 93)

Others observe that the debate about curriculum is mainly about how to fit the vast scope of specialty teaching into the existing curricular timeframe. Snadden (2006) writes,

> the debates I see in medical schools, at the operational level, are often not about what sort of doctors our society will need in the next decade or so...rather the focus is on the problem of having insufficient curriculum time to present the fullness of an emerging sub-specialty and how and where to fit it into the existing curriculum' (p. 97).

Another concern has been identified as the lack of educational theory in medicine. For example, Seabrook (2003) points out that relatively few doctors have received formal training in teaching methods, educational theories, or modes of assessment. Hunter (1997) also states, 'medical education of the past century has remained largely untouched by the contemporary investigation of human learning' (p.167). However, a new movement has emerged to study the impact of medical pedagogy. Not only is the scope of education expanding, but theoretical approaches to various teaching types and styles are being made explicit (Kaufman, Mann, & Jennett, 2000). In their research, McLeod et al. (2006) identified two main types of knowledge upon which pedagogic principles apply: declarative factual knowledge; and procedural knowledge that underlies reflexive motor and perception skills. They state,

> Research should focus on teacher training designed to make teachers' tacit knowledge explicit, with the expectation that explicit awareness of the science underlying the pedagogy will enhance teaching effectiveness (p. 147).

The investigation into what constitutes tacit knowledge and learning has also been a major preoccupation for medical education reform. Following Kuhn's ideas, any change in a normative paradigm first requires an explication of its implicit rules. This is exemplified in medical training through the new interest in studying the implicit socialization process provided through the structure of formal training. To this end, a

substantial body of inquiry has been conducted on medical education conceived as socialization, rather than the prior more narrow view of professional education as primarily a cognitive process of acquiring knowledge and skill (Bloom, 1992; Wenger, 1998). The socialization perspective treats medical education as a process of personal change and growth and not as a process of simple knowledge acquisition.

The perspective on medical education as a process of socialization has led to research on the idea of the medical curriculum as having three components: (a) the formal curriculum; (b) the informal curriculum; and (c) the hidden curriculum (Hafferty 1998, 2000). The formal curriculum is the structure and content of intentional education, designed in accordance with specific objectives. The informal curriculum subsumes all of the varied informal experiences through which the medical student learns the role of doctoring. Stern and Papadakis (2006) explain the informal curriculum:

> When teaching students our core values, we must consider the real world in which they will work and relax. The concept of 'teaching' must include not only lectures in the classroom, small group discussions, exercises in the laboratory, and care for patients, but also conversations held in the hallway, jokes told in the cafeteria, and stories exchanged about a 'great case' on our way to the parking lot. (p. 1794).

The hidden curriculum is similar to the informal curriculum but has more to do with the invisible structures of the medical establishment. Lempp & Seale (2004) define the hidden curriculum as the set of influences that function at the level of organizational structure and culture including, for example, implicit rules to survive the institution such as customs, rituals, and taken for granted aspects (p. 770). The hidden curriculum is often perceived as a negative force in a medical student's undergraduate training. Lempp & Seale (2004) identify six ways in which the hidden curriculum impacts medical students: loss of idealism; adoption of ritualized professional identity; emotional neutralization; change of ethical integrity; acceptance of hierarchy; and the learning of less formal aspects of 'good doctoring' (p. 770). In their qualitative research interviewing medical students regarding perceptions of the hidden curriculum, students said they learned through good and bad role models, incidents of being humiliated by hospital staff, haphazard teaching of clinical staff, and through the importance of learning about the hierarchy in medicine.

Another trend in medical education research is pedagogy for reflective practice. Students are being increasingly encouraged to explore the meaning they ascribe to physician identity. Director of curriculum development at McGill University, Dr. Donald Boudreau states,

> We're trying to provide detailed knowledge about what it is to be a healer and a professional and trying to reflect on what it is to be a physician. This self-reflexive exercise is important and meaningful for both students and those of us facilitating. When you explore with students what it means to be a physician, the results are eye opening. (McDonagh, 2004, p. 7).

Similar to the explication of tacit learning has been the explication of how students learn about clinical judgment. New interest is emerging in understanding and teaching about the cognitive, linguistic, and semiotic organization of clinical thinking (Groopman, 2007; Lingard et al., 2003; Cox & Irby, 2006). For example, Eva (2004) states, 'one of the core tasks assigned to clinical teachers is to enable students to sort through a cluster of features presented by a patient and accurately assign a diagnostic label, with the development of an appropriate treatment strategy being the end goal' (p. 98). He points out that medical educators have traditionally focused on teaching students 'analytic' models of clinical reasoning, but that in reality, novice as well as experienced physicians use a combination of analytic (i.e., conscious and controlled reasoning) and non-analytic (unconscious and automatic) processes. Eva states 'context specificity and the need to build up an adequate database from which to reason by way of analogy demand that many examples be seen, that students be enabled to actively engage in the problem solving process, and that the examples provide an accurate representation of the range of ways in which specific conditions present' (p. 98). Other authors also emphasize the key aspect of context in medical students' learning. Norman (2005) writes,

> ...expertise lies in the availability of multiple representations of knowledge. Perhaps the most critical aspect of learning is not the acquisition of a particular strategy or skill, nor is it the availability of a particular kind of knowledge. Rather, the critical element may be deliberate practice with multiple examples which, on one hand, facilitates the availability of concepts and conceptual knowledge (i.e., transfer) and, on the other hand, adds to a storehouse of already solved problems. (p. 418).

Research suggests that the ability of the doctor to reflect and think critically improves their professionalism and their clinical judgments. Mamede and Schmidt (2004) identify

five stages of reflective thought. These comprise: an initial state of doubt, perplexity, or uncertainty due to an emerging difficulty in understanding an event or solving a problem; definition of the difficulty by thoroughly understanding the nature of the problem; occurrence of a suggested explanation or possible solution for the problem through inductive reasoning; rational elaboration of ideas produced through abstract, deductive thought focusing on their implications; and testing resulting hypothesis by overt or imaginative action. From the work of Schon (1983), Mamede and Schmidt distinguish between 'reflection-in-action' and 'reflection-on-action', the former being a process by which the physician defines the problems within the dynamics of the situation and the latter being a "reconstructive mental review that occurs later on, after the event, and provides opportunities to learn from earlier decision-making processes" (p. 1302).

Another major change in undergraduate medical education has been a shift from large-class teaching to small-group learning grounded in an educational approach often cited in the literature as problem-based learning (PBL). Studies have examined the impact of problem based learning, its satisfaction ratings by students and teachers, and its philosophical underpinnings. Dolmans, De Grave, Wolfhagaen, and Van der Vleuten (2005) write, 'problem-based learning (PBL) represents a major, complex and widespread change in educational practice within higher education. Many medical schools from all over the world have implemented PBL' (p. 732). These authors suggest that PBL offers four main learning processes that more closely emulate the clinical role than does learning in didactic, large-scale, classroom settings. These are constructive, self-directed, collaborative, and contextual aspects of learning. There is evidence to suggest that PBL also enhances critical thinking. Tiwari, Lai, So, and Yuen (2006) conducted a study comparing students' critical thinking skills developed from PBL versus those skills attained in large-class lecturing. They found that students in the PBL group showed greater improvement in truth seeking, analytic ability, and self confidence in critical thinking. Similarly, Schmidt, Vermeulen, and Van der Molen (2006) used a questionnaire to collect self-reported data on professional competencies between graduates of PBL curricula and graduates of conventional medical curricula. They found that graduates of the PBL school rated themselves as having much better interpersonal skills; better competencies in problem solving, better self-directed learning and information gathering; and somewhat better task-supporting skills, such as the ability to work and plan efficiently.

The study of the tacit learning environment and the hidden curriculum, the introduction of introspective approaches to teaching non-science topics such as professionalism and healing, the study and teaching of clinical logic, and the move toward small-group, problem-based learning have made undergraduate medical training today significantly different from what it was even a decade ago. Contemporary research in medical education is preoccupied with developing techniques to evaluate these changes, and facilitate the abilities of medical teachers to adopt these new approaches, which appear to be radically different from their own formative training. Dornan (2005) writes,

> These are bewildering times for doctors who teach medical students. The UK General Medical Council (GMC) has reminded them that they have a duty to teach, yet has stirred up such radical change that their task is unrecognizably different from what they themselves experienced as students (p. 91).

Given the extraordinary challenge of teaching in unfamiliar terrain, faculty development has been identified as a key aspect in facilitating these changes. Steinert, Cruess, Cruess, and Snell (2005) emphasize the need for faculty development in incorporating professionalism in medical curricula:

> The recent emphasis on the teaching and evaluation of professionalism for medical students and residents has placed significant demands on medicine's educational institutions. The traditional method for transmitting professional values by role modelling is no longer adequate, and professionalism must be taught explicitly and evaluated effectively. However, many faculty members do not possess the requisite knowledge and skills to teach this content area and faculty development is therefore required (p. 127).

Concepts Central to Physicianship Education: Professionalism, Healing, and Phronesis

The McGill University Physicianship curriculum is about teaching professionalism and healing to trainees. Professionalism teaching can be broken down into two related areas: (a) teaching the universally accepted standards concerning the rights and responsibilities for membership in the medical profession, and (b) professionalism as it guides trainees to have appropriate attitudes, values and conduct in the clinical work environment. Similarly, teaching on healing has two components: (a) to provide a framework to understand the larger meaning of illness in the lives of patients, and (b) to understand the way in which the doctor-patient bond promotes healing, recovery, and rejuvenation

for both the practitioner and the patient. The motto of the Physicianship program is the Latin phrase, *Episteme, Techne, & Phronesis*, which translates as *knowledge, craft, and practical wisdom*. Phronesis is a particularly useful concept providing a foundation for the advancement of curricular reform. These concepts will now be explored in detail.

The Professionalism Movement

A major revision in curricular reform has been the introduction of courses on medicine as a profession and the importance of upholding professional conduct. Cruess and Cruess, (1997a) suggest that physicians of past eras needed only an implicit understanding of the relevance of their professional status in society due to the simplicity of both society and the delivery of healthcare services of those times. By contrast, the integration of market forces into the medical domain and the rise of public complaints about healthcare, with consequent threats to professional autonomy, have required that today's physicians understand the sociological critique of professionalism, self-reflect on the privilege of professional membership, and develop tools to measure and evaluate professional attributes and behaviours.

Different meanings are given to professionalism in the medical and sociological literature. The medical perspective suggests that professionalism offers physicians privileges, which facilitate their capacity to work in the primary interest of patients. Hilton and Slotnick (2005) write:

> Society grants monopoly status despite the risks that professionals might misuse their proprietary knowledge and skills for their own advantage, or that monopoly might stifle competition that improves service and reduces costs. Protections against such risks traditionally come from the professional putting clients' interests above their own. This establishes a fiduciary relationship – a trust that patients can place in their doctors and, by extension, that society can place in the medical profession (p. 59).

Similarly, Swick (2000) emphasizes the need for professionalism to be associated with a way of life, rather than a mere occupation, emphasizing that its social values and sense of altruism are essential:

> Professions serve as guardians of social values, and professionals are expected to articulate and hold those values publicly. A profession, then, becomes a way of life with moral value. It is in this sense that a profession becomes a calling, not simply an occupation (p.613).

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Some sociological perspectives, on the other hand, work on the level of social relations and the idea of social control (Johnson, 1972; Parsons, 1951; Friedson, 1970, 1994; Ehrenreich & Ehrenreich, 1978). For example, socialist critic, George Bernard Shaw believed that professions were 'conspiracies against the laity' (Cruess & Cruess, 1997b, p. 461). Yet unlike Shaw, Ehrenreich and Ehrenreich point out that:

> to analyze something as a system of social control is not to view it as a conspiracy. We are not arguing that the health system is consciously designed to exercise social control, or that the social control functions of the health system somehow explain its structure and dynamics. On the contrary, we explain the social control functions as themselves a result of the institutional structure, organization, and economics of the healthcare system (p. 42).

Friedson (1970) provides a seminal theory on professionalism. Three salient points emerge from his sociological inquiry: (a) professions are distinguishable from other occupations in that they have monopoly control over their division of labour, (b) monopoly is maintained through a certain paradigm or worldview, and (c) this worldview confronts and dominates over the lived experiences of clients and patients. He writes:

> ...the profession claims to be the most reliable authority on the nature of the reality it deals with. When its characteristic work lies in the attempt to deal with the problems people bring to it, the profession develops its own independent conception of those problems and tries to manage both clients and problems in its own way. In developing its own 'professional' approach, the profession changes the definition and shape of problems as experienced and interpreted by the layman. The layman's problem is re-created as it is managed—a new social reality is created by the profession. It is the autonomous position of the profession in society which permits it to re-create the layman's world (p. xvii).

This view resonates with the central sociological critique suggesting that professions are established first to serve the interests of their members and secondarily to serve the interests of their clients and society. This is the idea that 'a professional body is no more than an organization of members working together to compete for societal resources' (Swick, 2000). This is opposed to the view that professional status offers protection to physicians so they *can* work selflessly for the benefit of others. Despite the debate, authors both internal and external to medicine have written about the problem of medicine losing professional status in society. Hilton and Slotnick (2005) for example state that the role of the profession in society has been usurped by outside interests:

> In many ways...medicine has become distracted from its public and social purposes and thus lost its distinctive voice. In recent years, the debate about health care has been dominated not by physicians, individually or collectively, but by business, economic, and political interests (p. 613).

The threat to medical professionalism has been articulated in a number of ways. Hensel and Dickey (1998) state that the medical profession is threatened by rising costs and the increased pressure on physicians to adopt business strategies in the name of cost containment and in order to remain competitive in the health care marketplace. Similarly, Sullivan (1999) writes,

> The 'managed care revolution' has meant that financial imperatives, whether in the form of cost cutting or profit seeking, threaten to pre-empt professional judgments in the way medical treatment and care are administered. In their scope and speed, these changes are unprecedented, and they challenge not only the interests but the identity of the medical profession (p. 7).

In tandem with the managed care movement, another movement called evidence-based medicine (EBM) has gained momentum in response to critiques against the profession and to ensure that only scientifically proven medical therapies and interventions are used within clinical practice. Sackett, Rosenberg, Gray, Haynes, and Richardson (1996) explain evidence-based medicine as the 'conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients' (p. 71).

Another factor identified in the decline of medical authority is the rapid advance in scientific knowledge of the past 30-40 years. This has weakened the profession through an increase in the number of medical specialties (Haug and Lavin, 1983). The profession has also had to come to terms with the increased access to medical knowledge enjoyed by patients and the public at large. Counting on physicians to be experts in areas of knowledge is not enough to sustain their authority in the care of the health of the nation. The decline of physician authority has coincided with a rise in the movement called 'managed care', in which increasing numbers of institutional and government organizations are involved in the clinical decision-making process, particularly in the United States. Hartley (2002) suggests that the growth of the managed care movement is accelerating an overall decline of physician professional dominance. She states that,

> an adequate understanding of the changing character of the system of professions demands a consideration of the interacting roles of

'competing' health care providers, the state, and corporate and consumer forces (p. 178).

In an attempt to restore patient trust, regain control over the medical field and maintain an advocacy role in public health policy, medical authorities have advocated that the medical establishment clarify, consent to, and put into action a set of guidelines for professional conduct. Since 2000, a number of significant steps have been taken to this end. For example, in 2001, the General Medical Council in the United Kingdom published a statement called *Good Medical Practice*. It advises physicians on their responsibility for clinical care, collegiality, and probity (GMC, 2001). A year later, a joint effort of the American Board of Internal Medicine, The American College of Physicians, and the European Federation of Internal Medicine published a document entitled *Medical professionalism in the new millennium: a physician charter* (Sox, 2002). The charter has been widely adopted as the standard for professional practice. It has appeared in major journals in the fields of internal medicine, surgery, obstetrics, gynaecology, and dentistry. In addition, several hundred newspapers on an international scale have cited the *Physician Charter* in related stories and 65,000 reprints of the document have been requested from around the world (Eggly, Brennan, & Wiese-Rometsch, 2005). Many believe that establishing universal guidelines for professionalism will improve the profession's status and could prove to be a valuable resource for healthcare and society (Sullivan, 1999).

Given the efforts to re-instate medicine's professional status, many have looked to formal medical training as playing a key reconstructive role. 'Medical schools face a fundamental challenge in helping restore public trust in medicine as a profession' (Hafferty, 2000, p. 14). Since the establishment of the physician charter, educational leaders in the field have been researching critical issues in teaching professionalism in both formal and continuing education settings. Eggly et al (2005) state,

> Medical educators are acutely aware that their curricula for teaching [professional] competencies are not delivered in a vacuum. The nature of medical training inherently exposes medical students and residents to a social, economic, and political context that may or may not reinforce the principles taught in the medical school's labs and classrooms. Outside the classroom, trainees face the vagaries and complexities of patient care and interactions with colleagues, faculty, and myriad of other health care professionals. Therefore, the challenge to physicians and medical educators is to set standards, teach, and

> assess professional behaviour in a way that converges with and builds upon trainees' daily experiences rather than contradicts them (p. 375).

The literature on professionalism in medical education suggests that new approaches are needed to accomplish pedagogical goals. For example, Hilton and Slotnick (2005) suggest that learning about professionalism occurs through psychological development, moral development, and reflective judgment. They argue that "elucidating professionalism in medicine requires consideration of cognitive, psychosocial, and epistemological issues because all bear on the doctor-in-training's needs, and their ability to understand the needs presented to them by those with whom they interact" (p. 61). Ginsburg, Regehr, and Lingard (2003) similarly argue that a gap needs to be filled between introducing abstract concepts to students (such as those laid out in the charter on professionalism) and the actual ethical and moral dilemmas that students face during their training. They argue that a conceptual framework based on observable behaviours is required in addition to abstract definitions. Their research analyzed essays written by senior medical students about instances in which they witnessed, participated in, or committed a lapse in professional behaviour. Both the tone and content of the essays were analyzed to understand the spectrum of behaviours and actions students take in an incident of unprofessional behaviour and the degree to which they were willing or capable of reflecting on their own response in that situation. They found that recounting experiences of lapses in professionalism often involved deflection, condescension, or engagement on the part of the trainee (p. 350). The study is an example of innovative approaches to researching the development of professionalism in education.

Another approach to professionalism education has been the identified need to expand medical education into fields beyond biomedical science. For example, Wear and Castellani (2000) suggest that students can learn about professionalism through non-medical disciplines. They state that the values involved in professionalism teaching, in terms of communication and social responsibility, are reflected in non-medical disciplines. They write,

> medical students have little opportunity to engage any body of knowledge not gained through bioscientific/empirical methods. Yet other bodies of knowledge—philosophy, sociology, literature, spirituality, and aesthetics—are often the ones where compassion, communication, and social responsibility are addressed, illuminated, practiced, and learned (p. 602).

Educators also point out that teaching medical professionalism is a challenging task because medical students, despite their idealism for studying and integrating the values of professionalism, sooner or later come into contact with emotionally disturbing or unethical experiences in their training. These experiences alter their optimism and perception of the standards by which they should conduct themselves in practice. Thus educators advocate for new models of learning that incorporate emotional as well as cognitive development to counter negative training experiences. For example, Howe (2002) states,

> The literature suggests that successful professional development needs to be based on explicit values, which are repeatedly demonstrated in the learning environment, and modelled by senior colleagues and tutors [and] that curriculum should incorporate a clear model of emotional as well as cognitive development (p. 353)

Howe further states,

> professional development learning opportunities must, at minimum be constructed to engage students directly with experiences that mimic their future roles, create opportunities that allow them to reflect and rehearse the skills involved in managing such experiences, and require them to take personal responsibility for the outcomes of both their experiences and their learning' (p. 355).

Educators are challenged to produce effective programming in professionalism. Eraut (1994) for example, points to a theory-practice gap that educators face in implementing professional development curricula. He argues that professional competencies are often taught as generic constructs that, while helping students define professionalism, fail to teach students *how* to engender those qualities. Students typically understand what professionalism is, but have difficulty implementing professionalism in the face of varied ethically challenging or negative experiences in training. Eraut argues that a key skill for professional development is to bring un-systematized personal experiences under critical control by developing greater awareness and reflection on those experiences.

The challenge of assisting students in cultivating their professionalism is a crossroads between the professionalism and healing curricula of undergraduate training. Professionalism is teaching about the organization of care. Teaching on healing touches upon the intra- and interpersonal dimensions of clinical work that facilitates one's ability to self-reflect and foster meaningful connections with patients and colleagues.

Teaching the Physician-Healer Role

The concept of healing in medical education has arisen from the palliative care movement, which has advanced ideas concerning the healing effect of the bond between patient and physician when illness is terminal (Mount, Lawlor, & Cassell, 2002; Mount, 2003; Kearney, 2003). It is generally thought that although the patient-physician bond is most accentuated in palliative care, the cultivation of knowledge within that specialty offers insights into the role of doctoring from which the rest of medicine can benefit. Healing encompasses two general areas. These include the role of the physician-patient bond in stimulating the patient's innate capacity to heal from disease and medical treatment; and the idea of the 'wounded-healer', which emphasizes the importance of the physician's own capacity for resilience in the face of illness, self-healing and self-care. A more detailed description of the physician-healer concept is provided in Chapter two.

Healing in medical education has also been linked to developing greater appreciation for the experience of suffering (Cassell, 2004) and the role of empathy and compassion in doctoring. Considerable research has been undertaken to define and teach empathy. Some authors believe that empathy is the foundation of good doctoring, although debate exists as to the true definition of empathy (Newton, Savidge & Barber, 2000). Bellini & Shea (2005) define empathy as follows:

> Although empathy can be defined many ways, it is typically viewed as a multidimensional construct that encompasses both cognitive and affective components. The former is concerned with one's ability to perceive another's point of view and be aware of one's affect on others. The affective component is concerned with one's vicarious emotional responses to the perceived emotional experiences of others (p. 164).

Bellet & Maloney (1991) state, 'empathy is the capacity to understand what another person is experiencing from within the other person's frame of reference…the capacity to place oneself in another's shoes' (p. 1831). Marcus (1999) defines it as 'the ability to understand another person's emotional or life experience…to share in those emotions' content, but not in their intensity' (p. 1211).

The difference between the concepts of 'empathy' and 'detached concern' is also articulated in the literature. An example is Halpern's (2003) critique of the conventional definitions of clinical empathy. She suggests that in the conventional sense, empathy has been defined as, 'the act of correctly acknowledging the emotional state of another

without experiencing that state oneself' (p. 670). From this perspective, the physician's emotional response is perceived as a threat to his/her ability to perceive things objectively. Clinical empathy in this context thus becomes detached concern. However, Halpern argues that empathy is an emotional attunement with, not an intellectual understanding of the patient's experience. She writes,

> Outside the field of medicine, empathy is a mode of understanding that specifically involves emotional resonance. By contrast, leading physician educators define empathy as a form of detached cognition...this has important implications for teaching empathy (p. 670).

The medical education literature further distinguishes between empathy and sympathy. Coulehan et al. (2001) write,

> Empathy is sometimes confused with sympathy, or emotional identification with the patient's plight. Sympathetic responses include a physician's feeling sad and becoming teary eyed when his patient starts crying, or a physician's experiencing righteous anger when her patient recounts an injustice. Sympathy also applies to feelings of loss that people experience in response to another's loss. When present, sympathy often contributes to the physician-patient relationship, yet physicians may not always exhibit sympathy because some patients are disagreeable, culpable, or unlikable. Empathy, by contrast, does not depend on having congruent feelings and thus may be more versatile. (p. 222).

In this sense, empathy is more closely connected to compassion, in which the physician feels genuine concern for patient welfare. Sympathy, on the other hand, is a weaker form of compassion based on a reactionary emotional response to pain and injustice experienced by another.

A number of articles have recently been published on the challenge of teaching empathy in medical training programs. Several authors suggest that medical student empathy toward patients declines over the period of medical training. For example, Bellini and Shea (2005) report a decline in empathy during residency training in internal medicine. Henry-Tillman, Deloney, Savidge, Graham, and Klimberg (2002) suggest that empathy is best learned when students have the opportunity to follow patients throughout their journey in illness, treatment, and recovery. They write,

> Course evaluation repeatedly indicated that the didactic format did not convey the relevance of the subject matter to our students or provide

them with an opportunity to learn and practice appropriate communication techniques (p. 660).

In their research, students followed patients during a visit to a surgical oncologist and observed the patient throughout treatment. The objective was to foster student understanding of a patient's emotional experiences and frustrations. The findings supported the idea that empathy is best learned when physicians put themselves in the patient's place.

From another perspective, Nadelson (1996) argued that changing work conditions and increased institutional pressures creates less opportunity for physicians to express empathy. She writes,

> The locus of paternalism has shifted. Many of the manifestations of paternalistic and authoritarian behaviour observed in physicians and complained about in the past are less evident in the practices of individual physicians today, and more apparent in the healthcare 'system' itself. This system, like all bureaucracies, is less likely to be empathic with the needs of individuals, or to take account of differences between patients, and more likely to look toward economies of scale and standardization of practices in order to predict and control costs and outcomes. Excessive rigidity can threaten the clinical melding of science, humanism, and art that has been the soul of medicine (p. 31).

Hojat, Gonnella, Nasca, Vergare, and Magee (2002) also discuss the relationship between physician capacity for empathy and the broader political and economic factors shaping medicine stating that,

> a positive patient-physician relationship is a critical element in the practice of medicine and in the art of healing; however, such relationships have been severely strained by changes in the economics of medical practice as well as recent developments in the organization and delivery of health care. When one considers the many changes within the health-care system that may negatively influence the patient-physician alliance and undermine empathy in therapeutic relationships, it makes sense to begin to study the development and correlates of physician empathy and its contribution to clinical outcomes (p. 1567).

As with teaching professionalism, exploring with students the role of the physician-healer requires a significant amount of insight into the definitions of these terms as well as an understanding of the requirements of teaching style. The medical education literature on both professionalism and healing point to the broader aspects of medical

training as socialization and the different aspects of the formal, informal, and hidden curricula.

The Physicianship Motto: Episteme, Techne, and Phronesis

Episteme, Techne, and Phronesis, are ancient Greek concepts that have surfaced within the bioethics literature to clarify the role of medicine in relation to the increasing ethical complexity of health care delivery. This literature explores the concept of doctor beyond positivist descriptions of the physician as a scientist or gatekeeper of scientific knowledge. The literature also provides a framework for clinical thinking that successfully incorporates the scientific, practical, and moral aspects of medicine.

The bioethics literature delineating the three concepts demonstrates a primary concern with determining whether their current usages are in line with their original definitions, as found in Aristotle's text, *Nicomachean Ethics*. The literature has also served as a platform to debate whether clinical medicine should be considered applied Episteme (science), applied Techne (craft), some combination of the two, or something entirely different (i.e., Phronesis or practical wisdom) (Waring, 2000; Davis, 1997; Svenaeus, 2003; Polansky, 2000). Another use suggests that the three concepts provide a framework to understand the spectrum of Physicianship attributes and roles. An examination of the meaning of Phronesis provides a theoretical framework to contemplate what is required of the personal development of the practitioner, given the changes (scientific, institutional, and social) in medicine over the past century.

Episteme (Knowledge)

Episteme is the knowledge and theory of medical practice which is mainly written down and studied in medical texts. It governs knowledge harnessed in laboratory and clinical observation, although more recently is understood as coming from a broad array of sources. It refers to the information that practitioners have memorized or that they refer to in books and journals. From a post-modern perspective, Episteme is subject to interpretation, debate, and transformation and as such is not considered to be absolute truth or fact. Over a period of time, a particular set of medically related ideas become enshrined as a body of knowledge. Yet this knowledge also changes over time according to Kuhn's principles of scientific evolution and paradigmatic change (outlined in Chapter one). Typically, clinician scientists observe and experiment with phenomena in the

laboratory and clinic. Observations then become findings which are published in medical journals, texts and other media. Episteme is usually abstract knowledge about disease and patho-physiology. It is abstract because it is often the product of research at one particular site in the medical research system that is 'lifted out' of its particular context and shared across the community of clinicians, researchers, media and public. Clinician researchers in other parts of the health system receive this knowledge and compare it to their own knowledge base or incorporate it into their own thinking, research and clinical work. Activities of Episteme thus involve a combination of observing, studying, debating, reflecting, theorizing, hypothesizing, researching, and communicating -- all of which establish the knowledge base that is then applied to treat patients.

Mastery of Episteme is typically the first preoccupation of the medical student. It is what is emphasized in traditional pre-clinical teaching. Yet episteme is not limited to the scientific domain. For example, recent trends in medical education have resulted in a significantly expanded humanities- and literature-based curriculum from which students can acquire knowledge in their formative training. Clouser (1972) as cited in Kopelman (1999) writes,

> Humanities can give students perspectives about themselves, their patients, and societies. It helps students to see their profession in its moral, legal, historical, or other contexts. Students can then reflect on the web of different commitments, tensions, and social structures in which they are enmeshed at the same time developing their professional skills (Kopelman, p. 81).

Thus episteme in medical education is diversifying. Yet despite this broad view, the dominant character of knowledge in modern medical education is still knowledge of bodily systems and their patho-physiological progressions.

Techne (Craft)

Techne is the craft or artful aspect of medicine. It is what is produced in doctoring and comprises the means through which that work is achieved. Whereas Episteme is abstract, Techne is practical. This entails among other things, observing and establishing rapport with patients; listening and communicating; writing prescriptions and ordering tests; conducting history and physical examinations; performing surgeries, and so on. Technology is subsumed within Techne in that the increasing use of technology alters, if not reduces, the Techne aspect of Physicianship. Technology also alters Episteme. This is

because the nature, scope, and limits of medical knowledge are constantly being transformed through the development of various technologies in basic medical and clinical research. Knowledge harnessed from such technologies has led to the development of more sophisticated technologies, which in turn harness knowledge of an even greater specificity.

Phronesis (Practical Wisdom)

Translated as 'practical wisdom,' Phronesis entails having the wisdom to know what best to do given the particular time, place and context in which work needs to be done. Phronesis is the opposite or antidote to dogmatic practice. Montgomery (2000) explains,

> Phronesis or practical reason…is the virtue of working out how best to act in particular circumstances that are not (and cannot be) expressed in generally applicable rules. (p. 60).

Waring (2000) makes a similar observation:

> Phronesis is a 'state of grasping the truth, involving reason, and concerned with action about human goods.' It is an adult trenchancy of insight into practical matters that is cultivated by training and experience. Those who have attained it are the *Phronimos*, from whom we take our ethical standards. Phronesis issues direction in individual cases. These directions are based on an intuitive grasp of the particulars of each case and the discernment of the relevant actions that manifest good conduct. In deciding what to do in a particular set of circumstances, the Phronimos must seize and weigh the relevant facts, consider alternatives and make the right decision. This requires a cultivated eye for what is essential and fitting to practical deliberation. The Phronimos has a cultivated insight into how to apply general moral knowledge to particular situations. (p. 142)

Montgomery distinguishes Phronesis from Episteme:

> Science is abstract and its rules are timeless, while patients are astonishingly variable—as are diseases and the results of therapy. Clinical judgment involves the tactful deployment of the knowledge and experience relevant to determining what is wrong with one particular patient and deciding what action is best to take on the patient's behalf.

Tyreman (2000) distinguishes Phronesis from Techne:

> Techne is primarily instrumental and a means to production.…To use a musical analogy, Techne describes the technical skills required to play

an instrument or orchestrate a piece of music; it says nothing about the musicianship of the person. Phronesis on the other hand, is without specific measurable goals. It is that knowledge which knows how to act and is able to respond to situations and challenges in accordance with the general expectations of the profession. We expect a cardiologist to know how to deal with heart problems no matter how unusual they may be and so demonstrate Phronesis. But in so doing he will also demonstrate Techne by, say, performing a heart-bypass operation. In musical terms, Phronesis is the musicianship rather than the technical skill of the instrumentalist, though without some technical ability it is not possible to demonstrate musicianship (p. 120).

Episteme covers the domain of medical knowledge, which can be abstracted, generalized, textualized and taught didactically. Episteme deals with the *science and philosophy* of medicine and *what the physician knows.* Techne, the unique skills of doctoring, is best learned through apprenticing and role modelling. Techne corresponds to the *practice* of medicine and *what the physician does.* Phronesis, being the wisdom of approach to the particulars of each clinical relation and decision, pertains to physician self-development and *who the physician is.*

A number of authors point out that it is erroneous to say, in remaining true to the original Aristotelian concept of Phronesis, that a medical student who is undergoing personal and professional development exhibits phronetic activity (Waring, 2000; Svenaeus, 2003). Authors note that the original sense of Phronesis was used to refer to the activity of a being who was already a *Phronimos*, a wise and enlightened person. Although others can strive toward that state, it has to be developed before one is considered to have Phronetic abilities. It is also not the case that a Phronimos exhibits practical wisdom sometimes, and not at other times. Rather, what characterizes Phronimos-Physicians is that they *embody* wisdom which permeates everything they do.

The concepts presented in this chapter on the structure of undergraduate medical education, professionalism, healing, and the Physicianship motto, (Episteme, Techne, & Phronesis) encapsulate the evolutionary impulse of medical education. These concepts will now be explored in greater detail through the perspectives of the twenty clinician-educators interviewed for the empirical component of the research. The following chapter is divided into sections detailing the scientific, institutional, and social changes in medicine, as well as clinician-educator thoughts on professionalism and healing. The final section presents an analysis of the data in relation to the concepts of Episteme, Techne, and Phronesis.

CHAPTER FOUR: EMPIRICAL RESEARCH

Interviews with Clinician-Educators

This chapter presents the thematic analysis of qualitative research conducted with twenty clinician-educators between September 2006 and June 2007. All participants were members of the McGill Faculty of Medicine, with the exception of one participant who was a non-academic family physician working in private practice. All participants had duties in both teaching and clinical service, with the exception of one faculty member who was a non-clinician scientist. Appendix C provides the demographic details of the sample. Four main research questions guided the data collection:

a) What relevance do the concepts 'professional' and 'healer' have to the physicians, the practice of medicine, and medical training?

b) What do clinician-educators have to say about the importance of 'listening to the patient' in clinical encounters with patients?

c) What do physician-educators identify as critical factors that facilitate or hinder the establishment of healthy doctor-patient relationships, given numerous technological, economic, and social factors that are changing the nature of medical practice?

d) What aspects of medical training provide the foundation for excellence in medicine?

Qualitative research methods were used to conduct one-on-one interviews using a semi-structured interview script. A pilot version of the script (see appendix D) was created in September 2006 and reviewed by Dr. Donald Boudreau. Upon completion of the first three interviews, the script was modified (appendix E). Participants were recruited through contacts established by Dr. Donald Boudreau as well as by word of mouth. Maximum variation sampling was used to solicit participation from a diverse sample of physicians. This diversity included an equal number of men and women and a range of years of experience, from less than ten to over forty. Ten participants had no involvement with the Physicianship program while the other ten had various degrees of involvement from curriculum development to teaching and mentoring. Interviews lasted

between 15 and 90 minutes, with the average being 45 minutes. All interviews were conducted either at the McGill University Faculty of Medicine, the Royal Victoria Hospital, Montreal General Hospital, Jewish General Hospital, or the Montreal Children's Hospital. Interviews were tape recorded and later transcribed. Any data revealing participant identity was removed to maintain anonymity. Participants have been given pseudonyms to facilitate the reading of the report.

Organization of the Findings

The findings are organized in five sections.

a) Effects of Scientific advancements on medical training;
b) Institutional factors affecting medical training;
c) Social factors in medical training;
d) The Physicianship Program, curriculum development, and medical pedagogy;
e) The cultivation of Phronesis and self-development in medical training.

Sections (a) through (d) are covered in this chapter, while (e) is the subject of Chapter Five.

Section One:
Effect of Scientific Advancement on Medical Training

This section documents the perception of clinician-educators on the impact of science and technology in the medical training context. The data demonstrates that changes in science and technology have exerted a profound influence on the medical training environment and the clinical thought process. Findings of this section include the following themes:

- The clinical versatility of recent graduates is compromised by their entry into increasingly specialized and rarefied fields of medicine to a point of diminishing returns for health care;

- The decline of hands-on laboratory training is a concern to some who consider it integral to the scientific requirements of doctoring and the advancement of knowledge and public safety;

- The proliferation of diagnostic technology, particularly scans such as magnetic resonance imaging (MRI), while beneficial to patients, reduces opportunities for trainees to develop basic clinical skill in detection and diagnosis;

- Senior physicians who were formally trained without the presence of diagnostic technologies are better able to use the diagnostics with prudence and cost-efficiency;

- Current trainees exhibit lower levels of critical thinking, retention of scientific information, and competency in conducting tasks such as history and physical examinations, due in part to the presence of diagnostic technology in the training environment;

- The recent trend of patients bringing media and internet-based medical information to the clinical encounter, while not seen as a major issue for training, is significantly altering the dynamics of the doctor-patient relationship;

- The trend of patients seeking treatments outside of the biomedical paradigm adds a layer of ethical complexity to the role of doctoring that did not exist in previous eras.

Concerns About the Expansion and Diminution of Science

Participants spoke about how science has changed over the course of their careers, both in terms of positive and negative outcomes for medical education. For example, Redden expressed a concern that scientific knowledge is expanding to a point of diminishing returns for health care. He spoke about how sub-specialization is narrowing basic scientific know-how of younger generation physicians:

Redden: Nowadays, we have young guys [residents] starting out, who start their [career] life rather confined: 'I'm going to become a cancer specialist'…or even cancer of the kidney, period. But in my time [forty years ago], that wasn't the way [it was], which in a way was good. I feel that I've had much more exposure to everything than do our present day practicing urologists. In fact I have a concern what when doctors cover one another on weekends, we are going to soon reach a point where they are going to encounter problems that they won't know how to handle [because] they've never seen anything beyond their area. You know that old line, what a specialist is, is someone who knows more and more about less and less until he knows everything about nothing. Which is true. There is some truth in that line…I feel that I've had a better career on account of having to do everything and having been exposed to everything.

Redden explained that the nature of specialization is such that it diverts the trainee's attention away from general expertise. Trainees thus have little choice but to delve deeply and devote their entire energy to a specialization in order to perfect it, which in turn compromises their versatility.

Redden: There is too much knowledge and too much specialized techniques so that you can't become expert in everything. So if you acquire special expertise -- that expertise is required of you, and therefore you won't have time or energy for much else. And you might get better and better at that, but at the expense of broader outlook.

Karim suggests that increased specialization contributes to the problem of poor physician listening skills.

Karim: I wonder if it's because we are all specialized and that we don't deal

with the entire problems of the patient. For me, even when I see a

patient, I'm focused on the infection. And if they have a heart problem

or a lung problem, they go off to their other doctors. I wonder if it's a

function of that we are all very specialized and that we are all in our

own little specialty that we may not take the time to listen to the other

problems that the patient may have.

Redden and Karim's comments reveal the limiting effect of scientific expansion on clinical competencies. Alternatively, Fuller's comments reveal the limiting effect of scientific decline. He remarked that students today are less familiar with basic science skills and provides examples as to why they are still essential to the doctor's role.

Fuller: There are virtually no laboratories anymore…And there has been a

downplay in the scientific experience as well as a tendency to admit

people [to medical school] with virtually no scientific background. So

when the students finish, they don't appreciate the scientific

foundations of various disciplines. This has practical implications. For

example, as a nephrologist, I'm very sensitive to the fact that

microscopic urinalysis is extremely important and makes important

contributions to diagnoses and care. Well, students now coming out of

medical school, many of them have never used a microscope. In

histology and pathology [courses], I understand that everything is now

on CDs and in histology they are offering the choice between

microscopes and CDs, and of course most students choose CDs and

they take it home and look at it. So, the culture of using a microscope

has disappeared. Therefore as residents they never use microscopes.

And therefore as young physicians they don't use microscopes. I have

fourth-year students come to me who have been through science and

60

four years in medicine, having never used a centrifuge. They don't know what it is. So you give them a urine to spin down, they don't know how to do it. They don't know how to use the centrifuge, let alone the microscope…I was complaining to Dr. X [colleague] one day about not teaching microscopy. He told me that internists had taken a poll and decided that it wasn't important to teach microscopy. Ok. That's why you have women, scores of women in any large city walking around getting antibiotics for urinary tract infections that they don't have.

Fuller expressed concern about the basic science illiteracy of today's students and provided another example, the dwindling practice of autopsy, as reason for concern:

Fuller: When I was house officer here in the 1960s, about 2/3rds of all patients who died had autopsies. Now it's probably about 12%. [The reasons are] multi factorial. There is a shortage of pathologists. It's not remunerated very well, it is labour intensive, and the culture of asking for an autopsy has disappeared. A hubris has developed among physicians who feel that they don't need the autopsy now that the CT scan has appeared. We are a culturally diverse society and physicians aren't sure of how so and so from Pakistan or from Saudi Arabia is going to ask for…because some religions forbid or don't encourage autopsies. So there are a whole bunch of reasons, but the net effect is that we don't do them anymore. And there was a magnificent article in the *New York Times* about three or four years ago on this problem. And they highlighted three cases where they found that the autopsy finding was different from what the diagnosis was. And in one case, for example the autopsy showed meningitis, in which the contacts of the individual were immediately treated and prevented them from getting sick.

This example of the declining rate of autopsies demonstrates the interplay of scientific and social factors in determining medical decision making. A tension exists between respecting cultural values of an increasingly diverse patient population and upholding scientific traditions believed to support the advancement of knowledge and public safety. The increased presence of technology, such as sophisticated imaging devices, has also contributed to the decline of basic science training.

The Impact of Technology on the Clinical Training Environment

Physicians spoke about advances in technology in terms of the benefits and consequences to patients, physicians, and medical trainees. Most participants believed technological progress was necessary but comes with unanticipated consequences. Some physicians suggested that one of the main consequences of technological advance for medicine has been the separation of doctors from patients.

Arneault: In previous generations, physicians had no other tools but their hands to examine the patient. Now it is considered by many in the profession that if you can avoid physical contact with patients as much as possible, this is a good thing. However, the lack of intimacy between physician and patients is a major barrier for the physician as a healer.

Beale: The surgeons and internists who have various scopes and things that they use…for example there are doctors who will start out an interaction with a patient by using a technology. 'I'm going to put this tube up your bottom end, in your top end, in your nose, in your ear'…because that's the emphasis in their particular specialty. And I think you are going to find vast differences between various specialties.

Similarly Ortiz expressed concern that simulation technologies in the learning environment could have negative consequences on learning the human relations aspects to doctoring:

Ortiz: McGill graduates are very proud to be able to do a history and physical…I just think we need to make sure that we do our

fundamentals and not get swayed by everything [advanced technology] that is so easily available….you just cannot program a computer to think like a human, never mind feel and smell and listen. One of the main things that McGill teaches is look at the patient and not at the machine. No one is looking at the patient. They are all looking at the machine. And so it's all just awareness to tell students, "Ok, the machine is there, here is the patient…look at the patient and try to figure out what is going on and then I'll let you look at the machine." And that's how technology will impact medical education. You have to know how to use it and also what mistakes other people can make with it. I think we are just too mesmerized by it.

Another theme involved the idea that increased use of technology has led, on the one hand, to an increase in diagnostic power, but, on the other, to an erosion of clinical skill building:

Graham: I don't find that students come to the paediatric ward knowing how to do a general thorough, well organized, discriminatory examination of many body systems, like the neurological, cardiovascular, or respiratory exams. So they get to my ward in paediatrics where I may have been used to try to help people approach a child differently or see how you might detect something differently or how you might have to use tricks to detect the same things that would be more evident in an adult. And now, rather than try to focus them on how to have those additional skills to do something well on a child that they could do well somewhere else, I'm finding that a lot of the time they don't know how to do it well period. They don't know how to complete a respiratory assessment. They can't translate that into a paediatric patient. Because they don't know how to auscultate the chest and look for murmurs period, so their performance on a kid is maybe even worse.

Graham: It's not viewed generally that clinical assessment has clinical value

anymore because there is so much more that is dependent on tests.

I'm from the group of people who believed that the cardiologists made

diagnoses by their clinical examinations. [Now] we are operating in an

era, where I might have good clinical findings, but I might find that the

cardiologists never tell me anything until they've seen the

echocardiogram. They don't even offer an opinion of clinical findings

until they do an echo, which is a test that is not accessible to me. So

there is less and less reinforcement of those clinical skills. Whenever

they [the trainees] want to consult a cardiologist…they never hear

what the cardiologist's opinion is of the ausculatory findings of the

heart. How are they to check on the accuracy or validity of their clinical

findings? I just can speak for what I see happening here. I suspect the

trends happen in other domains too. We [used to] spend hours going

through neurological examinations of kids. You'd sit there and report

out the physical findings. Now, we get CT head or an MRI so frequently

and with relative facility that the general question that the kid might be

a little weaker on the left hand side is enough because that's enough

for you to do a CT scan and then when you do a CT scan, you find out

whether there is a hole in the head or a bleed or a tumour or whatever.

And what does it really matter if I can distinguish between grade two

or three strength on the upper vs. lower extremities and different

reflexes in the end because the answer is going to come from the CT

scan. So it's a change that needs to be acknowledged. Is this by

decision? Is it by design? Is there less of an emphasis on clinical skill in

medical school curriculum? That's the part that I don't know. But the

product that I see is different. And so it's the more exceptional, the

more advanced trainee who has acquired the clinical skills.

Fuller and Isaac made similar comments. Using imaging technologies as examples, they spoke about the reduction of opportunity for training in history and physical exam taking, and critical thinking and analysis.

Fuller: And I guess the truth is that with the technology evolving, you know, you don't have to appreciate the scientific aspects of medicine anymore. Instead of looking at data to see what's going on, it's easier to look at the CT scan which will show you. There is that effect too...the fact that the technology has usurped thinking and analysis to a certain degree.

Isaac: It is my impression that the doctors that we are training, students who cannot function without tests...that the older doctors who didn't have the tests relied more on history and physical exam. Nowadays, that's not the case. I think that people are very uncomfortable practicing without tests. So I think the technology has become part of the training. Has that technology reduced their ability to do physical exam and clinical judgment? Yes I think so. Is it their fault? No I don't think so.

When asked if he thought the reduction of clinical competencies among medical students was a concern, Isaac responded with unequivocal certainty that the evolution of diagnostic technologies have been a boon for patients, but an unfortunate barrier to experiential learning for physicians in training.

Isaac: Many people in this hospital go to the operating room for appendicitis, a very common easy operation without needing a CT scan first. Now, we treated appendicitis before CT scans. And almost as well, by the way. But what happens now is that the resident or the medical student on the surgical service...gets called down to the emergency room to assess a patient who has already had a CT scan showing appendicitis. So the challenge of doing a history and physical exam to prove the

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diagnosis has disappeared. And yet those people ...ten years, five years,
ten minutes later find themselves [graduated and] in their offices trying
to make that evaluation and they haven't really had the experience of
doing it. And that's not their fault. It's the way medicine is practiced. So
unless they get out into the community, and maybe they will learn it in
primary care offices, but they don't learn it very much in the hospital.
Technology is enhancing patient care. I don't think we can argue with
that. I mean the number of normal appendices we take out is about
2%, and it used to be 20%. So there is no question that it enhances
patient care. Whether or not it promotes clinical judgment and
listening and physical exam, I suspect that it might be in conflict with
that a little bit.

**Martin similarly explained the benefit of technology for patients and the consequence for
training, using the echocardiogram as an example. The quotation reveals an interesting
insight: his efficient use of the technology today is enhanced by the fact that the
technology didn't exist at the time of his formal training:**

Martin: When I was in medical school, there was this whole long description of
            the way the heart murmurs and so forth. After 30 years in clinical
            practice, basically my ears can hear a heart murmur. If there is one or
            there isn't. And I know the difference between a systolic or diastolic
            heart murmur, but I don't go through mental gymnastics trying to
            capture everything about the heart murmur because I can get an
            echocardiogram that gives me a good idea of what is going on. On the
            other hand, I am the gatekeeper for ordering the echocardiogram. If
            my ears don't hear a heart murmur and don't think that there is a
            problem, then I won't order it....[but] before they had
            echocardiograms, I think people had much better skills in being able to
            interpret clinically what a heart murmur is.

Lilly noted that in the field of neurology, diagnostic scanning technologies have replaced manual detection exercises only recently. She suggested that the technology and the manual exercise could be conducted in tandem, each enhancing the other. However, that approach is limited by the fact that patients are referred to neurology now only after a scan has revealed a clinical finding. This reveals a major reorganization of health care.

Lilly: Now you can get the scan and you don't need to do the exercise [neurological test]. It's not entirely true but it is partly true. Or you might do the exercise and you get the scan and they don't match and sometimes that shows that the exercise doesn't work that well and it sometimes shows the scan to be not relevant to the problem. But definitely that way of thinking about it…as like first let's sort of solve the problem with our clinical skills and then we will determine the direct investigation, [now] they don't even consult neurology until they've got the scan.

Students' Changing Approach to Absorbing Scientific Information

Senior physicians expressed awe at the amount of scientific information available to students in the current training context. Yet there was a split between them as to their perceptions of the competency of younger generations in absorbing and retaining knowledge. Some participants felt that the younger generations are smarter than their predecessors due to their relative ease at navigating the vast and growing areas of medical knowledge. Others observed that while students are good at retrieving information, they lack critical appraisal skills to assess what they read. One participant observed that students today have difficulty retaining basic skills such as skills involved in taking histories and conducting physical examinations of patients.

Martin: And the amount of knowledge that students have to acquire. I mean it's awesome. I mean when I was in biochemistry [30 years prior], there were a lot of X's in these equations. And I was just showing one of my patients this morning…we were talking about something about infertility and I opened up all my books and showed her these

molecules of all the steroids hormones….but the stuff that they learn now is volumes of new knowledge that they have to synthesize.

Isaac: I think students are brighter now. But I'm sure that's true in every specialty. I think my daughter is smarter than I am. And I think that perhaps that I am perhaps smarter than my father was…[laugh]..if I could say that. But do you know what I mean? In terms of being able to manage information…because there is so much more information. So there is no question that I think they are a lot better.

Quarta: They [current students] are smarter. Each generation gets smarter. They are savvy. I tell them, if I were to go to medical school now, I won't pass. They laugh…They are capable of doing much more, mind you the information is at their fingertips. For us it is up here [taps forehead]. We have to store it there. I think I still store it there. The day I stop storing it, I'll quit.

Graham: The kind of solid factual knowledge about disease, anatomy, pharmacology, which were probably taught to me and my peers in a very traditional and didactic way does not seem to be as strongly retained, grasped or used by more recent trainees. And on the other hand, they also have a much more rapidly expanding field of knowledge to try to get under their belts with resources to quickly access information at their finger tips that I never had available to me…. And [me] having been taught in a very traditional way where I may look to myself for a lot of answers, I know that many others are looking to reference materials more quickly but perhaps also with good facility. So the use of internet, the use of palm based programs, the use of on-line texts etc, it is very different now. Maybe it's reasonable to expect people to not have so much memorized that they can rely on to use in different situations. If they have a good idea how to integrate

information and use resource material on an as-needed basis as they are trying to work things through....

Lilly: In pharmacology small groups [students] have to present an essay. It's an opportunity to show off how good they are at that. And what they are good at is Googling. They are not all good at filtering what they pull off the internet. Critical thinking is not being systematically taught and it's not there already. And not in all of them. I think that what is different [today] is that the requirement [for critical thinking], if anything, is going up. There is more and more information more and more readily available. The evidence-based medicine stuff is coming along. You are supposed to be able to think about the science of it and filter what the drug company told you vs. what the Cochrane review told you and know how to go about doing that sensibly. And I don't get the impression that, at least the second-year students have the skills. Nor do they seem particularly bothered by the lack of those skills. Maybe I'm being heavily influenced by my last pharmacology group who did not particularly overwhelm me with their presentations. I challenged them: "You are basically taking information that you took off a website. But whose website is it? Do you think this is true? What's the nature of this information?" And they seem totally baffled by the question. "Couldn't this just totally have been made up? Is this someone's imagination?" And it was like I was speaking in tongues. I sort of thought that the internet age would have brought with it extremely critical thinking. But you just sort of accept that once you push return on Google that what you get is correct. You think that automatically by seeing that there are just so many different...you rapidly can see ten different perspectives on line. It might make you think twice about most of it.

In other ways, some participants didn't think students were much different today from previous generations:

Lilly: I don't think so [students today having different competencies from before]. I think some people are inclined to be very thoughtful, and some people are inclined to be literally more mature and able to think about those things. They have had more life experiences with them to put this stuff into bigger context. Others are 19 [years of age] and have no idea …but they will grow up eventually. I don't know that there is much difference [from the past]

Martin: I've been doing this ITP [Introduction to the Patient course] course since 1982 so it's been 25 years or so. And I don't feel that the students in the very beginning are really much different now than they were 25 years ago. I think that most of them come to medicine with a certain ideal. They had some reason to motivate them to become doctors. I think that they feel like there is some sort of calling or interest in medical science. I don't think that they are that much different.

Eaton: If I try to think back to performance/behaviour of students now as opposed to ten years ago, even twenty years ago, I don't see a difference that I'm aware of.

The Benefits of Advanced Technology

A number of participants did not express any concern about the role technology is playing in the training context. One felt that technology had no effect on a trainee's ability to learn how to a conduct proper history and physical examination. Another participant spoke about how technology is facilitating efficient use of time. And a third participant spoke about the appropriate proliferation of technologies in relation to the proliferation of complex diseases in the general population.

Duchesne: I don't see it [technology] as a cause in the change in physician behaviour...the bottom line is that if you don't get a good history or

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physical, you will be less able to order the right tests and imaging procedures.

Eaton: I think most of it [technology] is for the good. The main technology change that has affected my life is digital technology. In my office, I send patients down for an x-ray, they come back, I click on the screen, there is the Xray. In the hospital, I used to spend maybe 2 or 3 hours a week going to the x-ray department trying to get them to find x-rays. We used to have to call the lab to get results, and now, you get it on the computer right away and access here at my office. For radiology [I can get the results on my computer at home] which is excellent. If I am on call I can look up the film [for] which I don't have to necessarily go into the hospital. Sophisticated testing…I don't think that has been a detriment at all. It's only been a benefit.

Jameson: I think the improvement in diagnostics is paralleled with the expansion in the nature of the diagnosis. We have more diagnoses and more diseases today so I don't think that it [technology] changes the fundamental mental process that the doctor has to do…because the number of diseases was less before. Either they [patients] had consumption or they didn't. Now we have more specific information about what consumption is. So there are more tests and they help us. They help make the diagnosis, but there are more diseases to diagnose as well. So it balances out.

Science, Knowledge, and Technology
in the Public Sphere and Patient Population

Many participants noted that patients increasingly bring medical information from news and internet sources with them to their appointments. While this trend exemplified the change in dynamics of the doctor-patient relationship, no participant felt that this new reality had a serious effect on training. Medical information brought by patients was seen as beneficial to patient welfare and continuing medical education for the practitioner,

but was often derived from unreliable sources. Some felt the burden of having to correct for misinformation derived from sources of questionable credibility.

Houle: The big change that has happened in recent years has been access to the web. And that has its good and its bad. Maybe patients are a little more sophisticated when they come in, but they also come in with some of the garbage that makes it very difficult to interpret. And I'm sure that this is causing a rift in patient-doctor relationships because the doctor on the other hand doesn't necessarily have the time or the willingness to review the whole web…and a patient comes in with 20 printed out sheets and says…what about this, what about that. I had somebody last week who came in with sheets of paper taken off the internet and said "Ok, what sort of cancer do I have?" and there were 12 different cancers found in the breast. I said, "Ok, well you don't have this, you don't have this, you don't have this, you don't have this. This is the one you have." [she said] "Well you know, the chance of dying is" I said "Look, you are losing focus on what has to be done. You have cancer in your breast, hopefully the outlook is going to be very good for you. We can't tell you more until we get it out. There are a lot of things that have to be done to evaluate it…we have to get it out. And once we get it out, and we know more about it, that's the time we sit down and talk about it. Because at this point, I'm not going to give you a course on breast cancer because that would take a long time, and that won't be helpful to you. You want to know about the thing that you have, not what other people have. And so when I get that material back, then we will sit down and talk, and I can explain to you what is needed and what approach we should take. So although you would like to talk about it today, I can't give you this information."

Isaac: What I try to do in many cases is pre-empted. I have a bunch of booklets, the MD consult patient handouts. For any disease that is a

little bit challenging, such as breast cancer, which is a highly charged emotional disease, I ask them to read it and come back and see me the next week and we will go over it. But I say if you need information, this [pamphlet handout] is the sort of information that you should be looking at, not the willy nilly stuff on the internet…because it is very frustrating. Much of what you find on the internet, you know better than I probably, is advertising. If you look up hernia repairs, you will find 2500 sites that want you to go there to have your hernia fixed, rather than there being an objective evaluation of the techniques.

Eaton: I feel that doctors who are confident in themselves are happy to have other opinions, because they don't want to miss something. I've had patients who have seen other [specialists in my field] who thought of things I hadn't thought about. But if you are insecure, you don't like that. So if a patient comes to me and says, you know, you are treating me with this but I read on the net and this and this….it's challenging because you have to deal with it. And some of the time it's garbage and you tell them in a nice way, that, yes, you have heard about it but in their case it isn't pertinent. Or, it's something which you haven't heard about and you have to find about…I've actually gone and looked things up. I find that it is stimulating and makes me evaluate what I'm doing and saying. To [either] say, "I know that information but it's not relevant" or "I don't know that information and I'd better get back to you". But I know some doctors who feel very threatened with that and [feel it is] questioning their judgment. So it all goes back to the question of the self-esteem of the physician.

Similar to patients bringing information about their disease from media and the internet, another recent change has been the increased access and interest in treatment options derived from sources outside the biomedical paradigm. Again, the issue was not considered a significant barrier to training. Yet one participant spoke about how an

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incident involving a patient's desire for alternative treatment brought into question the extent to which dissuading patients from 'alternatives' correlates to the physician's responsibilities according to the Hippocratic Oath. Some physicians discourage the use of alternatives across the board, while others present a neutral stance. Regardless of their position, the majority of participants said that the one message important to communicate with patients is that exploring alternative therapies should not be thought of as substitution for conventional treatment.

Graham: I think we often don't ask about the alternative care that families choose to use either as a replacement for traditional medical treatments or complementary therapy. We often don't know and often we don't know because we didn't ask. But I have progressively increased the frequency with which I ask those kinds of questions. I'm not that well informed about some of the therapies like …. Homeopathy, vs naturopathy, vs herbal… by and large they are harmless. I don't dissuade families from using these kinds of complementary therapies, but I do try to dissuade substituting. At least to convey my own faith in the medical treatment that I'm suggesting and to not imply that they have an either or …that it's a choice. I haven't really run into many situations where families didn't want to comply with medical treatment but were choosing an alternative therapy that by doing so were putting the child at risk. I mean I've been involved in discussion about others cases but haven't had to navigate that one myself yet.

Karim: I think it [issue of alternatives] should be left up to the individual physician to decide. I have patients who take alternative medicines. I tell them I don't promote them. I say, "Listen, if I prescribe something for you, I don't know what the interaction will be with the alternative medicine." I leave it up to them to decide what they want [to do]. Sometimes they go to the homeopath, and they get the naturopathic

medicines. I don't know what's in there. I don't know if there is something that can be potentially toxic or have drug interactions with antibiotics I'm prescribing. I tell them don't mix the two. You never know if there is an interaction. If you want to stick with one then do that. But don't mix them. But I don't think the medical school should take a position on that because there are some Asian remedies that my mother has used, and I tell her 'don't mix medicines'. You either take the Asian medicines or the western medicines. Those are homemade. You don't really know what is in those. I remember there was one patient who took a Chinese medicine and it was basically Digoxin, which is a cardiac medication. And usually I tell them not to mix the two. I'm not saying that it's wrong…I'm sure there are some benefits to natural medicine but I don't mix the two.

Chaisson: Alternative medicines, that's all about managing information. Because that is patients bringing in information. And I'm not going to be educated or know about everything a patient is going to bring to me. So how does one manage information? Do we send the patient away, saying, "I'm going to have to meet you again in three or four days?" Or we have to decide that this is something urgent, and I have the patient wait in the waiting room while I either go on line or I phone somebody? Or do I have the patient go online with me? And that's all about managing information….There was a fairly significant problem that happened in oncology and paediatrics about a year ago where there was one patient who was spending a lot of money going to Mexico or the US [to seek treatment alleging to cure cancer] and then another patient got interested, and then people were starting to ask for money and approval and documents, and it was sort of a bit of a wave. And in fact, a group of physicians ended up taking this to the college of physicians and surgeons of Quebec to get advice because, at what

point do we tell a family, "look, this is crazy that you are going to take your life savings to something of which there is no proof about and might be harmful?" ...Our Hippocratic oath tells us that we should do no harm. And people [physicians] were starting to feel like this was getting into harm. That it's not our business most of the time when families try alternative medicine, especially if the child is in a palliative situation. But if somebody was going to take twenty thousand dollars, which they obviously didn't have, to do something that was potentially harmful, but, where is the proof or evidence that it was harmful? And that's the kind of managing information...You know these were very experienced physicians that were grappling with this.

Beale linked the increased use of alternative treatments with the iatrogenic effects of biomedicine. He suggested that the often ambiguous results of diagnostic technologies create insecurities in patients, for which they seek alternative solutions.

Beale: Conventional medicine messes up often. Often we do things because we've always done them that way. And given my own biases, usually what we do is we overmedicate people. It is not uncommon for me to see patients taking 15 different medications every day. And the patient is not necessarily better off for it, the patient is worse off for it. The patient may have had a sophisticated test because we do tests. And the test may have a negative impact, either on how the person feels about himself, or the test may for example...well, mammograms. Imagine yourself as a 35-year-old woman and the doctor says "we need to do a mammogram". And he says "oh we got the result back but don't worry. It's says that there is a little bit of an abnormality here, and it should be repeated in six months...but don't worry." Imagine yourself being like that...and there are all kinds of women out there like that. Don't worry? Are you kidding? So we do a lot of testing. It's a good way of ending an interaction with a patient. Either writing out a prescription,

or filling out a test requisition. We do that far too much. So to me it's

not a surprise that 75% of Canadians use alternative medicine.

This section highlighted clinician-educator perspectives on how science and technology have changed over the course of their careers and the impact of these changes on medical training. The data was organized to demonstrate that scientific and technological change impacting medicine occurs both within the profession itself (e.g., the increased use of diagnostic technologies) and in society at large (e.g., patients' increased use of the internet to retrieve medical information and advice). The next section highlights a number of institutional changes to the hospital training system and the perceived impact on medical education and patient care.

Section Two:
Institutional Factors Affecting Medical Training

The data demonstrated that a number of institutional factors impacted medical training and patient care. These findings include:

- Patient satisfaction of service received is dependent as much on the smooth functioning of the hospital's institutional hierarchy as on the physician's professional and healer approach;
- Physicians experience increased institutional bureaucracy, decreased autonomy for the delivery of cutting edge healthcare, and increased participation on interdisciplinary teams for service delivery;
- The increasing level of expertise in allied health disciplines such as nursing and physiotherapy has significantly altered the work dynamic between physicians and other professionals;
- Some medical students entering the hospital training environment overestimate the level of autonomy given to physicians in the current context and need to psychologically readjust in order to fully participate in the changed, team-based approach to care;
- Physicians report that their skill and ability to listen and incorporate patient subjectivity in the clinical thinking process is hampered by the fee schedule requiring them to limit the number of minutes spent with each patient;
- The recent institutional changes involving the introduction of shift work regulations creates a gap in values concerning altruism and commitment to the patient between older and younger generations of physicians in the teaching hospital setting.

The Institutional Support Structure

Some participants spoke about the importance of recognizing the work of an array of medical and non-medical hospital staff supporting the physician's role.

Quarta: If the parking lot attendant doesn't have a space for you, you don't
            park your car. If the place is not clean, if the cleaner doesn't come and

clean, you don't have a clean place. And if the patients aren't triaged and in the right place, patients won't know where to go. [If] the nurses don't do their help in caring for the patient, 50% of our work isn't done. So it's a team effort. It's not just doctors and nurses; it's a whole paramedical team.

Graham similarly stated,

Graham: The clerk that they [patients] registered with, and the nurse that triaged them, the person that put them in the room, and the nurse that saw them in the room…if they came through the whole experience before they saw me and nobody listened to them, it's completely different than if all along the way they felt that they had support and clear directions and understood what to expect, and when they said they needed to go to the bathroom or that their kid was hungry, or they worried about getting home to get their other kids from school…that someone heard them and gave them a response that they could do something with. That's very different. That sets it up for them to be a lot easier to talk to when I come in the room. People who feel that they weren't listened to before they started to talk to the doctor will more easily feel that the doctor is not listening to them. And I think we have to work all together.

Increased Bureaucracy, Decreased Autonomy, & Increased Participation on Teams

A number of participants spoke about the reconfiguration of health care and how this impacts on the requirements to demonstrate Physicianship attributes. For example one of the surgeons suggested that increased specialization coupled with the team environment reduces the impetus to develop the physician-healer role.

Isaac: A surgeon is not just a general surgeon anymore. In this hospital we have about six or eight different subspecialties. One person only

operates on stomachs, one person on colorectal. But I think the higher you get up, the more you get involved…we are talking about team stuff…for example, a well functioning surgical unit provides those [psychosocial] services, but I'm not sure that the surgeon does. In our team approach to breast cancer patients, for example, we have a dietician, we have a social worker, we have a psychologist, who are all intimately associated with the breast centre. So perhaps even better than me there is a psychologist who runs sessions to help them deal with the [psychological issues]. My job is to help them be aware of it and to refer, but to actually deal with the psychosocial issues myself, I don't do it very often.

Jameson advises medical educators and curriculum planners to help students adjust to the new team-building emphasis of clinical culture:

Jameson: Stress to the students that they are part of a multidisciplinary team nowadays. [Make them] understand that they are partners with their patients in health. It is something that needs to be stressed…interdisciplinary teamwork is certainly becoming more necessary now. Working with other health professionals, technologists, and patients, [physicians] are one component in that team. There is a certain perspective of doctors that they are the main show. And often times they do take leadership positions, which is fine, but they have to balance that with taking advice from other people.

Jameson continued by saying that many medical students come to the hospital with high expectations concerning the degree of autonomy to be granted to them and then have to readjust to the reality of the setting. He stressed that the complexity of diseases presented today require increased cooperation with the expanding disciplinary expertise of other allied health professionals.

Jameson: They [medical students] think they are going to be in charge and in power, and it's not that they don't have responsibilities as a physician, but they have to balance that against the complexity of what we treat. People [health professionals] have increased their skill of expertise. The [increasingly] bureaucratic nature of our organizations also. Cutting edge is not the way health care is delivered [anymore]. We are becoming much more institutionalized. There are a lot of levels of hierarchy, leadership and control and so on. So people have to adjust.

Institutional Regulations

Ortiz and Sauvigne spoke about the role of institutionally dictated regulations such as the number of hours a physician can be on call. These regulations, in the eyes of some senior colleagues, threaten core values of doctoring including altruism and commitment to the patient.

Sauvigne: The old school [approach] was that when you are on call, you start in the morning and the next thing you know you could have spent 36 hours in the hospital…and then…eventually you go home and go to bed and come back in the morning. And it was worse for surgeons. When I was a resident [10 years prior], it was still routinely done that surgeons would be on call for a whole weekend - 96 hours. I think that that is inhuman….So to go away from that is a good thing. It doesn't take too many studies to show that you actually are not a particularly bright physician if you've been up for 36 hours. God forbid I would not want a surgeon who hasn't slept for two days to be operating on me. So in order to correct that, there are regulations about how many hours and on call [one can work] and if you've been on call, you get to go home. And the backlash to that is that a lot of people have felt that well, if I'm a resident on call tonight, I'm going to be admitting patients and then the next day, things happen to those patients. I have to take care of

their treatments, they have to get some tests. So either, I go home in the morning, I sign out, or I stay the whole day and take care of that patient. In the past I would have stayed the whole day to take care of the patient. Now, because there is a limit to [work hours], you're not supposed to be spending more than 30 hours in the hospital, come morning or noon time I sign out. And there has been a lot of discontentment from older attendings because there is the sense that "well you can't just drop your patient. This is your patient. It's your responsibility and it's to the detriment to the medical team and the patient that there is no continuity." Which is in some ways true.

Sauvigne demonstrates how changing institutional regulations can simultaneously eradicate dangerous work practices and overturn the traditional concepts associated with the virtues of doctoring. The virtue of altruism, for example, is now being reconsidered within the context of institutional based care. Ortiz adds that in the French hospital system in Quebec, shift work has been a much more established practice and altruism is assessed differently because of that. She stated,

Ortiz: Perhaps society and the older generation is not set up to accommodate [shift work] in just a practical sense. For example, I used to work in a French hospital where they have more strict time rules. On Monday, some staff will leave at 6:00pm and leave the other residents with any work that needs to get done. And on Tuesday, they will tell the others to go home and they will take care of the work. Is this selfish? Is this altruistic? It will be interesting to see how it will play out when this [current] generation moves up a bit more into actually taking over when there is not this clash with the other generation....

Another participant spoke about a correlation between changing regulations and the changing attitudes of more recent residents. She noted that the trend has been to give less responsibility to residents and increase the presence of higher levels of management

in day-to-day affairs. These institutional changes are coupled with a perceived increase in the self-entitlement attitude of newer residents.

Graham: Somewhere between 10 and 15 years ago, I think there was a
            significant change …in terms of responsibility in scheduling and off-
            service involvement and the directorial [involvement] of the attending
            staff. As [compared to before], where more responsibility for things
            [was given to] residents themselves. So there was a change then, and
            then there was another change, maybe in the late 1990s and 2000,
            with another kind of a change where it went to the staff not only being
            more involved, but actually now there is a bit of a sense of, it's the
            resident's right to the post call, the resident's right to leave the clinical
            area to go to teaching, to leave at five o'clock. So if there is more work
            to be done, that's the responsibility of the staff. "Because I'm a trainee.
            So, I'm leaving to go to my teaching. If there is something that should
            be done, I guess the staff should take care of it. Because as a trainee I
            have my right to go to teaching." So there has been a bit of a change
            somewhere around 2000 and I think that's more or less where we sit
            now. …..

A few participants commented on the effect that the fee-for-service structure has on the ability of the physician to perform according to Physicianship attributes.

Beale: I'm not surprised that listening is felt to be a problem for a lot of
            reasons. Physicians now are no longer willing to spend the time with
            the patient. Because if you take time to listen to all things that concern
            every patient, it would occupy an awful lot of time, and physicians in a
            fee-for-service type of practice would be prone to try to limit what they
            listen to and what they deal with at each interaction. Perhaps
            physicians who are on salary or on some kind of an arrangement
            whereby, regardless of what they do, their earnings will be the same,

would be more prone to listen to a patient who needed being listened to.

Karim: I mean I have to tell you that my husband is a family doctor and he works in a busy clinic. And if there is a set time and he will tell them, "today, I don't have time to discuss all these problems but come back in a week and we will set an hour aside to discuss all that." But I think that it's just a lack of time. It's terrible to say…When I used to have an outpatient clinic, I was the slowest one. It was awful, but the fact of the matter is that we get paid fee for service. And if you see three patients in an hour, vs. 20, well you are not going to make a lot of money. I think that if the remuneration was changed, you wouldn't be so driven to see 20 patients in an hour. I mean they have their overhead to pay, they have their secretary to pay…

This section highlighted a number of institutional changes involving increased hospital bureaucracy, changes in the work dynamic of hospital-based interdisciplinary health care teams, and new shift work regulations altering the perception of selfless service as an inherent responsibility of the physician. In the next section, social, demographic, and cultural changes within medicine and society at large will be explored.

Section Three:
Social Factors in Medical Training

This section pertains to changing social, demographic, and cultural changes that have emerged in society at large and have influenced medical practice. Findings of this section include the following themes:

- The culture of medicine, including the ideology of professional responsibilities, is correlated to the cultural shifts in the public sphere, as evidenced by the breakdown of professionalism during the eras of societal revolution [e.g., 1960s-1990s];
- A shift in social structure and values is challenging the traditional definition of altruism within the medical profession;
- Younger trainees are oriented more toward lifestyle issues, extracurricular activities, and self-care as compared to the older generation;
- Some perceive a decline in manners and common decency among younger generations in society, including younger medical students;
- A perception by some that each successive generation is smarter, more willing to collaborate on teams, more adept in navigating the vast scope of medical knowledge and research, and have less mental barriers in terms of caring for the increased culturally and sexuality diverse demographic of the patient population;
- The observation that trainees are more honest/less embarrassed in communicating their needs, their limits, their thoughts and feelings to teachers as compared to previous generations;
- The change in morbidity in the patient population from acute illness to chronic, and the increased complexity of disease in an aging population is creating challenges for health care delivery;
- The increased age and frailty of the average patient in teaching hospitals reduces the number of patients from whom trainees can learn the signs and symptoms of disease.

The Breakdown of Professionalism Through
Societal Revolutions [1960s-1990s]

Participants spoke about how societal changes affected professional values and behaviours. They recalled how the social revolutions of the 1960s and 1970s, while on the one hand may have been necessary for society, also gave way to a culture of medical practice that dislodged the professional requirements of doctoring. Arneault, for example, noted that physician individualism was a movement contrary to professionalism, which emerged from the1960s. Before that era, physicians had a code of medical ethics preventing them from behaving in ways counter to patient welfare. Now, after many years of shifting in societal values, he is witnessing the reconstruction of a professional culture in medicine.

Arneault : Why do you think all this professionalism bullshit came along? Because physicians were acting as though they were individuals, as though they didn't belong to a profession, as though they didn't have obligations to the profession, as though they didn't have obligations to society, as though they had no relationship to the guy over there, who is a physician also, just because they don't know him. And what do they owe him? What do they owe the patient? All that stuff had, sort of, fallen by the wayside. [This happened] around the 70's and on. It got worse and worse, so that by the time of the turn of the century, people acted like they didn't have any obligation to anybody. [And it] happened because of a breakdown in social structure. You know we used to have people be much more hierarchical before. They trusted their government; the government was much more representative by them. They all had a hierarchy which they knew and trusted. Professions had a hierarchy. People lost that. And why did they lose that? Well because of complications that happened in the 60s and on. And it was bad for medicine…

Quarta: …because we became a little freer [in the 1970s]. There was a freedom. There was no code of conduct…dress code, hair code, facial

appearance code. After the hippie times, you had to be told 'hey, you have to come dressed a certain way: brush your teeth, comb your hair. It used to [have to] be told [to staff] in the 70s. Because you can't go near a patient if you haven't had a shower in five days. It's a very physically intimate profession…

Chaisson: There was a certain amount of professionalism that went on [at the time of my graduation some 30 years ago]. The doctor was seen more as god and didn't share as much information with patients. But there was an implicit commitment to the physician-patient relationship. I think [we] went through a period when the physician patient relationship wasn't very healthy and very well focused upon. And I think now, the physician-patient relationship has become an explicit topic of examination, study, and education. I guess the pendulum swings, and I like that there is now an emphasis on Physicianship. The unprofessional physician behaviours were becoming a media focus, a patient focus. This was part of what people were becoming discouraged with. Even us as professionals…were ashamed of those things by our colleagues from our colleagues. So now that we are able to describe it and evaluate is really important.

Changing Conceptions of Altruism, Lifestyle, and Self-Care in the Training Context

Physicians reflected upon significant social shifts marking the current period since the year 2000. Older physicians as well as those who had ten or less years of work experience felt that a very recent shift in values had taken place. There was a general sense that all of a sudden trainees now do not see themselves offering the same kind of altruistic service to the profession as was the case prior to the year 2000 and for the older generation. Yet some challenged the dichotomous image of the older altruistic physician and the younger self-interested trainee, suggesting that self-care and altruism go hand in hand and that the focus on extracurricular activity of the younger generations will give them the rejuvenation necessary for service.

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Chaisson: There is a bit of a trend in physicians to try to do more self-care, which some people define as "I'm not going to give as much as I used to give." For instance, residents have contracts [regulating] that the day after they are on call, they are off. But for us faculty, we do night call, and we are just right back to work the next day. We don't get a day off, because if we are not there, we are not getting paid, which is a little bit crazy. Because people before my age used to just be on call all the time. You never had any time off. So the whole concept of self-care, we are still trying to figure that one out as physicians. And those things are things we can look at under [the] Physicianship [curriculum]. It allows for discussion about those things.

Beale: I've practiced for 35 years and have gone from the initial state, wherein it was not appropriate for doctors to think about having a life because they were supposed to be dedicated [to their practice], and if their practice allowed, they could spend time being friends and fathers and husbands and wives, and that was something that was inculcated into one's thinking. When I did an internship for a year, for every second night, I was on call. I wasn't supposed to think about that as being a burden, I was supposed to think about that as: that's the choice you've made in the profession. Over time, there has been a dramatic change in the quality of life. Lifestyle has become a major issue. I interact a lot with medical students, and a lot of them are not reluctant to say, "I want to be a such and such specialist because I like to canoe and sail, and ski and whatever it is." So, that's been the evolution - commitment to being available for a patient, or indicating to a patient where he or she can go if the doctor is not available is a thing of the past.

Duchesne: There is a huge difference in terms of what people are willing to sacrifice in terms of their quality of life. I put in one hundred hours a week during my residency [ten years ago], and all of a sudden these

medical students and residents are much more resistant to that. They all want to have a good lifestyle, which is a word I never used when I was training…You go into it knowing you are going to work like a dog. And now people are saying, "oh you know, I have hockey practice or something."

Duchesne: There are people who are in the profession for 30 years. And weekends, even if they are not officially on call, they will come in to see any of their patients. But the younger people are saying, "well if we are not being treated with the same respect, why are we going to do that?" I find that with the deterioration of public opinion comes also a perception from people going through that "if we don't have the same kind of respect, why should we sacrifice…working so long hours, so many hours?"

Quarta: I don't think medicine can work in shifts. I think patients need to identify with their doctor rather than an unknown entity which is an amorphous form of groups. Sure, nobody can be here 24 hours. I'm sure patients understand that too. But I don't think for the sake of my lifestyle, or my weekend boating or my golfing. ….they [patients] need to be able to say "I have a doctor." That could be a family doctor. That could be a specialist of any kind.

Isaac: I think that my sense of myself compared to my father and my daughter compared to me, each succeeding generation is more lifestyle-oriented in terms of taking care of themselves and signing out. It's very hard to find a physician after 5:00pm in some specialties. I'm not sure that that has increased healership. It's certainly increased lifestyle, and the argument may be made that a well rested doctor with a good lifestyle is going to provide better care than somebody who is not. But the opposite argument can be made as well. As an example of

lifestyle, when I was a medical student coming here, everybody used to be worried where their locker was. Now the students come at the orientation session and the single biggest worry is 'what about parking?'. It [the change] is huge. The money that is available in terms of bursaries and stuff. I mean when I was a student, parking was not an issue. The issue was: where you were going to get your money to buy supper? So I think there is a huge difference.

Ortiz questioned the idea of altruism from the older generation. She suggested that the seemingly selfish activities of current trainees may make them better healers. She pointed to a clash in values between generations:

Ortiz: Someone just pointed out this quote to me by Hillel: 'If I am not for myself, than who is for me? And if I'm not for others, then what am I?, And I think that there is this balance to be struck between taking care of yourself and taking care of others. But perhaps society and the older generation are not set up to accommodate that in just a practical sense of signing out and shift work and team work. I used to work in the French hospital system, and the French residents are much more formal about procedures and time rules. On Monday they will leave at 6:00pm and leave the other residents with any work that needs to get done and on Tuesday, they will tell the others to go home and they will take care of the work. Is that selfish? Is that altruistic? It will be interesting to see how it will happen when this [current] generation moves up a bit more into actually taking over…when there is not this clash with the other generation. I still question the idea of true altruism and the complete neglect of self-care and complete neglect in the way of being a role model to others. …and I'm looking at these young kids and I'm saying, "yeah for sure they are into all these kinds of things that seem a little bit selfish, *and* they are extremely good team players *and* I see that in the small groups *and* I see how they interact much

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more collegially than I've seen in the past." So I'm wondering how this collegiality, this maintaining their own interests, will actually make them better healers. But this is a big clash of generations. But when we actually let these people work in teams, now, the Echo generation [the offspring of the baby boomers] is not supposed to be able to work in teams…but let's see what happens.

Ortiz: They are certainly smarter [now] and although that seems like a concrete thing, it reflects in the attitudes that they have. So, maybe I want to say that they are more emotionally intelligent but that's a bit fluffy. They seem less preoccupied with their own achievement, although that is still important, and they are just more aware of more issues and wanting to discuss more the impact of XYZ, of what they do, of their knowledge, of their role. I mean, what stays the same is that they are still young and they are still idealistic, or nilistic because that's part of being young. And they are still at a major stage of development. But with a broader idea and they are certainly more able to discuss some of these harder concepts…It's funny they say this is the 'echo generation' and so that these students are much more self-centered and not able to look at long-term consequences and instant gratification, and that's not what I'm really seeing in medical students. I'm actually very impressed by them…impressed by their kindness and by their altruism and by their ability to work very hard. I think we need to nurture that because I think they can become disillusioned easily.

The concept of altruism has been questioned due to the increased presence of women in the profession and diversified family structure in society. Participants suggested that the traditional definition of professional altruism is based on a 1950s era family structure model. Beale, for example, commented on how easy it was for the predominantly male cohort of physicians of his generation to give of themselves selflessly when their wives were at home taking care of domestic work and raising children. Sauvigne similarly

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spoke about how the increase in women in the profession, and the transformation of the traditional family model, has stimulated debate over what constitutes altruistic service.

Sauvigne: I think that there are quite a lot of changes that have been brought on by more women in medicine. [These are] I think overall positive. But also some changes have made some people resentful. [For example], if I'm a woman and I want to take a maternity leave, I think that a lot of people will frown upon that …because they say, what's going to happen to your patients? And it's true. It's an issue. The older generation were mostly men with the wives at home. So I think that that puts a lot less pressure on the demands of the profession. [In the past], if you chose to, you could work seven days a week, 12 hours a day…that's fine. Now, for one, you have no choice [because of scheduling rules], and, two, you may not be able to from a family perspective…If you are working on minimum manpower and one person goes on leave, suddenly everything falls apart, whereas if there is a little bit more leeway, it wouldn't be a big deal.

Sauvigne's views illustrate the dynamic interplay between the institutional and social aspects that impact on the perception of altruism and patient care. On the one hand, older generation physicians may express concern for patient welfare when a colleague has to abandon her patients in order to take maternity leave, based on a traditional model of the family. Yet at the same time, the practical problem of lack of human resources and understaffing may exacerbate or even create the tension in the first place. This then contributes to an apparent rift in values in terms of self-sacrifice for public and professional welfare.

Decline in Formal Behaviour, Increase in Casual Behaviour

Participants observed that a significant change had occurred in level of social grace exhibited by the younger generation. Some felt that students today are less polite, and less respectful, particularly toward authority figures. Alternatively, some felt that

students today are more honest about their needs as compared to those in the previous era:

Petras: Society certainly has changed in 40 years, 25 years, and the last 15 years. So yes, the generations of students have also changed. They were much more passive before. We told them they had to read 200 pages, they read 200 pages. Or they didn't read 200 pages. But they never would have admitted to not having done so. Whereas if I asked a student [today], who may not have come to the panel discussion…not all of them show up to the panel discussion, and I asked them why not? There is very little embarrassment in saying "well I slept in. It wasn't required so I slept in." And this is not one, two or three, but a significant number. So it's more the freedom to express exactly how they feel without any sense of…well, embarrassment. I'm not sure that in my day we were all perfectly obedient…but we would have felt awkward saying, "well I would rather sleep in than come to this…panel discussion." I think there is much more concern, and I don't mean that negatively, but much more concern for one's own well-being, which is, "I need to sleep in." Or, "the lecture may be fascinating, but I need to go play squash or something." So there is that sense of the self. There is more verbalization of …you know, "200 pages, that's a heck of a lot to read."

Duchsne, Fuller and Ortiz felt that there has been a recent decline in manners and common courtesy, which was inherent in the culture of previous generations. They attributed this to the broader trends in society.

Duchesne: If you are driving, most people [today] are pummelling over pedestrians that are walking across the street. People don't hold doors open for women with strollers, people on the bus don't get up for someone with a cane…some TV shows which show physicians having

all kinds of affairs…I think there is a deterioration across the board, and physicians are part of that.

Fuller: I think that society has changed. There has been a dumbing down, generally, of the population. People have become insensitive. When I was a high school student in the late 40s and 50s, I can tell you that it was universal or virtually universal if you were sitting on a bus or a street car, if an elderly person or a woman, didn't have to be old, even a young woman got on, you as a teenager, you stood up and gave your seat. I am told by young folks today that that does not happen, except in rare circumstances. I think people are ruder for whatever sociological reason you want to invoke. I don't claim to know the answer. I think that students are more disrespectful today. They are certainly ruder…This sense of entitlement…the whining…

Ortiz: Their [students'] basic manners are not as "good" as in the old days. They are, overall, a little too familiar with authority and with patients and lack some social graces. We need to help them correct this.

Graham recounted an incident that exemplified changed expectations of current residents and the honesty of the younger generation, which she encouraged. She noted that it seemed to be the case that in the era of her training [in the 1980s], residents appeared to be more capable of working harder and for longer periods of time without admitting succumbing to fatigue as compared to today's generation. Because of how things have changed, she discovered that recounting the rigors of her training experiences to current trainees created confusion in their minds about her expectations of them.

Graham: Recently one of the residents said to me…"I know that things were different when you were a resident so maybe your expectations [of me] are different." I thought that was really interesting. [What happened was] he was asked to go assess a patient…He was tired. He got there and felt he couldn't handle the situation. He felt he could not

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cope with it. He could not decide if the kid was sick or not sick, he didn't know what to do so he called for help…When I was a resident, after call you stay and work all next day and it seemed like we were super capable of going on even though we had no sleep. He felt bad that he was sleep deprived, got put in the situation where he had to make a quick judgment about a patient, and felt he couldn't do it. He couldn't think. So he called for help. I said, "what you did was perfect." But he thought maybe I thought badly of him…it's an interesting reflection on how he perceived his expectations in the context of what was expected of me and of what I had said I had done [when I was a resident].

Increased Heterogeneity of Ethnicity, Gender, and Age-Related Culture among Patients

Physicians spoke about how the increase in racial and ethnic diversity within the general population has raised new issues of concern for practice. For some, this required an understanding of different medical knowledge systems that immigrants introduce to Canadian health care. For others it was a call to improve communication skills and cultural sensitivity:

Graham: Canadians are less and less uniformly white Protestant or Catholic individuals. I think in addition to the risks that are there through genetic, hereditary or geographic location, there is also the way that people from different religious or ethnic backgrounds are going to understand or receive or apply information. Or how they may apply and how comfortable they may be in following recommendations. So I think that not only expanding our factual knowledge on basic or clinical science aspects, [but] also expanding on our understanding of the differences in the cultural influences on health and health needs of families and kids. For example, the whole alternative therapy [movement]. Some would suggest that that is almost heretical that the

medical school would provide any teaching or training to its trainees in this domain [alternative therapies] because that's not the role of medicine. I think in terms of having people [trainees] be better prepared [do deal] with the health needs of families, it's better to be informed.

Houle: There are patients who are new to our system, immigrant populations. It's always a dynamic system because in every year there are New Canadians who don't really understand. You have to explain everything twice. And they come in with translators who are not much more advanced in sophistication from patients. So that has swung from the old days and that has happened because the GP is disappearing. They don't have a GP; they go to this clinic here, there; they use the emergency dept as their source of care when they need it.

Karim: Even though I was born here [from an immigrant family], I have some cultural….how to say it…baggage that comes with me. So I think taking into consideration the cultural, psychiatric, psychological, psychosocial aspects of the patient. I even see it with some of my own patients who come from up north. They don't talk. They don't speak much. They give one word answers. It's hard to draw that out of a patient. So a physician might be taken aback by that. How to effectively help a patient, given that…I wouldn't say [has] limitations, but [how do you] take those added elements into consideration?

Isaac: So I think the homogeneity of medical students 40 years ago was huge. And now it is a very diverse group of people. More and more people are getting the opportunity to go to medical school, whereas in the past, not trying to be insensitive, but it was a more homogeneous class of people. And a more homogeneous ethnic class of people….I think the classes have become much less homogeneous. Diverse. I think

there is a cultural impact. You will sit in a teaching session that used to

be 80% wasps [white Anglo-Saxon Protestant] if you pardon the term.

And now it is a very diverse group of people. I think the whole city is

more diverse than it was 50 years ago.

For Jameson, sensitivity to diversity was needed not only for ethnic and gender diversity, but also due to cultural differences between age populations:

Jameson: It [listening] has to be tailored to the patient as an individual and also

in terms of the cultural context. Different cultures have different ways

of interacting with their physicians…different age groups also…so there

is a need for physicians to be culturally sensitive, gender sensitive, age

sensitive. And the interaction has to be tailored to that. That can be

taught because a lot of these things you can pick up from the patient

pretty quickly.

The Shift from Acute to Chronic Disease
and an Increasingly Geriatric Patient Population

Physicians described how the nature of disease has significantly changed in the past few decades. They spoke about how much more complicated it is to treat illness, both because the average age of hospital patients is older, and because diseases are increasingly chronic and incurable.

Eaton: It used to be that patients who were hospitalized, first of all they were

younger. Secondly you could often do things for them. You could help.

We didn't have the same technology so you had to think more. But the

pace was therefore slower. Now, when you go to into a medical ward,

the average age must be 70-75, and I would say that many of them

have been in hospital over and over again. And you fine tune them, and

you send them home, often to poor social situations, and within a

month or two they are back in. You are dealing with pre end-stage

disease in people. Everyone has diabetes, high blood pressure, heart

disease, emphysema, gout, hypercholesterolemia, ischemia to their leg…and you can hardly get them better. If someone comes in with acute pneumonia…they are sick, you treat them, they get better and go home, that's great. We used to have patients like that. But now, it is chronic disease. And they get very sick in the hospital.

Several interviewees noted the difference in the nature of disease commonly presented today compared to a generation ago and how that affects teaching medical students and residents. Fuller explained the impact of this epidemiological and demographic shift on training programs. Medical students lose valuable hospital training experiences because the majority of patients therein have too many complications to be solicited for participation in training:

Fuller: I taught clinical/physical diagnosis to second-year students a few years ago, and there were virtually no patients on the wards at the Royal Victoria [local teaching hospital]. In the 60s, you had five or six clinical teaching units [a general medical ward] at the Royal Victoria, a whole bunch at the Montreal General Hospital, you had St. Mary's Hospital, you had the Queen Elizabeth Hospital, and you had the Veteran's Hospital. The students could be divided up amongst the hospitals, and they got first rate teaching by dedicated teaching fellows and staff people. Now the Veteran's is gone. Queen Elizabeth is gone. I don't know what teaching occurs at St. Mary's. And at the Royal Victoria, the five or six clinical teaching units have been reduced to two. And of those wards, many patients are now geriatric and chronic and unable to take part in a student interview. So the number of patients that the students are being exposed to, I think is dwindling. They are simply not seeing enough. So you could teach them everything you want to in the classroom, but unless they go out to the wards and are actually seeing patients, all of these precepts may very well not be reinforced by day-to-day experience.

Fuller suggested that the increased demand for relatively healthy patients who can be solicited for training has threatened the high standards of respect towards patients with which he was familiar from his formal training:

Fuller: I can remember still…I began my [training in] physical diagnosis in the spring of 1959, so this is 47, 48 years ago. And I remember still a young girl with Hodgkin's disease. [She was] 18 or 19 years old in one of the old wards at the Royal Victoria, on the last days of her life, curled up in the foetal position very sick. And the physician, a cardiologist, opened the curtain and saw the state she was in and said, "I'm sorry gentlemen, you are not going to see her today. She is too ill, and it is inappropriate." And he made sure we understood that there are going to be times when we will not be able to see the physical signs and that you have to understand that if you are student #3 that day, if the patient says "no", you have to understand and accept that. Because if you are a patient, there is a limit to how many people you want to come examine you, how many fingers you want up your rectum that day, and we were taught very early on by senior clinicians the importance of respect for the patient. I think that [nowadays], there is a rush to see patients because of the reduced numbers of patients [that can participate in education]. The year that I was a clinical tutor [a few years ago], I remember running down the hall with my group so I could get to the patient before the other tutor who was running from the other direction simply because I knew that if I didn't get to that patient with my group first, they would not see the physical signs that day. So I think because there aren't enough patients to teach on, there is an urgency to get things done.

In the three preceding sections, a detailed account was given concerning the scientific, institutional, and social changes affecting the medical training environment. In the

following section, clinician-educators share their thoughts on the Physicianship program and the requirements of curricular re-structuring.

Section Four:
Reflecting on Teaching, Curriculum Design, and the Physicianship Program

This section documents responses to questions pertaining to issues in teaching and curricular design. It should be noted that ten of the twenty participants had no involvement in the Physicianship program, while the other ten had varying degrees of involvement ranging from mentoring and lecturing, to designing the curriculum.

Opinions on the Physicianship Program

Participants were asked to comment on the Physicianship program as a training approach, and the appropriateness of using the terms 'professional' and 'healer to educate about the doctor's role. They were informed that prior research (the patients' perspective study) indicated that the professional and healer terminology did not resonate with all patients. The general consensus about Physicianship was positive, although a few were skeptical that curriculum redesign could make a significant difference for training. As with patients, not all physicians felt affinity toward the professional/healer terminology, and some also expressed concern about what they considered an artificial separation of the doctor's role (the separation created by distinguishing professional from healer roles). On the other hand, some suggested that the professional and healer concepts have their value beyond direct training, in creating a positive image of medicine in the eyes of the public and the government:

Chaisson: I understand why there would be some people who would have difficulty with some of those words [Physicianship, professional, and healer]…the fact that terminology and communication means different things to different people. When the Cruesses [two McGill faculty members with expertise in professionalism education] started working on the theme of professionalism and were trying to define it, and when they looked through the literature and came up with these two descriptions of professional and healer, my perception of what they were doing was [that it was] brilliant and it was absolutely the right

time for it. Because there was an aspect, both government reactions and societal reactions, where physicians were at risk of becoming civil servants and being less respected, so a lot of the benefits of looking at professionalism and defining it was that we as physicians were being encouraged to take on responsibility about things like self-regulation. As well, we now have terminology and evaluation tools to discuss Physicianship with governments and so on. So I happened to like Physicianship, the words professional and healer -- I think it [the idea of separating out professional and healer roles] is a little bit artificial.

Fuller: Don't get me wrong, I think it's [Physicianship] a peachy idea, [but] what's wrong with [the terms] physician and patient? I am a physician. Do I heal? Sometimes. I would rather not heal. I would rather prevent. If I could prevent you from developing a medical problem, that would be wonderful…I can see the objection to the term healer, it sort of conjures up images of witch doctors and shady guys with bottles of herbs. Professional: that's a little…astute of patients to not like that word. What is wrong with physician? I am your physician. You are my patient. And I will try and prevent your problems and if I can't do that, I will try and cure your problems, and if can't do that, I will alleviate your suffering to the best of my ability. Inventing new words for things doesn't change anything, and it is useful only if it changes perceptions, which then allows a change in resource. Let's do things to prevent…if that stimulates the government into putting money into disease prevention, sure call me a disease preventer. But if it is not going to translate into new resources and new efforts, why do you want to fool around with words?

Beale suspected that if a majority of McGill medical faculty were interviewed, there would be a split in opinion about the merits of the Physicianship program:

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Beale: Some think that it is [placed] just right - how Physicianship is

incorporated. Others would see it as an add-on which is given priority

and for which a price is paid. Those who see it as a significant add-on

are worried that there will be a compromise of students' learning

content, information acquisition, physical examination, hypothesis

generation, and management of patients.

One participant in particular was skeptical about potential positive change that a new curriculum could bring:

Eaton: I've seen new curricula over and over and over. I don't know if with

each new curriculum there are positive effects. I don't know how it's

measured, if it is measurable. I know by seeing students at the end, in

the residence…and I look back to my training when the patient

population was totally different. And certainly there have been some

improvements in the non-traditional clinical levels, so broadening the

scope of teaching. But in regard to changes in the curriculum where

one goes from this pattern of teaching to another pattern, I don't know

how beneficial it is. There are years and years of work and thinking that

go into changing the curriculum. So, I don't know, but I have my

doubts.

When asked about whether he felt curricular change of any sort was required, Eaton responded:

Eaton: I think to the extent that people are becoming sensitive to the softer

issues, Yes. Certainly as compared to way back when. Do I see an

impact at the day-to-day level in the students, in residents on the

ward? I'm not so sure. I think that so much of professionalism is

gleaned from real life situations…you read the newspaper about

behaviour in physicians that is non-professional, and you start

incorporating that. But perhaps many people don't incorporate it and need something more structured, more formal.

Another participant suggested that Physicianship shouldn't be considered an add-on course to the curriculum's scientific base, but rather the opposite – that the Physicianship program be considered the anchor around which the science curriculum content revolves. Her justification was that the curriculum material of the Physicianship program embodies the core attributes of doctoring, while the scientific content is constantly changing over time and is thus on the periphery of establishing life-long skills.

Lilly: I do think maybe Physicianship should take its rightful role and not be a course that is stuck on as a course in one of six or eight. I don't know if that is possible because medical students know what is supposed to happen, but it should sort of be the default mode and other things should be around the edges. You know, "we will teach you about genetics and it will change, but you know, good communication is good communication. So you'll need to learn the knowledge base for genetics now, but you will have to keep up with the literature because in six years [it will be different]…but that here is at least one part of the curriculum that is really an anchor…something to really work on. And if you know nothing about what you are doing, at least this will keep you afloat while you look up in your book what the treatment for whatever is."

Defining Professionalism and Healing

Participants defined professionalism and healing in various ways. Professionalism guides physicians in promoting benevolently intended care, ethical conduct, respect for the power differential between patient and physician, healthy boundaries, trust, confidence, competence, and communication, both with patients as well as with colleagues.

Arneault: The role of professionalism is to instill values and behaviours in physicians so that they uphold benevolent intent in every medical encounter.

Jameson: Professionalism is based on a number of different elements. It includes bringing experience and knowledge to patients and patient care. It involves ethics and respect. Those are the elements.

Karim: Professionalism is to try to the best of your ability to be the most effective physician you can be for the patient and to be a patient advocate in all elements…whether that's scientific, whether that's helping them fill out the form so they can get their benefits.

Lilly: A professional is a particular aspect, a particular social role that carries with it rights and responsibilities and that you should know what that role is and fulfill it to the extent possible, particularly with the idea of trust, confidence, and competence as important aspects of professionalism.

Duchesne: Professionalism is really what we are looking for in people that we are training to become physicians. And I think that's the most appropriate word, even if it does sound a bit cold. [Because], for example, it is illegal for physicians to have sexual relations with patients because there is a power difference that probably professionalism incorporates in the word. And that's why patients tell us details that they probably wouldn't tell their best friend or their families. I think that it is a very appropriate word.

Naveed: We have to be professional not only with our patients…but [also] with other professionals…and I can say that on a day-to-day basis there are times when you see people behaving in ways that are deemed not professional, and nobody ever addresses those things…Now, with the

[Physicianship] course, there are more opportunities to talk about ways to deal with situations professionally and unprofessionally. Something as simple as having a meeting among colleagues and making suggestions as to how one person may improve care, and you may have a difference of opinion, and how do you express that? In a professional way? It's not always done professionally. And that's something that students need to learn early on. I think that in dealing with allied health professionals, I think that it's really important that we deal with them in a professional way as well and that we don't see ourselves as being in a completely different category. We are all professionals together, we need to work together and be respectful. So I think that professionalism is really important, not only with patients but also within us as functional teams.

Healing was often thought of as an old term which describes what the physician does. Some participants didn't think that physicians do the healing but instead provide support for the self-healing potential of their patients. One included the roles of teaching and research within the healer role. Others felt the healer role is helpful in times when they fail to solve the mysteries of illness and need to recover from emotionally challenging clinical situations.

Arneault: Every medical act is a healing act. And remember, a healing act can be an anti-healing act too. In other words it can do harm as well as good. But all medical acts are healing acts in that they tend to change that person with the intent to be better. …When you go to a doctor, you don't have to find out if his intent is to make you better. That's inherent in the profession, and if you find out that his intent is not to make you better, you don't blame the profession, you blame him.

Karim: Healing is, in an old fashion way, to get the patient well. And often we don't get the patient well. It is learning how to help the patients, particularly in those difficult situations. When the patient is doing well,

that's the easy part. But the difficult part is when the patient is not doing well and will not be improving. That's when it is hard to reconcile physician as a healer. And in those situations I think there could be more emphasis on how to handle those situations. I do not find it easy….It's trying to help them [patients] in other ways if the science hasn't worked.

Lilly: Healing …that's the doctor's job. You are supposed to take care of people. I definitely think of it as more than just correct diagnosis and prescription of right medication. Especially as a neurologist who looks after chronic and mostly untreatable conditions. I'm bound to be oriented toward the sort of 'care always' perspective, which I do think has a lot of value [now] as much as it always did. And I get that from my clinical work every day that I do it. You don't have to offer them [patients] anything except a shoulder to cry on and they are grateful for that. And that is plenty. People sort of get frustrated…"oh neurology no treatments"….well…you know those old fashioned ideas of why people come to the doctor…they are actually true. You don't necessarily have to have a solution to the problem.

Isaac: Healing is a very old concept. It dates back to before professions if you think about it. But I think healing is providing the right circumstances for the patient to get better. I'm not sure you heal the patient. I think you provide the circumstances for the patient to heal themselves. You aid nature. I think sometimes if we didn't aid nature, the patient wouldn't get better. But I think that you have to respect the fact that the patient is healing and that you are helping them do it.

Jameson: Healing involves the bio-psychosocial approach. It involves dealing with medical issues in the context of the patient's overall need for well-being: biological, psychological, cultural, and social.

Graham: To be a healer is not necessarily to heal. It's to help in the healing process and that healing is not necessarily referring to the physical but to the emotional, spiritual, and psychological and may be reflected in different ways. My role as a healer is not just to my patient, but to my patient and their family. I think that the other side of the physician as a healer to some extent is to help us [physicians] to not be so devastated when we can't do something for someone…but to help us accept the value of what we can do for people even when we still don't know what's wrong…so we still don't know what to offer as a treatment, but we are trying. Or where it is clear cut what the problem is, but there is no cure, there is no treatment that can be offered. And to not feel like we are failures. So to recognize that our role as healer is not just in finding the science or medical solution to the physical problem, but it's the role we play with the patient in the whole picture.

Naveed: Physician as healer is a great way to actually say what a physician does. Because when you see a physician as a healer, it is more of a holistic approach to a patient whereas you really look at the big picture. So a physician as a healer involves a lot of different things. You can be a healer by being a researcher, you can be a healer by educating others, and you can be a healer by being a direct clinician. So I think the word healer is good in that it encompasses various aspects of medicine. When you immediately think of healing you think of one-on-one healing, but I think there is a large part beyond just being the clinician that sees the patient. And I think when you think of healing, you think physical, but you also have to think psychological. I think the term healer is a very nice word that encompasses all that.

The healer concept didn't resonate with all participants, and some did not make a distinction between the roles of professional and healer:

Duchesne: I agree [with patients] that the word healer is a bit soft and cuddly. I don't particularly like the word healer, I'm not sure what other option there is. But I do agree that it is a bit homeopathic. I don't know what I would choose.

Beale: In what I do, I don't sit down and say to myself, 'I have to help this person heal.' I always say to myself, 'I have to help this person. I have to do my best to help this person with everything…to feel better about him or herself, to feel valued, to relieve discomfort whatever it is. So the word healer, it tends to have a kind of charlatan witchcraft connotation to it in my brain, and yet I understand what it means.

While Duchesne preferred the term professional over healer, Chaisson had the opposite view. She felt that the term 'professional' has become too broad a concept to have meaning to the practice of medicine -- that nowadays, gardeners and hair stylists are calling themselves professionals and she felt that the concept of healing was more relevant due to its uniqueness to the art of doctoring:

Chaisson: I guess there is something about health care professionals that is unique, and I don't know what the terminology is to reflect that, and I think the word healer maybe fits with it. And I think that Physicianship somehow brings it together and makes it unique. I don't think that the word professional makes it unique. Healer makes it a little bit more unique.

Participants also commented on what they felt was an artificial separation of professional and healer roles:

Eaton: I don't think they [professional and healer] are separate in my mind. Professionalism may reflect more the ethical behaviour, the expectations from the ethical point of view. And you could be a physician without necessarily being an effective healer. Some of the

doctors who are abrupt, they could be highly ethical, but the healing is affected. It is impaired because of the lack of that softness.

Karim: I'm not sure they [professional and healer] can be separated.

Beale: There is prevalent an attitude and behaviour that tends to treat patients as problems, diseases, illnesses, or tumours or hearts or whatever. I think the idea of the healer would be a bit of a balm for that attitude. It would help in a way. However, I've listened to the healer idea, I'm not sure that I can divorce the healer in me from the caring person and the proud physician because they tend to be part and parcel of all of it. If one of my patients is sick, and the sickness is having a negative impact on the spouse or the family, that concerns me…and I understand that is part of the healing function, but I personally haven't been able to divorce it from all the other things I think of as a caring physician.

Another connected the idea of healer and professional in the following way:

Arneault: Professionalism is primarily a social movement. Healer is primarily related to the individual.

Pedagogy and Ordering of Curriculum Content

Participants expressed differing opinions as to the ordering of basic science, clinical, and Physicianship curriculum content. Duchesne, for example, was unsure as to whether psychosocial (Physicianship) aspects would be more effectively taught at the point at which students are training in hospital versus in first and second year. Lilly also expressed concern that students in their first and second years find it difficult to imagine how many of the Physicianship ideas will be relevant. Martin on the other hand firmly believed that a student should be introduced to psychosocial issues from the beginning:

Duchesne: I think that you have x hours in the curriculum and you have to decide how to divvy them up. And I would think that I would front load the

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course work material and then when they are in the clinical rotation and when they have had exposure to patients, that's when they've had specific situations that have come up that they can have some kind of context in which they can talk about Physicianship...I think that when students initially choose medicine, they consider the factual knowledge and the giving of medication as the number one most important thing that they are offering. And as time goes on....you realize that the most important intervention sometimes is the support and care that you give your patients. That does have to be translated to students. It's just not clear to me where that is supposed to happen, [whether] at the *initial* student level, student level, or at the residency level. I'm not sure they can appreciate the significance before they step into a hospital. If one would have to choose [what years to implement Physicianship], I would choose med3, med4, r1 and r2 so that in residency they still have a forum in which to discuss this.

Lilly: You are talking to people [medical students] who don't know...it's hard for them to really see how it [psychosocial/ethics] will be applied and you can't blame them for it: 'Imagine that this is going to be relevant and try to come to grips with it now,...even though you need to go through the experience to make sense of it. It may be interesting to see what happens, whether advance preparation will be useful to them. It is worth trying...or whether it's the case that you have to go through and then have the maturity to look back on it. I usually try to include ethical issues as they arise even if it is supposed to be a time to communicate about the content of the case being presented. You know, a neurology feature...how to interpret findings or whatever. But if what came up was an ethical issue, then if the discussion goes in that direction, I usually encourage it to go in that direction rather than saying 'this isn't the time to talk about ethics, we are supposed to be

talking about whatever…cranial nerve…I think that it should be 'it is just part of the job.' It shouldn't be something that is seen as a separate bonus course that is on the outside. And I think that that is partly because of the way the undergraduate curriculum is organized, and in principle the problem-based [structure] could resolve that, but in practice I don't think that they really do. You learn biochemistry, and then you learn pharmacology, and then oh, apparently, you are learning about how to be a doctor in some nebulous way. The two don't really meet. And maybe they'll meet at the clinic, but maybe they won't so much.

Martin: It's entirely appropriate to be dealing with these psychosocial issues now [in first year]….While they are still eager and enthusiastic, they are still burning with whatever fire was in them to make them want to become doctors, and they can certainly relate to another patient, as a person. It doesn't require all of this very technical knowledge. So I think it's important to take that fire and to stoke it. And if anything, the new curriculum, I would hope that they would take measures to keep that fire alive. See that's what I think…that I suspect gets blown out. That initial enthusiasm and interest and concern about people. You talk about diseases, and they relate these things to themselves and their own experiences.

Some suggested that the concepts contained in the Physicianship curriculum should ideally be integrated with all curriculum content throughout the entire medical training experience:

Lilly: I guess there is a question in my mind about where these [psychosocial] issues should be taught…That's the problem. It's something that you tack on top, as opposed to being organically part of the experience of becoming a doctor. And I think that's maybe why it

ends up, no matter the best effort of the very committed people that teach that kind of thing… that it always seems like something extra to people. Which is too bad. I do think that it should be taught. I know people kind of try to integrate it a little bit. I know in our pharmacology small group, there will be a little question at the end about an ethical issue, but it always seems pasted on and no one takes it…you know, 'this isn't the time to talk about ethics…that's to be discussed in the Physicianship class. Let's just figure out what drug goes where.' But even the people teaching the small groups feel that way because they are usually pharmacology Profs. So I don't know how to make them more integrated.

Arneault: [As if speaking to students]: We teach you medical science, and we teach you respect for the person, and medical humanism. Now when you take care of patients, apply your science because that's the basis of medicine and try to be humane. What? That's ridiculous. There may be two kinds of knowledge…but the [medical] student has only one obligation: make the patient better.

A few participants spoke about additions and deletions of curricular content. Graham, for example, noted that new content needs to be added to reflect the changing times and rise of certain medical conditions that were not prevalent at the time the current curriculum was established. Beale commented on the tendency to want to add to curriculum rather than remove:

Graham: Obesity would be an example, relative to the current significance of the issue of obesity in North America. I don't know what time obesity education prevention and awareness [is given]….child abuse…there are some topical areas that I think are more important and more valid to dedicate time now…it's not that kids weren't abused in the 1950s, but it's partly because there are all these other things…there is law, there

are resources, it has to be confronted. So a physician should be well equipped to confront and deal with it well.

Beale: You know there is a great expression: curriculum planners and curriculum leaders are very good planters of gardens but they are not very good weeders. And that is true. Everybody wants…you know we need a little bit more ENT, we need a little bit more complementary and alternative medicine, but nobody says 'ah, time to quit teaching general surgery, we don't need to do that'. And it would be interesting to know what they are not taking in. Are they missing anything because they are now focused on these different ideas? I don't know how you get at that, but nobody spends any time thinking about it. Everybody knows what should be added, but nobody knows what should be subtracted…There are a lot of lectures which are the hobby horses of the lecturers…Because if you go to those guys, that's part of their identity, 'I'm a pharmacologist and I teach medical students pharmacology.' Many professors feel that 'I've got an hour and I'm going to tell them everything about ATP or mitochondrial function in babies with Thyrosenemia. Although students should be acquainted with various rare diseases, they should just know it exists. They need a lot more time on things like communication skills and hypothesis generation.

Karim similarly commented on the need to remove aspects from the curriculum that were not relevant to medical practice today:

Karim: [During my medical training], there was a lot of time wasted on certain subjects…there are certain topics like for example on biochemistry…the Krebs cycle…you know there are certain things that we never apply, that we never use on a day-to-day basis. So I think, as a broad principle to look at things that are useful…I mean there is a lot of information

that is not useful to medical students when they become future physicians. I don't know why we even had to learn them. I mean for example we spent a lot of time in histology on teeth and how teeth grow. Do I ever use it? Do I think other physicians use it? No. Dentists might use it. But I think they should examine some of the [content], particularly in the first year…are there some areas or subjects that are potentially irrelevant in the practice of being a physician?

Both Lilly and Martin contrasted those ideas by suggesting that there is merit for medical students in learning far-reaching and obtuse material, even if they never use that information in their careers:

Lilly: For someone who has spent 18 years in university, to me, part of the medical school curriculum is like the equivalent of a liberal arts degree in that you are supposed to become conversant in a science terminology. Not that you will necessarily remember the details of the Krebs cycle, but you have some sense of what the Krebs cycle is and in some big picture way…and when you do meet some child with some inherited disorder, and there is the Krebs cycle, you have some clue what this is all about….It's that kind of foundational idea. That idea that you might end up, if you go and do a Ph.D. in Communications or English, or maybe you are going to study some post-modern novel, but you are still need to know something about Shakespeare. Even if you can't remember a sonnet to save your life. You took Shakespeare. So for the same kind of idea, especially because a significant portion of the class comes into medical school with no science background…it depends…if you think you are training technicians, then you should be focused on the point. But there is something to be said for some background, and it doesn't have to be just basic science background. Arguably they should be taking stuff that will help them learn better critical thinking and better writing skills as well that doesn't necessarily

relate directly….doesn't have to be on some pathological condition. Those kinds of skills should be fostered.

Martin: Medicine, in the beginning, is just learning a language. You don't really have a good understanding of any of these concepts until you start to use them…I remember in my notes in my first year of medical school, I took as many notes then as I did in four years of university and when I think back about it, basically I was learning a language. And then later on, I started to use the language and use the concepts. I developed more of an insight and an understanding, and that's only going to be able to come with clinical practice. There is stuff that I learned in medical school that I've never used and won't ever use, but if I hear the word, I know. It could be some kind of a neurological thing, some kind of a pathway…I might be more interested in the clinical [aspect], but I can read a journal, and if they talk about some spot in the brain where there is some kind pathway…I've learned it. So I have some kind of familiarity with it. I couldn't give you a big academic dissertation about what it means. So, how could you start to do these things until you've learned the language? So I have no problem the way it is.

For Lilly, more important than learning about irrelevant scientific aspects, she stressed the importance of being taught by clinicians rather than non-clinician scientists in certain areas:

Lilly: I remember myself that the lectures in pharmacology that were given by actual clinicians were lectures that I retained because it came up again and again. Because the clinicians focused on what they knew was highly relevant. Whereas…and it's not the pharmacologists fault, they are focusing on things that are relevant to them or make sense to the drug. It just might not be something that hangs together in the clinical view. I think more integration of what should be…you know, but the

integration of clinicians. I think that would actually help to make it more relevant. But I don't think that things have to be all relevant…I don't remember the Krebs cycle either.

Fuller felt that students had difficulty integrating the basic science lessons of the first two years with subsequent clinical training and suggested that the ordering of the two is backwards:

Fuller: You teach students anatomy. As you are learning it you don't see how you could forget it, you know it so well. And a year later it's all gone…and by the time they get on the wards, they've forgotten the basic anatomy. So if there is a disconnect between learning in the classroom and application in the real world, I think that any success you are planning for this [new curriculum] is going to be attenuated. It's like learning auto mechanics. You can learn all about engines and cars in the classroom, but if you never work in a garage, and if you never see what a car is like, and you never have a problem, somebody says, this light is going on, or this isn't working, or there is a noise, and if you never have to diagnose the problem, how long do you think you are going to remember your auto mechanics? What use is it going to be to know that the pounds per square inch of the fork…You know, I used to joke, but it is almost not a joke anymore that medical school should be taught backwards. We are teaching it the wrong way. What I mean by that is that you get a crash course in anatomy, physiology, biochemistry and then you learn clinical medicine. And then, at the end when you've seen patients and you've seen the problems, then you teach the physiological foundations of disease and patho-physiology….So it's being taught backwards. Instead of getting the basic science first and the clinical medicine last, I think that maybe we should be teaching the clinical medicine first and the basic science last so the students learn how relate the two.

Karim similarly stated that she had to re-learn material in residency:

Karim: I had microbiology lectures…And they were very dry. I mean, you don't really appreciate it yet. Those same things I learned in year two, I re-learned in my specialty. Because when you are a resident, you are not going to remember the different names and the biochemical reaction… I mean those things I learned again.

Whole Class Teaching Versus Small Group Teaching

There were contrasting views on the merits of large lecture-style teaching versus small group teaching:

Karim: I have to say that in my specialty, we have small group teaching at one point, and I find that they [medical students] appreciate the small groups. You have groups of 15-20 students. They ask questions. It's practical. It's based upon problem-solving, and I think there should be more of that rather than whole class teaching, which is cold and informal. It doesn't really give you a chance to ask questions except at the end, whereas here it is more a back and forth.

Lilly liked the concept of small group teaching but observed students not making the most of the experience and wondered if it was worth the extra resource required to execute:

Lilly: I've been more involved in the small group teaching parts of the first and second year, and I'm not entirely convinced about it. In some ways I like it [teaching small groups]. [But] I find it a relatively inefficient way to transmit information to 15 students at a time. I'm not always that convinced, it depends on the group, that the students really take advantage of the strengths that are supposed to be offered [from small group learning]. I feel like they just as well should be sitting in a large lecture hall, which would take one of us rather than 20 of us…especially

on my more tired days. Obviously there are some aspects of teaching in small groups that are helpful. They can ask questions…but I don't always get the sense that they take advantage of it. I don't know if it's just that they have a lot of work, but for me, it's a big deal to drag myself in to do those small groups, and I don't always feel that the amount of work that I put into it is being met from their side. They come late…and they aren't necessarily prepared and to me that's a big waste of my time. So this is in the small group teaching pharmacology or CNS units.

In terms of existing large, didactic class teaching, Lilly also commented that she didn't appreciate students skipping lectures and taking advantage of the fact that the lectures are tape recorded:

Lilly: A medical student last year told me, if he misses a lecture, he just listens to it online, only he listens to it at triple speed to save time. Whips along and just picks out bits and pieces that are relevant. So you can actually go through medical school in a third of the time just by turning up the play back time on the recorded lectures. I'm old fashioned in the sense that …you know…the lectures as useful as they are…they are useful if you show up and pay attention and take notes and interact with the professor. This TV-oriented style, I don't like at all. Basically they make the human part obsolete. On the other hand, when the human part is made available in small groups, they don't necessary take advantage of it….The human part of giving a lecture…I like doing that. I like lecturing. I think I'm relatively good at it, and it irritates me when the whole thing is made very passive so that students don't have to show up, and the lecture is some kind of performance that is optional, that can be watched later at triple speed. I guess I find that insulting.

Role Models and Media-Based Influences on Trainees

Many participants emphasized the importance of having good role models to support the academic preparation of the first- and second-year curriculum. Duschesne commented that witnessing bad behaviour by role models at the residency level undermines the principles of Physicianship:

Duschesne: You can be taught all you want in a classroom, and you then go and see somebody behaving very differently, for whatever justification that person has for it. And all of a sudden it undermines what you have taught them.

Graham raised the idea that it is difficult to assess who is a good vs. bad role model.

Graham: My exposures were bad role models when I was a resident and bad role models now even. The temper-tantrumming primadonna surgeon is a bad role model but might be an excellent surgeon. Those with inappropriate or condescending attitudes towards women, for example, have been models that I've seen many times. Or the excessive use of foul language would be another example. And people who don't follow through. I don't know….I guess to have a discussion with people to see as a good professional and a good standard of professionalism and therefore to think about who good role models are is a good exercise, but in the end we also don't want to go around labelling our own colleagues as the good and the bad.

Beale spoke about all the potential influences on a medical student's self image, ranging from television to casual discussion in the cafeteria. He stated that the most powerful role models however are the exceptional physicians that they are trained under:

Beale: When I think back to when I was a medical student, there were medical shows on that we used to talk about all the time. We used to talk jokingly about them and probably suggesting that they were all very facetious and so on. You know, there was Ben Casey, Dr. Kildare. This is

when I was in medical school in the middle ages. And I'm sure it influenced us. Because when you are in medical school, you have no idea what it's like to be a doctor. You have ideas maybe from when a relative was sick or when somebody talked about a doctor, or what you see on TV. So I suspect that conventional wisdom, family experiences, television, movies, have a significant impact on forming students' sense of what a doctor is. But the nice thing is that there is nothing nearly as powerful as students working with a good teacher who is a good person. And it is really easy to observe…within days they are modelling what the good doctors around them do. Now, they also model what the bad doctors…or the bad behaving doctors do. But fortunately in this environment, most doctors who model for the students do a reasonable job. There is a minority of jerks in the medical school. But I think that the entire environment is just saturated with potential influence….ranging from …if the students go to a rave, to chatting in the cafeteria, to on the phone, to text messaging about an exam…I think every one of those things has a powerful influence. But fortunately, charismatic personalities have the most significant influences. That was the case when I was young and that is what I tend to see. And I say fortunately because they tend to be the good values which these people influence.

Beale also spoke about the cultural differences between specialties and how students often subsume the values of that specialty, regardless of previous disposition:

Beale: In many other [specialties], the culture is negative with respect to humanism, caring, professionalism, and so on. I see students who are good people…residents who are good people. Then all of a sudden they are different. They are brought into the culture of their specialty.

From a research perspective, Beale described the kind of knowledge that would be valuable for medical teachers to understand the impact of influences on medical students:

Beale: The question is…what are the principal determinants of behaviour…what is the strength of the impact…of whatever…ethnic background…parents, the demographic of patients, or the origin, or language spoken, physician exposure. What are the principal determinants? How do you get at that? I don't know. But that's big time stuff because what we do in medical school and residency programs can have a life-long impact because it's a very intense learning activity that people go through. You know, they start medical school as children. I would never say that to them, but there are still high school kids competing to be best in their class and then, boom, seven years later, they are mature, caring people.

The Challenge of Recruiting the Right Kind of Student to Medicine

A number of comments were made about the importance of recruiting the right kind of student to medical school and how Physicianship efforts depend largely on who gets accepted. Duchesne and Eaton for example, stressed the importance of recruitment in the sense that medical education cannot easily transform people who do not already have a disposition toward Physicianship attributes:

Duchesne: It is very hard to internalize these [respectful altruistic] feelings. What one hopes is that you at least choose people who have that substrate to begin with. Good foundation. That you are choosing those medical students who already have some of that and you are building from what they already have.

Eaton: One of the discouraging things I learned from [a course in family dynamics] is that by the age of 30, and even younger than 30, it's very hard to change who you are. I had a patient who I sent to a

psychiatrist. She had five and a half years of psychotherapy. Her husband met me and said, "I'm furious with you. My wife now understands why she is who she is, but she still is who she is, and it cost me $250,000." So, to take somebody whose personality is not one of showing empathy and understanding and to try to think that you can change that person by a course even something more in-depth, I'm not so sure that for many people who are fixed in their ways that it's a teachable phenomenon. It's like judgment. You can see very good judgment in people at a very early age. And certainly at the student level, you can tell who has it and who lacks it. I've never been convinced that you can teach good judgment.

Another participant commented on the difference between what can be instilled and what remains intrinsic in terms of altruistic attitudes and intentions

Beale: Altruistic behaviours can be taught. Can you instill an altruistic attitude? I don't know. Just like attitudes are not measurable. Behaviours are measurable, and I think we have to be content with behaviours. A lot of us have attitudes that, if translated into behaviours would be very unacceptable. And they change with time. The attitudes change with the way the population changes, our lives change, our environment etc change. But I don't think that should prevent the medical school from trying to convey the importance of altruistic behaviours. But, do you change the person? Not really. I don't think you can change a personality, you can't change the chromosomes. You can't change the nature of the person, but you can influence his behaviour.

Another participant felt that the issue concerning recruitment lies beyond recruiting the right kind of student because all students coming into medical school are conditioned to think of medicine in certain terms based on their childhood experiences of healthcare.

He suggests that students need to un-learn their conceptions in order to adapt to the paradigm shift associated with Physicianship education:

Arneault: The biggest barrier is that, for historical reasons that have not gone away, most physicians see their job as the treatment of disease and the patient as an inconvenient interference in that job. [Medical] students want to be taught about diseases and they come into medicine with a structural understanding of disease. …Disease is an abstraction. You can't find disease…not in clinical medicine. You can find it in a museum, but in clinical medicine you can only find a patient. You can find abnormalities that indicate losses of function, but you don't find a disease. That's just fiction. They [medical students] come into medical school with that fiction.

Eaton emphasized that simulation exercises in the recruitment process may be a solution:

Eaton: I was at the opening of the simulation centre at McGill and there was a chap from Israel who spoke just brilliantly. They were so impressed with the use of simulation that they actually now use simulation in the medical school application process. They put them [applicants] in difficult situations. And they have changed dramatically the type of individual that they accept to medical school. They'll [be] more [apt to] accept people who show willingness to understand difficult patients and deal with them rather than being arrogant and haughty and avoid it. Even if they are brighter and have done better in tests. So I think they said that 20% of their medical school admissions now are people who would not have been admitted prior to the simulation testing. For three years I was on the admission committee at McGill and I didn't enjoy it at all. Because it was MCATs, GPA, it was a little bit of the interview just to make sure they weren't psychotic. The letters of

reference weren't even looked at. If your GPA was less than 3.6, you
weren't even considered. I think that McGill could learn from the Israeli
experience and could select people in a manner that would try and pick
up students who, perhaps don't do as well, but who are more geared
to becoming humane care-giving physicians.

Others also spoke about the importance of recruitment and the selection process:

Fuller: It's not easy and I don't mean to denigrate the admissions committee,
but I don't think they do a particularly good job in admitting students.
If you want a good potato crop, you've got to plant it in earth that is
going to nourish the crop. If you want good doctors at the end, you've
got the start with good students at the beginning. And frankly, I don't
think we do. For 35 years I taught Med I physiology. And I saw these
students in med I, in med II and I saw them in the hospitals, and I saw
them in the end. And…I'll bet you, I could have identified in med I,
already the problems…the students who would never put it together,
and wouldn't be particularly good physicians. Now having said that, I'm
not sure…I think it [the recruitment process] could be better, but I'm
not sure I'd do better in selecting the first year class….Programs are
doomed to severe attenuation or failure unless you are starting with a
good group of students. So you want these things to succeed? Figure
out how to accept a better brand of student.

**He also explained the caution in placing too much emphasis on good grades for
admission criteria:**

Fuller: A lot of these students take Mickey mouse courses…you know,
Chemistry in Modern Society…where they get good marks so that they
get a high grade point average. So…what are you dealing with? As
opposed to the student who is really being passionately interested in
biophysics and maybe his marks aren't as high, so he gets rejected. And

there have been, over the years, just disasters in the interviewing process. Terrible contacts between students and interviewers. I know that some of the members of the selection committee are second and third year medical students. Well, what the hell are second- and third-year medical students doing on an admission committee?

Another explained the importance and difficulty in recruiting medical students from first- hand experience:

Houle: I haven't evaluated [recruitment] in 15 years, but there was a time when I sat on the admissions committee. I spent a lot of time trying to evaluate etc, and it's always been a complicated problem because you try to separate out those factors. I mean you take their brightness as a given. They are all going to be able to pass the program. So you look at the other factors, what is your motivation? What are they like? Are they caring? Are they going to be professional? Are they going to be advocates for patients? all those things. So how do you pre-evaluate for those things? …How do you get at the human dimension with students? And the things I used to look at were: did the person look real? Did the person look like the person who wrote the letter. Because you've sent in a letter telling me about things you'd like to do, you get your good friend to do it, you can get one off the web etc. and in it you say you are in it for people, you are interested in helping people, all these wonderful things that 7 years later…now you are only interested in how much money you are going to earn in a year. Nobody is going to get into medical school saying look, I want to earn a lot of money. I want to live better than my parents. They are not going to say that. So they are going to say all those altruistic things. So then how do you go through one of these letters to decide? are all these things real? And I used to try to deal with these things…for example, if I had a student who came in, who couldn't look at me while I'm interviewing the

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student, I have problems with that student. Because is that student going to be able to look at a patient? This student is coming in knowing that I'm going to decide if she or he can be in medical school or not. So if that student, at his best performance can't look at me, that's a problem. So I may say no to that student. I may rank that student very low based on the interview. Now, I always would feel guilty about saying no because you know, maybe I was the wrong guy…maybe I intimidated that student. Maybe if that student met with you, he would be open, he would be looking at you, etc, etc. I feel guilty, and, on the other hand, what choice do I have? So the other interviewer may say, medium. The student doesn't get in. How bad do I feel? Well I don't feel that bad because I know that there are 1000 students out there that are all just as good academically, why not take the guy who seems comfortable. So I let somebody go, but I hope I didn't take in someone who is going to bomb at the end of two years or three years. Then I would feel bad. So, I have to make those decisions.

Isaac commented on the importance of recruiting students who are primarily science oriented, but who have the capability of expanding into their Physicianship role as their training progresses.

Isaac: I've watched the admissions committee change from time to time. And that if this [emphasis on Physicianship] becomes an overriding quality that we are looking for in admitting people to medical school, I would challenge them not to ignore the scientists who are very important as well. I worry that if we pick people from this area [Physicianship], that the Nobel prize winners may not come out of the class. I think you have to find a way to make the scientist more sensitive and the sensitive people more scientific. It would be fine to have an old family doctor who listened to you and did everything. But if he didn't know what to do after he listened, I'm not sure if the health of the

population would be better….And if you make the competent people more sensitive in the way that the patient wants, I think that is great. But I think that we are also in the process of producing not only competent physicians, but also world class researchers. I think that's part of our obligation. So you wouldn't want to weed out that small group of people that might have all these skills….My assessment of the admissions process is like a hockey team: you can either recruit the best athlete or you can recruit for the position. So if the highest achiever or the highest performers are the people who we should be recruiting and then I think we should teach them to be sensitive. I think it would be wrong to start looking for sensitive people because that is what we want in the end. Or I think there should be a balance in there somewhere.

Isaac also suggested that admitting people on the basis of how much volunteerism they did is not a good indicator of their future performance as a physician:

Isaac: Everybody knows this. You probably knew this when you were student: the one way to get into McGill is to do a lot of volunteer work. And people were doing volunteer work not because they had any burning desire to do volunteer work. They just knew that that was a requirement. Well that is absurd to do that. Because everybody knows. And people were all going out and there was a flurry of people trying to find volunteer work and in most cases it wasn't because they had an overwhelming need or desire to do that, it was because that was part of the formula to get in at that time. I really have a hard time with that. I think that there is a better way of judging it, rather than forcing people to go out and do things to make themselves look like they are that.

Faculty Development

Martin commented on the fact that faculty development is the key to the success of the Physicianship program.

Martin: A lot of these kinds of healing and patients-centered…these are the cornerstone of family medicine. I was trained in family medicine. I was a resident in family medicine. And I teach in family medicine. So, most of all of this stuff is not new to me. And the desire to teach this and to have the students embody this stuff, none of this stuff is new to me. But it's interesting going to these faculty development workshops and a lot of the doctors there are specialists. Some of them are very, very small specialties, very narrowly focused. And I would imagine that it would be impossible for them to have the same kind of long-term continuing relationships that a family doctor has, [one who] has continuity of care for many, many years and gets a chance to get to know the patient. I think that these sessions and this kind of sensitivity towards healing, for it to have its major impact for the students is for it to have an impact on the faculty. And that's where I think…I think that that is really important. And I'm very very happy. I hear some of these guys talk about this stuff, and it's as if they've learned about how to make ice cream. Maybe I'm looking at them through my own prejudices as a family physician, which you develop over the years…I think that this is a wonderful focus that McGill is doing. I think that the most important part of this focus is to get the faculty…the ones that don't know this…to become sensitized to it and to teach it. And that's the difference between town and gown. Even in family medicine. One of the reasons I stay so active in the program is that I think…maybe even a different unique experience compared to some of the family doctors that are teaching fulltime at McGill because they might just be seeing patients two or three times a week and doing a lot of

administration or research. And sometimes their ideas can be so…idealistic that it's not tempered with experience. Because having said everything that I've said, I also see 20 to 30 patients a day and I also have to sometimes not be this wonderful ideal doctor doing patient-centered medicine.

Faculty development in the context of a changing focus in medical education highlights the importance of educators remaining open to learning new approaches to teaching as well as new philosophies within medical education.

Approaches to Teaching

Some participants shared examples of what they say to help students understand Physicianship principles.

Houle: I sit down with the student and I try to teach listening to the patient, listening to the family and observing the patient. I'd say, "what does the patient look like?" If the patient came in and his hair was all messy and he had torn pants and he had a hole in each sock and his boots were worn and he smelt terrible, [I'd ask], "what do you think of that patient? Does that mean anything to you?" And you get different responses from different students. Some will say, well that's it. I say "is there anything that may apply to how you are going to look after that patient?" and some of them will very quickly come out and say "yes here are some ideas". And some will be bewildered and not see how the appearance of that patient has anything to do with what you are going to be doing with that patient. So we started work on that and eventually they come up with the answers. How would you think that would alter, how would you think that the appearance of that patient would alter the care that that patient gets and how you deal with that patient?

Martin: Like I say to them [medical students], when they first interview people, it's like going to ask your friend what happened yesterday at the park. You just ask them. It's natural. But what is not natural is the review of systems and all these…exactly what are you supposed to be asking about this chest pain…the whole thing that they have to learn and then incorporate into their natural communication. You have to spend some mental time, while you are talking…to remember which of the six things you are supposed to ask people with chest pain…and that distracts you from the more natural communication you would have if you knew nothing about chest pain. Except like…"well does it hurt"?, You know the obvious questions you should have asked before you went to medical school. So you have to know what the differential diagnosis is…and the first six things that the person said and what am I thinking of and what I need to exclude. It's especially difficult when you first start doing it because you are not doing it through pattern recognition, you are doing it step by step in a very effortful way. So it's no wonder that the communication aspect of it gets a little choppy. Really. So I don't like that idea that students are coming in as naive marvellous communicators and are destroyed…it's just the nature of what they are learning to do…I think naturally temporarily. Even if you didn't care, it would become easier to do…even if they could care less for the patient, they are bound to improve as the more factual stuff becomes better integrated in what they were saying.

Martin: I've always been…since 1982 in this introduction to the patient course so like it's been 25 years and I've gone through at least 12 cycles of first-year medical students and I've been there in that first year, and I've been involved in that course. And I see their involvement and enthusiasm, and in fact I always challenge them on the first day, after we meet and have lunch. And I give them a challenge that they should

be able to maintain that enthusiasm and to remember all of the

reasons why they wanted to become a doctor and remember the

human aspect so that when they finish at McGill and we are done

mashing you out like a hamburger that they should retain that core.

That essence. So that is a challenge that I always give them.

Summary

The preceding sections outlined a number of perceived challenges of teaching medicine as well as the scientific, institutional, and social influences on the training environment. What the data demonstrate is that the complex nature of change within medicine and society at large presents challenges to the efforts to reform the model of medicine according to the various reconstructive approaches as presented in Chapter two (i.e., the physician-healer model, narrative medicine, the patient-centered clinical method and the biopsychosocial model). The complex interplay between scientific, institutional, and social factors of the training environment also demonstrates the need for physicians to develop an awareness of, and reflect on the changes taking place. Cultivating self-awareness and self-development in relation to the work environment is also necessary in order to navigate it's increasing complexity.

A theoretical approach to understanding physician professional growth and development will now be explored in the following chapter, which has the data organized in relation to the Physicianship motto, *Episteme, Techne, and Phronesis.* This analysis complements the framework detailing the scientific, institutional, and social influences. Whereas the latter pertains to external factors determining outcome in clinical work, the following section pertains to the inner aspects of the socialization process, professional identity formation and self-development. Given the significant changes to the training environment, as demonstrated in the preceding sections, I suggest that undergraduate medical education now requires curricula that reflect both the external markers of change: the scientific, institutional, and social determinants, as well as the needs in terms of how best to cultivate Episteme (knowledge), Techne (craft), and Phronesis (practical wisdom) in trainees. The concept of Phronesis will be given particular attention, as it is the area least understood and represented in the curricula of formal medical education.

CHAPTER FIVE:
REVISITING PHRONESIS (PRACTICAL WISDOM)

School is a place where both the teacher and the
taught explore not only the outer world, the world of
knowledge, but also their own thinking and
behaviour.

<div align="right">Krishnamurti, 1953</div>

Ages have been spent learning to teach doctors how
to apply medical science to disease. Our task is to
learn how to teach doctors how to apply *themselves*
to the care of the sick.

<div align="right">Cassell, 1997, p. 45</div>

Why the Need to Cultivate Phronesis (Practical Wisdom) in Trainees?

The empirical findings of this research provide evidence to suggest that the cultivation of Phronesis for current trainees is important in order for them to be able to navigate between change and dogma – the contradictory forces that characterize the profession of medicine. An example can serve to illustrate this point:

Beale: Often we do things because we've always done them that way. And given my own biases, usually what we do is we overmedicate people. It is not uncommon for me to see patients taking 15 different medications everyday and the patient is not necessarily better off for it, the patient is worse off for it. What I see [today] is that doctors know very little about drugs and their influences are from [the pharmaceutical] industry. The patient will go to the gastroenterologist. He puts his three drugs on, and then the cardiologist puts his six drugs on, and the psychiatrist puts his two drugs on. And there aren't enough people around who look and say "you've been on this drug for five years. What's it for?" "I've no idea Doctor but they keep renewing it."

"Why don't we try stopping these ten over here? We will get you off
these ten. What do you think about that?" There are very few people
doing that. It's just easier to sort of continue…And you take the family
doc, his patient comes back from the hospital. He was admitted with a
short-term stay for a heart problem. He comes back, and he is on eight
new medications. And you may say this is exaggeration. It's not. And
the doctor there says, "who am I to question what they do on the Ivory
Tower up on the hill?" So he just carries on. I spend a lot of time
weeding out patients' drugs, but not many do. In the past, in terms of
therapy, it was easy because there weren't a lot of therapeutic choices
at the time, and the pharmaceutical industry was not nearly as large as
it is right now. Was there anything different [about therapeutics]
taught in the past? …I think the difference was that then we talked
more about the principles of therapy: you know, use the smallest dose,
try to do short courses rather than long courses of therapy. Maybe
that's what we did. Now, "cholesterol is up? Put him on this drug."

What this example demonstrates is that the combination of dogmatic practice (i.e.,
practice according to an established pattern in therapeutics) coupled with scientific and
institutional changes (i.e., the proliferation of medications, the increased influence of the
pharmaceutical industry in continuing education, and the increased division and
specialization within tertiary care treatment) creates an instance in which patient welfare
and the reputation of the medical profession is jeopardized. Yet the physicians working
on behalf of the patient, the gastroenterologist, the cardiologist, and the psychiatrist,
might well have exhibited excellence in their roles involving Episteme and Techne within
their respective fields. They may have decided upon courses of treatment within their
respective fields based on the most up-to-date scientific knowledge about the efficacy of
these pharmaceuticals. Had they been evaluated for clinical performance, they may have
also demonstrated high standards of care in line with the code of professionalism and the
philosophy of the physician-healer. And yet the combination of factors in the scenario
resulted in a major deficit in the delivery of medical care. Until recently, the prescription
of medications had minimal iatrogenic effect because there were simply fewer

pharmaceuticals available to prescribe. Why Phronesis is important now is that due to multiple competing factors increasing the complexity of healthcare delivery, physicians need to cultivate and employ their innate wisdom potential to bridge the gaps created by the changing scientific, institutional and social determinants jeopardizing the delivery of sound medical care.

The traditional training approach in medical education has either ignored or diminished the idea of cultivating of Phronesis:

Arneault: That's the way it used to be, [that] doctors in medicine don't count --
it's the science that counts. Science makes the patient better. It doesn't
matter who the doctor was. Well that was the 50s, 60s. That's what
people used to think. It didn't matter who you are…just know the
science. The science takes care of the patient. Well, that's bullshit. You
think, how could anybody have ever thought that? Well you know, how
can people think the stupid things they think? You know yourself.

As Arneault suggests, the model of medicine dating back to the middle of the 20th century was based on the idea of medicine as applied Episteme and Techne. The new educational model of Physicianship is founded on a radically different view, which is that the physician's *state of being* is at the centre of the doctor's role. A few physicians spoke about the significance of the *being* aspect of Physicianship:

Tambor: An old farmer friend of mine, he said, "I knew a doctor across the
border in Vermont. I used to go to him because you felt good as soon
as you walked into his office. And you felt better when you walked into
his examining room, then when you went home and took your
medicine you felt better even again." But you could feel it as soon as
you went into his office. You felt better…you could feel the vibration
that this guy cared for you.

Quarta: I used to be in the McGill [medical school] admissions committee years
ago. When the person [applicant] walks into the room…you feel it. One

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should never say 'I like that person or I don't like that person.' It's not a question of like or dislike. It's the *vibes* they emit...I mean if I talked about auras and energy, they [others] would think we are crazy, but put it in simplistic terms that's what it is, isn't it?

What these quotations suggest is that the core aspect of doctoring exists apart from what one knows and does as a physician. This core aspect, the physician's *state of being*, is an overarching determinant of the way he or she exhibits qualities involved listening, communicating, commitment to patient welfare, moral reasoning, empathy, professionalism, healing, clinical thinking, etc. What the concept of Phronesis can offer in training is the understanding that one's state of being needs to be acknowledged, understood, and cultivated to facilitate the transition into Physicianship.

The idea of Phronesis is gaining momentum within medical education because the traditional approach in medical education has been to teach students what they need to know and do, and then evaluate them on the retention of their medical knowledge and on the performance of their clinical actions. However a growing perception among medical educators is the concern that teaching and evaluating knowledge, skills, and behaviours is inadequate to ensuring that the values of the profession are maintained from one physician to the next, and from generation to generation. One aspect of this curricular dilemma involves the limitation of evaluation methodology. Clinician-educators comment that while it is possible to test students for, for example, moral reasoning by quizzing them how they would respond to a scenario involving an ethical dilemma, the question remains unanswered as to whether the results of such an evaluation tool reflect the actual degree of a trainee's moral development. It is still unknown how best to develop curricula and evaluation tools to cultivate and assess the extent to which a trainee is *becoming* an excellent physician.

Given the limitations of evaluation measurement, many physicians have said that the solution is simply right recruitment and right role modelling. Participants spoke about the tremendously positive impact good role models had on their development. However, the development of the physician's state of being and wisdom of practice cannot depend on role modelling alone. The benefits of role modelling correspond more to the domain of Techne than Phronesis. This is because to role model behaviour means to emulate, which corresponds to Techne and the *doing* aspect of doctoring. Phronesis on the other

hand, is the way the physician is as a doctor, not based on pre-learned execution of skill, but on an awareness and attunement to the particulars of a given situation in which doctoring needs to be done. That each clinical situation is unique means that aspiring students cannot rely on role modelling alone to develop the requirements of wisdom of action to guide their work. The tradition of role modelling Physicianship qualities has also been increasingly constrained, for several reasons. One reason is that senior role models are increasingly bewildered as to how best to impart doctoring skills to the younger generation, both because of the radical changes to the training environment and because the younger generations are bringing with them radically new ways of perceiving the values of doctoring as compared to the historically defined values through which the older generation was socialized. This experiential and cultural gap between older generations and the younger trainees has been documented from the data.

To further understand the role of Phronesis requires insight into the distinction between Techne and Phronesis. For example, communication skill and technique used to create rapport with patients is the domain of Techne. Yet a Phronimos-physician is one who knows not only how to create rapport using general guidelines to do so but is capable of fostering rapport with a diverse patient population by knowing how to engage with different personalities, conditions, and situations.

Karim: It [the Physicianship approach] needs to be tailored to the patient as well. For example, for some patients, they just want it cut and dry. They don't really want to you to ask, 'how does it affect you?' 'How does this impact on your work, on your family life?' So that's a hard question…

Martin: Even though patients have all different kinds of demands, there are all different kinds of patients. If you are a skillful physician, you have to learn patient personalities. With listening, there are some people who don't want to stop talking. And what they say is irrelevant and inappropriate and you have to learn…it's a very, very complicated thing having human interactions and it is patient things, doctor things and contextual things.

Chaisson: I think patients have different styles too. There are some patients where the listening part is less relevant for their healing. That the physician will say, '…I'm not worrying about your symptoms.' that's healing for them, even more important than the time spent listening. Some patients need the listening time, other people need the reassurance. And that's why different physician styles might work better for different patient styles.

Beale: My experience would be that some patients, if you would spend three hours with them, would continue to talk and want you to listen to them. Others just want just the facts or just an answer to a particular question. So, I suspect that what patients really want is to walk away with the sense that they have communicated what their problem is, the doctor has heard it, and the doctor responded. So, again, difficult to generalize, but what I observe, again in this very skewed world in which I work in clinical medicine is that most doctors do a good job of listening. Now I regularly pass by clinics where there are 200 patients waiting to be seen by a few doctors. And it's not surprising that many patients don't feel that they are listened to. So it is a peculiarity of the specialty, probably a peculiarity of the hospital, and a peculiarity of the individual doctor.

These quotations demonstrate that the Phronesis aspect of establishing rapport requires that the physician be able to detect different personalities in the patient population and tailor the biopsychosocial and listening approach to the given context. While teaching the physician-healer role assists students in understanding those integral aspects of doctoring, Karim suggests that the overt expression of the healer role may not be suitable to that particular patient. Phronesis, in relation to creating patient rapport, implies an un-formulaic, present-moment attunement with the diversity of possible ways of tailoring the doctoring role to the needs of a given situation at a given time. In another example, a physician provides a counterpoint argument to the complaint that doctors fail to listen because they interrupt patients too often while they are speaking.

Eaton: I've been around long enough so when a patient starts on a track, I
          know what questions are important for me to further narrow down the
          possibilities. So I might ask another question even before the patient
          stops talking. Some patients go on and on and you can't just sit and
          listen. Some patients go off on tangents and it's not getting you where
          you want to go. But you have to develop a way…a style of bringing
          them along in the history that doesn't make it feel as if you are not
          listening. If someone starts in a certain way, if I ask questions that
          makes sense to the patient, and they can see that I understand what
          they are talking about, I think it instils within them a certain confidence
          that I am going in the right direction. The other day, someone came in
          who had seen three or four doctors with a chronic cough. And people
          said, "well, maybe you have asthma." So I asked her if she has any
          reflux – [she responded] "how did you know that I have reflux?" and
          then I asked her "do you snore at night?" [she responded] "My god,
          why did you ask that question? How did you know I snore at night?"
          And there is a triad of asthma, reflux and sleep apnoea that actually
          came out of work done at the Montreal Chest Institute. So each time
          that I asked a question, the answer to which was "yes I have that", it
          made her realize that I knew what I was doing and I knew what I was
          talking about. So it's not only listening. I could sit back and listen for
          half an hour and it could be much less efficient than if I listen, get the
          gist of what the patient is saying, and in a nice way go on to the next
          [question]. And I think patients respond pretty well to that. I know I get
          [good] feedback. I have patients who like coming to my office. They
          feel well looked after. So it's not just listening.

The un-formulaic nature of Phronesis maybe an idea difficult for a trainee to grasp
during early training, when he or she is learning about how to exhibit the qualities of
professionalism and healing. Yet eventually in training, there arrive instances in which

the overt expression of professional and healer attributes needs to be adapted to extenuating circumstances. For example, a physician who possesses Phronesis has the virtues of compassion, care, altruism, and empathy. In most instances this takes the form of simple gestures of kindness and human connectedness. But in a few instances, firm speech with patients may be the wise action for that particular situation. When trainees are being evaluated for their ability to offer a caring approach, they may do well in establishing eye contact, listening actively, communicating, etc. Yet those same Physicianship attributes may prove to be ineffectual in a scenario in which the student is interacting with a patient who has just been given some bad news and has become hysterical. In this panicked state of mind, the patient is now unresponsive to simple acts of kindness and the trainee is left to figure out on their own what the expression of caring looks like for that situation. The measures taken for the situation depend on the details of the context. The practical wisdom of the physician is based on a sense of what needs to be done.

Given the challenge in designing undergraduate training curriculum in relation to Phronesis, two areas of pedagogical consideration are presented here to begin to understand the way in which Phronesis develops: (a) curricula to help students strengthen their abilities in perception and (b) curricula to help students develop awareness of the role their emotions play in clinical care and decision making. These two areas will be discussed in relation to the empirical data in the sections below. First, an example is used to exemplify the need to explore these areas. The following passage concerns a young trainee feeling emotionally disturbed during an interaction with a patient. From Reiser and Rosen (1984):

> Michael Smith is a youthful-looking junior student doing his first rotation in Internal Medicine. The setting is a crowded, hectic ward in a city hospital. Michael's patient is a 47-year-old unemployed 'waitress' named Johnnie. In fact, Johnnie is a prostitute. She is also an alcoholic and, intermittently, a heroin addict. She has been in prison several times. Currently, she is in the hospital for severe abdominal pain, possibly alcohol induced pancreatitis.
>
> A hard-edged, boisterous woman, she seems to get along well enough with the resident and intern who are taking care of her. Their interactions at the bedside seem amiable enough, filled with gruff joking and double entendres. However, this apparent ease of rapport is not destined to be for Michael....Michael has been assigned to do her admission history and physical and draw her blood samples. The

resident has told him earlier, snidely and barely out of the patient's earshot, 'Have we got a good one for you.'

From the outset, Michael fidgets nervously, the back of his neck heating up, as Johnnie beholds him with a silent but scornful scowl. He fumbles as he tries to get his ophthalmoscope set up. Suddenly Johnnie crows out,

'How old are you anyway, twerp?'

'Twenty-three', Michael mumbles uncomfortably.

'What the hell are they sending *you* in here for anyway?' she retorts. 'Am I supposed to be your guinea pig?'

Michael squirms and mumbles something.

'I don't think I like your attitude, Sonny, she says snidely. 'I may be a city hospital patient, but I ain't nobody's fool. You go get one of the *real* doctors to examine me!'

Mike withers inside, his palms now perspiring profusely. He trembles with humiliation and rage.

Initially Michael tries to handle the problem by being polite and conciliatory, but it doesn't work.

'I ain't going to be your guinea pig, Sonny boy!' Johnnie snaps. 'You ain't examining me!'

At this point, Michael decides to sound more 'authoritative,' as he imagines his resident would in this situation.

'Listen, Ms. Johnson!' he says in his gruffest voice. 'I am here to examine you. This isn't a private hospital, you know. This is important! Now, come on and stop giving everyone a rough time!'

Michael has now puffed his chest and tried to seem as stern and 'physicianly' as he can. He hopes this will force his rambunctious patient to comply, but it is not to be.

Johnnie now squints at Michael with sardonic amusement. A wry smile then breaks through the leathery dissipation of her worn face. With slow and deliberate measure, she says, 'Back off, Sonny boy. Come back when you grow up!' She grabs her IV pole, which begins to totter dangerously (p. 29).

Reiser and Rosen continue the scenario by demonstrating how the attending physician could help the medical student disengage from his emotional state and begin to view himself and the experience objectively:

> The attending listens to Michael non-judgmentally and then says, 'try to detach yourself from the immediacy of the situation.' (Note empathy involves distance as well as closeness). Pretend you are invisible and looking down at the interaction between the two of you from a spot on the ceiling. Forget about yourself—watch that guy named Michael down there. Ask yourself: Why is it that Johnnie might be reacting with such hostility to Michael? Give her the benefit of the doubt. At least *try* to see it from her point of view. What do you come up with?' (p. 31).

What the example demonstrates is that the student's level of perceptual acuity and mastery of emotion led to a breakdown of the relationship with the patient. It is natural to expect medical students to be initially underdeveloped in these areas. Part of the process of self-development toward Phronesis is to be increasingly able to accurately perceive the patient in his or her context and have mastery over one's emotions such that they do not interfere in the delivery of care. These ideas will be explored more extensively later in the chapter.

Phronesis in the Changing Medical Training Environment

While it is beyond the scope of my analysis to suggest that one generation of physicians exhibits more Phronetic virtue than another generation, the interview data provides evidence to suggest that certain changes in Episteme and Techne over the past forty years impede the possibility for self-development toward Phronesis. Yet at the same time, other changes during this span of time have created more conducive training environments for the development of Phronesis. For example, in terms of what has changed in medicine that makes it more *conducive* to phronetic development I refer to a passage from an interview with physician Redden. He described what was lacking in his formative training that he believes students in the current era can benefit from. His description of this pedagogical change relates to the kind of experience that offers trainees the opportunity to develop wisdom for practice.

Redden: There was a lot in the system of the old that I went through which was found wanting to me. The old system of: "I'm the professor, you are the student. You'll just listen to me. You will not ask any questions." If you asked the question, it was almost like an insult. An example: As a junior intern in the orthopaedic service, I was asked daily to apply these wet sulphonomide dressed gauzes to wounds throughout the

> ward. [I was to] apply these gauzes every day. In my mind, many of
> these wounds were healed and why we were doing it made no sense.
> So at one point I had the nerve to ask the professor "why are we
> putting wet sulphur dressing on healed wounds?" And you know what
> his answer was? 'How often are you doing this son?' I said, "Once a day
> sir." "On this day forward you will do it twice a day." Just because I
> asked the question.

In this passage, Episteme is the *idea or knowledge* that sulphonamide gauze applied to wounds speeds up the healing process. Techne concerns the work Redden carried out in applying the dressing to each patient on the ward. Being a trainee, Redden wanted to eliminate unnecessary treatment by making case-by-case decisions as to whether or not treatment should be given. Had he had the opportunity to do this, it would have been activity toward the development of Phronesis because it would have been training to sense the right decision for the particular case. The example shows that while Episteme and Techne are learned, Phronesis is developed through cultivation and nurturance. Furthermore, the degree to which Episteme and Techne are rigidly or dogmatically applied as medical practice determines the possibility of nurturing Phronesis in medical training.

> The data of this research suggests that increased movement toward
> bureaucracy and 'managed care' is a movement that promotes
> medicine as rigidly applied Episteme and Techne. An example of this is
> the Evidence-Based Medicine (EBM) movement. Groopman (2007)
> writes,

> ...a movement is afoot to base all treatment decisions strictly on
> statistically proven data. This so-called evidence-based medicine is
> rapidly becoming the canon in many hospitals. Treatments outside the
> statistically proven areas are considered taboo until a sufficient body of
> data can be generated from clinical trials. Of course, every doctor
> should consider research studies in choosing therapy. But today's rigid
> reliance on evidence-based medicine risks having the doctor choose
> care passively, solely by the numbers. (p. 5)

The justification for EBM is to ensure that only those scientific advances and technological innovations which are well tested and supported by the medical research community are transferred in clinical setting. EBM is a justified response to the problem of using unsubstantiated medical practices in clinical care (Miles, Bently, Polychronis &

Grey, 1997; McAlister, Graham, Carr & Laupacis, 1999). However, as Groopman notes, a common critique of EBM is that the movement contributes to the degeneration of the active decision-making process physicians undertake during the assessment of particular cases.

In opposition to the passive decision-making trend, Redden commented that he encourages his students to question all that they do in the hospital, and he felt that while dogmatic practices do still exist, intolerance of questioning the orthodoxy of tradition has greatly diminished. "I like what I see going on in medicine today," he said, suggesting that trainees have the freedom to reflect on, make suggestions, and question practices that were traditionally outside the domain of critique. He expressed optimism regarding the cultivation of a critical approach and thinks this is one of the positive developments in the training of younger generations. He further states:

Redden: I think one of the most intelligent definitions of learning is a process of

self-discovery and remembering what was discovered. And if that is so,

you can't make the discovery for your students; it's just that you are

leading them to the discovery that they have to make on their own. I

think there are tricks in helping them remember what was

discovered…but the process of discovery is a solitary process and all we

can do is create an environment where it will occur. That's the way I

feel about it….So giving didactic lessons of, 'ok…these are the ten

points that you must memorize' makes no sense to me.

Redden's philosophy of teaching medicine is in line with discussions of how to develop phronetic ability found in the medical literature. Tyreman (2000) writes,

> There remains the issue of how Phronesis is encouraged in a practitioner. It may be possible to recognize it when it occurs but how is it promoted? … Teacher and student venture together into complex and underdetermined situations where both are free to question and challenge assumptions including the analytical framework in which the knowledge is represented. This challenges the traditional role of medical teachers as imparters of knowledge and emphasizes their role as facilitators of learning. *Phronesis* is acquired through engagement with and reflection on concrete situations; this does not result in rules of engagement for future situations, but facilitates the promotion of

professional values, principles, and mores which guide moral action (p. 122).

The evolution of medicine as an environment for the development of Phronesis is not at all transparent. The increased license given to students to question and reflect appear as an oppositional trend to the evidence-based medicine movement. Further investigation of the facilitating and hindering factors for Phronesis should be undertaken. In the following sections I detail what I consider two key aspects to the development of Phronesis: perception and emotion.

Phronesis and Perception

Phronesis develops through a strengthening of the ability to perceive. New medical school curricula are being developed to incorporate training in observation and perception (Shapiro, Rucker, & Beck, 2006). It should be noted that perception is similar but not synonymous with observation. According to Webster's Ninth New Collegiate Dictionary, to observe means 'to watch carefully; to recognize and note a fact or occurrence.' To perceive on the other hand, means 'to attain awareness or understanding of; a quick, acute and intuitive cognition.' Good observational skills are a base requirement for establishing rapport with patients. A number of participants spoke about the importance of observation:

Chaisson: Several years ago…residents went in pairs to a pregnant family's home and did observations in the last trimester and the first six months of the baby's life. And one of the things that the residents found interesting was how different their observations could be, and that was one of our sub-agendas: to have the [trainees] realize that they could see some very simple things in life very differently.

Duchesne: I am a huge fan of observation. If I see somebody who has tattoos on their knuckles, you know, four letters…love or hate or fuck or whatever…I ask them if they have ever been in a gang or in prison. And without fail I am on to something. And this opens up the discussion. If you are doing paediatrics and [you see] that somebody has a small jaw and a high palate…the very un-PC [un-politically correct] term is "funny

looking kid." You don't say this to say to yourself "well this is an ugly

child." You say that because with it comes possible diagnosis of genetic

abnormalities, and you should look at the kidneys and you should look

at the heart…and so it is useful to look at these cues. Because if you

know that somebody has been in jail because of the tattoos, then you

can say, ok they are at higher risk of HEP C. You know, it opens up

doors.

For Duchesne's example, the role of observation is used in conjunction with factual associations gained through experience. With prior knowledge that prisoners and gang members often tattoo their knuckles, the observation then opens doors to enhanced care. Thus observation and the Episteme (knowledge) of what is being observed can improve care. However, Phronesis pertains more to the arena of perception than observation, because practical wisdom requires the physician to quickly and intuitively understand what is going on in a certain scenario. A Phronimos-physician is one who not only observes but is able to perceive the reality of a situation as it truly is.

One way of developing perceptual acuity is by the trainee perceiving to the best of his or her ability and then reflecting on whether the perception was accurate, based on subsequent information. In this approach, the trainee needs to feel safe in the idea that errors of perception are a normal part of Phronesis development and can only be corrected through reflection on those errors. Ultimately, the repeated activity of perceiving, accepting that perception may be incorrect, and assessing perception with subsequent information elucidates and orients the trainee toward strengthening his or her less-than-perfect perceptual skills. Martin writes:

Martin: I had a student that wrote up a patient encounter. And…despite the

fact that this patient thought that everything under the circumstances

was fine and that he was handling his illness and his circumstances

reasonably well, she [the medical student] felt that, maybe he

wasn't…maybe he was depressed, or maybe there was some kind of

denial. I liked the idea that she was…she may or may not have been

right about those things…you know, and in fact I think she was right to

a certain extent, but the fact that she wrote that in her paper, that she was thinking of it, I thought that that was good. It was something that I encouraged when I wrote my marks on the paper. I wrote "this was very good. I'm glad to see that you are thinking like this."

Martin: (continues) ...you see one of the good things about being in family practice and having continuity of care is that you get these feelings [about patients] but you don't have to do some kind of drastic action. And over many visits and sometimes over years, your feelings become either reinforced or you disregard them because you feel that they are wrong. It would be a little bit more difficult if you are seeing somebody once in the hospital or over a very short period of time to be able to work on these things. Yet on the other hand it might be critical that you do. Because I mean, say somebody is in the hospital and they are at the end stage of their illness and you've got to really, if you can, try to use all of your skills and knowledge and intuition to observe the patient and how they are doing and their interactions with their family to skilfully manage this patient.

Like Redden's quotation in the previous section, Martin encouraged his students to develop themselves through criticality and questioning. He also suggested that the physician's ability to develop perceptual acuity is enhanced by the opportunity to care for the same patients over a long period of time. This continuity of care provides the opportunity to validate or correct what was previously perceived. Yet Martin also suggests that the hospital context, in which perceptual acuity is most necessary, is also the context in which true perception may be most difficult to acquire because of the short-term relationship between physicians and patients in that setting. This fact is exacerbated in recent times by the scientific, institutional and social changes in the hospital training environment which restrict the trainee's clinical engagement with patients.

Another point of discussion in terms of perception is the interview data concerning the impact of evolving technology on the trainee's ability to develop clinical skill. As Techne

involves the senses in the physician's practical affairs, the culture of Techne of a particular medical tradition or era provides the opportunity for, or functions to impede, sensory development. Well documented in the literature is the fact that technological advance in medicine of the last 5 to 30 years has replaced what physicians have traditionally done with their hands and senses (Reiser, 1993; Cassell, 1997; Carrick, 2001). From the empirical data, physicians also discussed how advances in technology, particularly in medical equipment such as MRIs, and echocardiograms, have decreased the need for hands-on Techne. This reduces the number of opportunities trainees have to develop their perception. Numerous physicians spoke about this issue. The underlying message was always that while diagnostic technology is usually good for patients (because it provides greater accuracy in diagnosis than human perception generally speaking), it is bad for training because it does not offer the imperative for developing observational and perceptual skills as was the case for the previous generations. I suggest that both the lack of continuous care and the replacement of sense-based diagnosis by technology are factors that hinder the development of the Phronimos-Physician. The finding suggests that a new pedagogical approach to facilitate sensory training is required.

One suggestion put forth by physicians was the use of videotaping in training:

Karim, Chaisson and Naveed mentioned how valuable they felt videotaping was to assist students in observing and reflecting on their behaviour, and to improve listening and communication skills:

Karim: One aspect [during my formal training] in which they videotaped us doing an interview, which I found very helpful. You know there are some mannerisms that you may realize that you're not doing, or how you ask a question, words, that could make a huge difference for patients, or sometimes patients may not be understanding what you are saying, but you go full steam ahead and you may need to take a few steps back and say, "did the patient really understand what I was saying?" So, I think role playing…simulations…because I find those situations help prepare you…

Chaisson: Videotapes of others and videotapes of oneself…Those are key. I see

huge value in watching videotapes. Including me. If medical students

are practicing doctor-patient relationship stuff, that they see

videotapes of others, whether if it is with actors or whatever, but then

they see videotapes of themselves…and then sit down with educators

and go over their videotapes. I think that is huge.

Naveed: I think it might be interesting to show video interaction between

physician and patient and have a video of someone who isn't listening

well and what the outcome is and have someone who is listening well..

and what's the difference. They might have taken the same time, so

someone who has taken ten minutes with the patient and another

person who has taken ten minutes with a patient. Someone who listens

effectively and someone who doesn't, and you know, I find students

respond well to visual and watching a video. It's kind of like…once

someone did something very interesting where they showed a clip of a

TV show…'ER'…to some of their students and said, you know what did

this doctor do wrong? What would you do as a physician? And I think

that students respond well to that kind of thing. You know it sounds so

ridiculous but to take a clip from 'Grey's Anatomy' or 'ER', these are

things that will catch their attention. But I think to visually see

something and compare sometimes makes it more obvious. I think also

the simulation centre we have now and doing our patient interviews is

great because the facility they have to videotape, they can actually

watch themselves to see what went wrong in an interview. So I think

that these are tools that we should be using and taking advantage of in

teaching.

Phronesis and Emotion

Emotional insight has recently become a topic of interest in the advancement of medical thinking. Groopman (2007) for example, writes extensively about how his own positive and negative emotions cloud or illuminate his judgment in his clinical work with patients. I suggest here that Phronetic development involves awareness, understanding, transcendence, and mastery of emotion. This entails understanding one's emotional disposition generally speaking, observing how specific emotions interfere with perception, and understanding and making use of emotions in practical matters and in the learning process. Houle exemplifies the need to understand and develop mastery over emotion:

Houle: I'm sure there are people in every one of our institutions who have

never learned how to manage anger and frustration. You know, you get

a surgeon, in this case the surgery gets cancelled, or they won't do it,

or whatever, and he gets so angry he hits the wall and breaks his hand

or his wrist. And this surgeon has a problem. And you can encourage

him to get treatment for the issue but if he hasn't caused any harm, it's

hard to force him.

Ultimately, mastery of emotions is the ability to transform emotion from hindrance to virtue in patient care. A number of other examples of the relevance of emotion emerged from the data. For example:

Chaisson: When a physician goes into an interview [with a patient], they have to

take care of their noise, whatever their noise is. My noise could be that

I've had an upsetting interaction with somebody, it might even have to

do with the plumbing breaking down in my house, or that I'm

exhausted, or I haven't had dinner. You know, I have to say to myself,

'is this *my* noise that's making me less able to hear?

Martin: I know myself as a person, I tend to be somebody who emotes. I tend

to be somebody who is a little bit more emotional. And I'm not afraid

of expressing my emotions. Like…I would want to give somebody a hug

and a kiss and that is my nature. And I'm that way with some of my

elderly patients and so, I think that in part it has to do with your

personality, but it is something that can also be learned and modelled. I

think that there is definitely a role for that in medical school and

especially as things are becoming so technical.

Redden: There is this idea that intellectualization interferes rather than

promotes learning. The more I think of it, the more I am in agreement

with this idea because the mind will always be deceived. Illusions are

always confused with reality so that if you took the intellect out of the

learning process and just brought emotion in, my claim is that number

one, you make the process more democratic in that you don't say 'this

guy has more emotion that this guy' Everyone has emotion. But where

we say this guy is smarter than this guy. But maybe that's not true.

Maybe my claim is that anything that makes an emotional impact on

the person will be remembered. Whether that is insight, or

understanding a mathematical equation, if emotion was brought into

the process, learning will be served. And I don't think that we

emphasize this enough.

Chaisson elucidates numerous factors that affect her emotional state at a given moment: (e.g., stress, exhaustion, hunger) which create an internal disturbance causing perceptual distortion or inaccuracy. Martin suggests that self-knowledge is knowledge about the quality of one's' emotional disposition and that a particular way of emoting with patients has virtue given the context of technologically based health care. Redden links emotions with learning, which has been recently raised in the literature by, for example Boler's (1999) work theorizing on the role of emotions in educational settings as well as Aultman's (2005) research on emotional learning in medical education.

Albert Einstein was famously quoted as saying, "education is what remains after one has forgotten what one has learned in school." Redden's insight can build on this idea by suggesting that what remains in memory after all else is forgotten is retained because of

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an emotional association. Yet the juxtaposition of the passages from Chaisson and Redden expose the seemingly complex character of an emotion-based pedagogy -- on the one hand, emotions having the potential to cloud perception; on the other hand, having the potential to emancipate the learning process. Whatever the case may be, the argument here is that wisdom emerges from emotional self-study. Mastery of emotions is a process that must be uncovered if it is to be intentionally incorporated into the design of medical curricula.

Aspects of Osler's (1889) speech, *Aequanimitas*, have relevance to understanding of the link between emotions and Phronesis. Osler argues that maturity in doctoring requires both imperturbability of body and equanimity of mind. He writes,

> Imperturbability means coolness and presence of mind under all circumstances, calmness amid storm, clearness of judgment in moments of grave peril, immobility, impassiveness...It is the quality which is most appreciated by the laity though often misunderstood by them; and the physician who has the misfortune without it, who betrays indecision and worry, and who shows that he is flustered and flurried in ordinary emergencies, loses rapidly the confidence of his patients (p. 27).

> In the second place, there is a mental equivalent to this bodily endowment, which is as important in our pilgrimage as imperturbability, ...Aequanimitas...How difficult to attain, yet how necessary, in success as in failure! Natural temperament has much to do with its development, but a clear knowledge of our relation to our fellow-creatures and to the work of life is also indispensable (p. 29).

Osler's definitions of imperturbability and aequanimity correspond to the concept of Phronesis in that they require of physicians a lucidity of perception and emotion, which gives the physician the power to make wise decisions. Aristotle's writings also clarify the role of emotions in developing Phronesis. While Houle's anecdote demonstrates how anger can be a hindrance to patient care, Aristotle presents the positive aspect of anger. In the section entitled, *The Virtue Concerned with Anger*, in *Nicomachean Ethics,* he states,

> The person who is angry at the right things and with the right people, and, further, as he ought, when he ought, and as long as he ought, is praised. This will be the good-tempered person, then, since good temper is praised. For the good-tempered person tends to be unperturbed and not to be led by passion, but to be angry in the manner, at the things, and for the length of time that the rule dictates. But he is thought to err rather in the direction of deficiency; for the

good-tempered person is not revengeful, but rather tends to make allowances. (Aristotle, trans. 1980, book IV: 5).

In Aristotle's view, mastery over emotion is not the eradication of emotion, but the ability to have control over emotions such that they are expressed at the right time and in the right context. His idea is that an emotion such as anger, for example, is required in certain circumstances to effect positive change. Yet left un-mastered, emotions overpower the will to act morally and interfere with the process of Phronetic development. Aristotle writes,

> For those who are not angry at the things they should be angry at are thought to be fools, and so are those who are not angry in the right way, at the right time, or with the right persons; for such a person is thought not to feel things nor to be pained by them, and, since he does not get angry, he is thought unlikely to defend himself; and to endure being insulted and put up with insult to one's friends is slavish (book IV: 5).

Rather than perceiving emotions themselves as hindrances, Aristotle elucidates the problem of emotional underdevelopment. The concept of having mastery of emotion for the benefit of oneself and for others is an important bridge in the transition into a Physicianship mindset. The idea also further clarifies the distinction between sympathy and empathy. As reviewed in chapter three, sympathy is feeling for another through one's emotional reaction to the other's experience. Empathy is being able to feel for the other while maintaining self-possession of one's emotions. Being able to care without being overwhelmed by emotion assists in cultivating practical wisdom. The following observations from Sauvigne and Tambor further demonstrate this point and the importance of understanding emotion as it relates to self-development and practical wisdom. In these passages, it becomes clear that physicians need to master their emotions because, left unexamined, emotions have the potential to interfere with effective clinical methodology:

Tambor: You see patients who are sick, who are afraid. They don't know what you are going to find. They've been waiting 4-6 hours…they are either angry at the system, they are angry at you, angry at the secretary. They finally come in; they get to see you, and they are in that state of mind…So you walk in and that's what you are going to see every ten minutes, hour after hour. So you know, you just pick up on that

vibration if you want to put it that way…people vibrate from their emotional state, and you are exposing yourself to that vibration. Like you pluck an E string on one guitar and another guitar in the same room the E string will start to vibrate. So in the same way, somebody comes in with depression, if you are around depressed people you tend to feel depressed. If you are around anxious people you tend to feel anxious. So if doctors don't have some way of dealing with that, then you just don't want to deal with that in patients because it brings up more of your own stuff…and you just deal with it by turning a blind eye to their suffering and just deal with their diseases and the biochemical thing that is going on and how do you treat it. Of course, that has to be done. But the art of medicine is TLC really.

Sauvigne: …like if you have bad news to say, bad news is bad news, there is no rosy way of putting it. If you've reflected back their angst, then, either you haven't done anything or made things worse. So somehow you have to integrate that [bad news], but at the same time not have it bring you down. And then give them back something that is either hopeful or energizing or something that will make them feel better after having talked to you or after having seen you. I don't know how you consciously learn to make that transformation. I think we each have a different threshold. Like for example when I was trained in oncology, I just fell apart. Because I thought that it was way too difficult. That was too high a threshold, for me - the amount of bad news and angst that I had to absorb and how much I wanted to give back that was positive, it was too much. But other people do it. So I think we each have our threshold and it is certainly a very internal process. So you learn what you can deal with. Sometimes you react badly. It is indeed something about you…so…the soft spots that we

have or why we are defensive about something or we don't know how

to deal with, its...it's internal.

Saugivne expanded on the idea of emotional 'soft spots':

Sauvigne: For instance, if I saw a patient who was my age who was dying of

breast cancer, I don't know how I could...it would be a huge struggle for

me to muster the composure to be the usual doctor that I would

be...you know...the usual cheerful...trying to be very positive and

encouraging...because it hits a really ...[interviewer: it evokes a certain

fear because of the similarity] yes. So I think that you need to recognize

that ...and that happens all the time. But also to figure out...you know...

hopefully we are not all walking around in fear of finding something

you are terrified of. That most of the time, how do you find the energy

to transform angst and pain that the patients are suffering and to be

able to give back something positive?....it's not about closing yourself

off. I think it's about recognizing your limits.

Tambor's guitar string metaphor and Sauvigne's idea of emotional 'soft spots' clarify the link between mastery of emotion and the development of Phronesis. For Sauvigne, emotional awareness was developed through experience working in Oncology, where she discovered her emotional threshold given what she expected of herself as a healer. For her, emotional wisdom was about 'recognizing her limits.' Tambor took the concept of 'emotional self-knowledge' one step further, suggesting that exposure to suffering is a reality of work beyond the physician's control -- 'an occupational hazard' as he states, and that physicians have to have mechanisms that develop 'immunity' to suffering in order to sustain their own mental health throughout their careers. His guitar metaphor serves to elucidate what is required of trainees to deliver compassionate care. His insight is the idea that a successful physician is one who is capable of compassionate witnessing of patient suffering while also witnessing and accepting what that suffering brings up in terms of 'one's own stuff.' For Sauvigne, the thought of the suffering of a woman her age with breast cancer had an emotional resonance that was beyond her emotional threshold. Tambor suggests that even in mundane instances of care in which the

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patient's suffering is well below the practitioner's emotional threshold, this suffering will still have an effect on the practitioner's emotional state. Tambor doesn't detail what he means by physicians having to find a way to deal with the internal resonance of suffering caused by exposure to suffering. Yet it could be suggested that a practitioner's capacity for moral and phronetic development depends not only on will and desire to witness and sooth the suffering of patients. It also depends on the will and desire to observe one's own suffering (which emerges from the unconscious mind, and as Tambor suggests, as a by-product of medical work.). Developing Phronesis, or the wisdom of knowing the best action for particular situations, is not possible if the physician 'turns a blind eye' to the suffering of others or to the resonance that suffering causes within themselves.

Awareness of one's emotional limits, and the development and transcendence of emotions has been part of an implicit or invisible medical pedagogy of the traditional medical model. The Physicianship model is one that is attempting to make explicit that traditionally implicit and invisible aspect to professional development. And any medical curriculum that moves toward an educational framework supporting the overt activity of student self-reflection and self-knowledge acquisition is in line with current trends and critiques of modern medicine. Whereas the scientific, institutional, and social aspects of the clinical socialization process are factors beyond the control of students and medical educators, these factors can be discussed with students to help them understand the context in which they will be working. On the other hand, Phronesis and the development of professional and healer attributes are concepts that can transform student identity, from lay to professional, as well as provide a language of self-development and self-knowledge that can establish their movement toward Phronesis over the course of their careers.

Summary

This chapter was an exploration of the many internal factors determining the character of clinical thinking and the doctor-patient relationship. The discussion, particularly pertaining to Phronesis and the strengthening of perception and emotion corresponds to emerging trends in medical pedagogy that examine the training environment in terms of socialization into the profession. What I have attempted to do in my analysis is to present the interview data as it is relevant to a pedagogy of Phronetic development. A major conclusion of this dissertation is that in traditional medical education, the

platform for personal growth and development of the trainee was provided implicitly, through the work process of clinical methodology and in taking care of patients. What has significantly changed in medicine is the fact that the physician's work provides less of a well-rounded opportunity for personal and professional development than it did in the past. The examples are numerous: increased specialization limits the trainee's opportunity to gain cross-disciplinary experience that builds a robust knowledge of multiple medical areas and confidence in his or her ability to deal with a diversity of patients. The replacement of hands-on diagnosis by technological devices has reduced the instances of trainees learning how to detect illness using the senses. The shift work environment of hospital culture limits the infrastructure for continuity of care and the developing of trainees' observation skills. The increased bureaucratic work environment also provides less structure for physicians to develop commitment to patient welfare. Finally, the societal trend toward self-care and the pursuit of self-interests has disrupted the traditionally defined concept of altruism within the profession.

Alternatively, the changed scientific, institutional, and social contexts of health care settings have affected student development positively by reducing the power difference between staff and student. This has allowed students to express their critical thinking skills by speaking up and questioning the kinds of medical practice they witness during their training. The shift-work environment further allows students to rest from long shifts and pursue extra-curricular activities that, in theory, can support their clinical performance. Students today are also more honest about their needs and more open to the self-reflective process, although some participants (e.g., Lilly and Ortiz) felt that students did not take their self-reflection homework seriously enough. Further work is required to transform the analysis of this dissertation into concrete pedagogical activities for curriculum development. However, the data of this research support the curricular reform initiatives of Physicianship, both as a compensatory measure given the educational deficit, as well as being in line with the recent societal trends that support self-reflexivity and emotional development. In the next and final chapter of the dissertation, I summarize the goals and findings of this dissertation and suggest avenues for further research.

CHAPTER SIX:
SUMMARY AND CONCLUSION

Efforts to improve undergraduate medical education cannot succeed without engaging with the multifarious factors – scientific, institutional, and social – that shape the pre-clinical and clinical training experience. Recent changes within these domains have significantly altered the environment in which students acquire their medical expertise and professional socialization. However, no overarching conclusion can be made as to the extent to which the training experience is becoming more or less conducive to Physicianship ideals. To suggest that the state of the educational environment has on the whole ameliorated or on the whole deteriorated would be oversimplification. More grounded is the conclusion that the influence of medical training on enhancing core Physicianship competencies is the result of the interplay amongst scientific, institutional, and social factors within the medical profession as well as the public sphere. The outcome of clinical performance is as dependent on changes within the training environment as it is on the conceptions, attitudes, and aptitudes for Physicianship that students bring into medicine from their innate potentials and from the culture of their generation.

For example, the data suggest that the current medical student is the offspring of an era (1960s-1990s) marked by the breakdown of social hierarchy, norms, customs, and formalities within society at large (see chapter four, p. 98). During the earlier part of this century, professionalism education in medicine remained undeveloped because students entered medical school already predisposed to exhibiting professional mannerisms, based on the societal norms of those times. Medical school education was thus focused more on science and technique and less on professionalism because the wide spread norms of formal behaviour served (or at least had the appearance of serving) the doctor role. Today, that culture of formality, courtesy, and respect for hierarchy has diminished. This trend may be advantageous for the profession if it means that younger physicians are more emotionally honest about their experiences and more apt to work within the subjective realm of their patients. Yet it may also be a hindrance if they experience difficulty in establishing boundaries along professional lines, or have difficulty

distinguishing between intimate but professional conduct versus casual, unprofessional conduct.

The kind of multifarious change demonstrated through the data reflects the non-linear progression of the clinical paradigm, in which some hindrances are being diminished while others are emerging. To map this non-linearity requires an investigation into the set of conditions that led to particular outcomes in the past in relation to how those conditions have changed within the current era. Evidence from the empirical data suggests that the increased use of medical technologies in hospital training environments create a reduction of opportunity for skill building and phronetic development in the trainee. Yet at the same time, students today are more likely to be encouraged to question and reflect on their training and are receiving for the first time in modern medical training, specific formal curriculum materials on professionalism and healing to assist in the transition into clinical responsibility. The outcome of such interplay between determinants is yet to be concluded.

A second conclusion of this research is that innovation in medical pedagogy is necessary to meet the demands of a changing clinical environment. Innovation is taking place in medical schools across North America and has manifested itself in two broad areas: One is the sophistication in teaching of science and skill through the use of computers and simulation technology. The second, the domain of this research, is new curricula addressing the relational aspects of doctoring. The McGill Physicianship program is one example of how curricula can be restructured to help students learn how to relate better to patients, colleagues, the medical profession, and to themselves as individual physicians.

Yet from the array of themes presented in the empirical data, a third conclusion is that didactic/instructive teaching of the relational dimension cannot be the definitive approach to effecting change. Formal teaching of the concepts embedded in the professional/healer model can be a point of departure to assist students' comprehension of the scope of the physician's role and responsibility. However, due to the increasing complexity of the training environment, it is no longer adequate to present the ideals of medicine to students and expect that they will translate into applied virtue. Numerous reasons exist for this. For one, many of the changes within the training environment undermine the ideals of Physicanship. One clear example is the fact that new regulations

limit the number of hours a physician can remain in the hospital. Some senior clinician-educators are concerned about the adherence to the regulation in spite of the need for presence and continuity of patient care. Another example is the role that diagnostic technology is playing in determining the extent to which students receive *meaningful* skill acquisition training. Reduced hands-on training opportunities may be a factor explaining the trend of student divestment from the training environment and a focus on extracurricular activity. A third factor is the fact that students are exposed to good as well as bad role models. Clinicians expressed concerned that the outcome of the Physicianship program would be attenuated if students chose to emulate the ethically and professionally substandard behaviour of some of their teachers. Fourth, the meaning behind the virtue-concepts themselves are not unanimously agreed upon within the profession and a clash between older and newer era values has ignited debate about the relationship between, for example, altruism and self-care. Given these restraints hindering didactic Physicianship pedagogy, the introduction of such a framework must coincide with an inward focus. This means that each student examines him or herself to realize what innate qualities they will bring to the profession; to uncover their beliefs, values, assumptions, and preconceptions; and to bring into their consciousness any psychological/emotional barriers preventing their transition into the realm of Physicianship. It is within this domain of pedagogy that Phronesis development has its place.

Thus, the data suggests two complementary paths to accomplishing innovation in Physicianship pedagogy: The first is to explore with students a mapping of the terrain of doctoring and the medical training context. This involves having them contemplate the often difficult and complex conditions of the contemporary medical environment (e.g., the scientific, institutional, and social factors) that demonstrate the importance of Physicianship (professional/healer) education. This kind of teaching approach can help students navigate through and gain insight into the complex array of factors that will inevitably shape their experience in training. Important for educators and students to remember is that entrance into an undergraduate medical training program is not only the first step in a trainee's process of professional socialization. It is also entrance into a historically defined and evolving trajectory of medical pedagogy arising from developments beyond the trainee's immediate field of vision. As medical students enter this process, they bring their preconceived notions of what their medical education will look like. The literature and empirical data strongly suggest that more often than not

students feel a degree of disappointment, disheartenment, and disillusionment over the course of training. That the students from the outset gain at least some awareness of the complexity of the social, scientific, and institutional factors at play may provide a buffer against the psychological and emotional hazards of the clinical culture.

The second path of Physicianship pedagogy is the domain of Phronesis. This kind of pedagogy involves teaching insights that move beyond preaching messages of medical morality such as 'you must behave in this manner,' or 'you must put your patients' interests first.' It involves exploring with students their conceptions of what doctoring is and how those conceptions match the scientific, institutional, and social realities of the contemporary context. What the analysis of Chapter five suggests is that the successful, unfaltering incorporation of professional and healer traits in trainees involves perceptual and emotional development and increasing capacity for truthful self-reflection of their Physicianship progress. This process of self-development cultivates the strength of character required to withstand the less-than-ideal environment of training.

In the interviews, skepticism was raised not only about the success of teaching students to relate better to patients, but also about the success of teaching students to exhibit qualities of virtue (compassion, care, cooperation, altruism, selfless service, respect, presence, etc. – see Appendix B). When participants were asked the *impromptu* question, 'how do you teach or instil in students the kinds of virtue that patients seek in their physicians?' it was commonly felt that the solution was in recruiting the right kind of student and ensuring -- or at least hoping -- that they have good role models during their formative years. Many of the physicians interviewed had at some point in their careers participated on recruitment committees and expressed how challenging it is to decide who should be admitted to medical school. Some physicians, such as Fuller and Issac, held the strong belief that the profession is being undermined by the admittance of increasing numbers of students who have no science background. Alternatively, others were more interested in recruiting students with innate Physicianship qualities.

In terms of the actual teaching of virtue in the undergraduate timeframe, no concrete ideas, only articulations of the complexity of the challenge were offered. For example:

Arneault: How do you teach it? How do you teach it? You know, a moral

imperative is not teaching. 'Thou will do likewise' doesn't teach

anybody *how* to do it likewise.

Tambor and Quarta made similar comments:

Tambor: How do you eradicate greed? I mean, if you've got a white cloth and it

gets dirty, you can't whitewash it, you can't paint it white. You've got

to wash it to get the dirt out of it. When you get the dirt out of it, it's

naturally white.

Quarta There is goodness in every student. We just have to nurture that.

These three quotations point to an inner reality of virtue development -- that it is cultivated less from paternalistic pedagogy, and more from removing inner obstacles impeding the naturally existing and innate virtue found in every student. Arnealt's comment is a recognition of the fact that merely telling students to put the needs of the patient first, to do the right thing, to be compassionate, to be altruistic, etc. does little to *instill* moral thinking in students. Physicians commonly believe that those who enter medical school with a pre-existing Physicianship disposition can benefit from the intellectual reinforcement of that disposition. However many consider it unreasonable to expect to instill virtue in someone who doesn't possess it already. Alternatively, some physicians, such as Quarta, suggest that all students have virtue and that the problem doesn't lie with the student, but with the system and the bad role modelling they are exposed to during training. Tambor speaks more directly about the process of unearthing virtue, suggesting that the path of Physicianship development involves observing and clearing out negative attitudes, values, and beliefs which impede the development of the naturally occurring positive character. This is in contrast to imposing professional and healer behaviours on top of the unexplored terrain of thoughts and feelings about being a physician. What these ideas entail in terms of pedagogical research and application is still to be developed.

Future Directions for Educational Research and Medical Teaching

To examine the generalizability of the research findings, it would be useful to conduct qualitative research concerning the hidden curriculum of the clinical training environment with physician-educators working in other parts of the world. The findings of this study derive from the perspectives of physicians working in the city of Montreal, within the province of Quebec. Some data, including concerns raised about fee schedules and institutional hospital policies were only relevant to the local context. Also useful would be to interview physicians who had no teaching obligations, to understand their concerns for medicine outside of the training context. The research may have yielded a different or an additional set of concerns had the interviews been conducted with physicians other than clinician-educators.

In terms of future research, the framework outlining the scientific, institutional, and social dimensions of the clinical context can serve as a useful tool to understand how the clinical environment functions to support medical education in other countries and cultures. The social dimension influencing clinical culture would be of particular interest, as societal norms such as formal etiquette and a tradition of respect for authority have deteriorated in North America in ways they have not in other cultures. The impact of culture on professional performance, from a global perspective, could be studied from the framework that emerged through this research.

The empirical findings confirm what has been cited in the literature, which is that medicine has undergone a prolonged period of paradigmatic instability coinciding with the period of societal revolutions since the 1960s. Only recently has a new paradigm emerged in medical education, clearly evidenced by the changing composition of undergraduate programming. What this means for medical students, however, is that they experience their formative training as ideologically heterogeneous and often contradictory. Students learn about the relational ideals of medicine through pre-clinical classes in medical humanities, narrative, healing, and the recently adopted professional code, but then experience the clinical training environment as a network of practices and traditions that often function through principles of a bygone era. Some of their experiences students deem as unprofessional, unethical and disturbing, particularly in the light of their Physicianship training.

For this reason, an understanding of the 'mechanism' by which the system evolves can help students observe, accept, and make best use of the training opportunity they are given. Kuhn's (1970) framework can be adopted as a starting point to understand the evolution of the clinical terrain. Different parts of this terrain are evolving in different ways and at differing rates. Movement from confusion/disillusionment to clarity can be achieved by being shown this reality of evolution.

In conjunction with the fieldwork of this doctoral research, I have been peripherally involved in discussions amongst Physicianship curriculum planners about how best to evaluate the effectiveness of the Physicianship program in accomplishing its goals. Medical educators worldwide are now seeking answers to questions related to evaluating professionalism, ethical conduct, and moral development. However, to evaluate students according to these principles is challenging on many levels.

Based on this research, there are numerous areas in need of consideration in designing effective evaluation programs. The first is to define the measure of program success. There are two ways to measure success of the program. The first is to measure the level of Physicianship competency attained by graduates. The second is to assess their satisfaction with the Physicianship program. Both areas are fraught with challenges. It is very difficult to compare Physicianship-trained students with conventionally trained students because all students in multiple years receive the same training. Comparing the McGill cohort with the cohort from another school is also challenging because the educational programming at the other school might also offer similar curriculum content. Moreover, the goal of Physicianship is not so much to improve performance, but to inculcate a mindset of doctoring. How to assess the transition of a mindset is a challenging question currently without an answer.

The second approach, to measure satisfaction with the program itself has other problems. That Physicianship is a new program has meant that it has been met with skepticism and resistance on the part of some students and faculty. Resistance and skepticism are common reactions to proposals for change in the structure of education. What evaluation approach can create a distinction between resistance to the novelty of approach versus resistance due to theoretical and practical flaws within the program?

A third consideration is in understanding what research methodology (e.g., qualitative, quantitative, and experimental design approaches) would be most suitable for the

evaluation of the Physicianship program. Finally, a fourth challenge is the issue of evaluating students on such qualities as commitment, presence, and altruism when, as the data suggests, the changes in medicine have diversified educator opinions about how these qualities are expressed within the clinical environment. These areas are in need of further research.

What is clear from the evidence provided in this dissertation research is that the paradigm of clinical medicine is evolving and that the evolution has a describable character that can be explained to students and teachers. The historically-defined characteristics of the dissociation paradigm are being challenged, dismantled and transformed through approaches to re-associating the various elements of the system and unearthing their underlying philosophical foundations. This trend of re-associating the various elements of the medical knowledge system resonates with the broader movements re-associating health to the social, psychological, emotional, economic, and political dimensions of life.

Practicing medicine engages physicians with some of the most challenging aspects of human existence: physical disease, psychological pain, and existential suffering. Given such proximity to the human condition, a principal reward in doctoring is that it offers invaluable opportunity for self-development. The cultivation of this potential has traditionally been passed down through apprenticeship and role modelling. Yet for the multifarious reasons cited, these mechanisms are not as effective as they used to be. Medical educators are now seeking new ways to encourage cultivating the mindset necessary for doctoring by restructuring their curricula, researching medical pedagogy, and explicating the intrinsic principles of Physicianship.

The contribution of this dissertation has been to illuminate the complexity of the clinical environment that demonstrates no simple solution for Physicianship development. The way students and teachers benefit is by becoming aware of the complexity, by being willing to reflect on and correct their perception of the clinical environment, and by developing themselves emotionally. In this way of approaching medical education, physicians and their trainees can effect positive change for the tradition of medicine and can have positive influence on the complex pattern of transformation of the clinical paradigm.

APPENDICES

Appendix A:
Interview Script for Patient's Perspective Study

The interviewer introduces him/herself to the participant, and explains the objectives of the study. If the individual has agreed to participate in the study, the consent form will be presented. For example, the interviewer will state, "Before we start, I'd appreciate you signing this consent form that tells me you agree to the discussion we are going to have."

Section 1:   Setting the scene (5 minutes)

This section is brief and designed to kick off the meeting.
"Thank you for agreeing to participate in this discussion. I'd like to give you some quick background and then we can get started. I'm going to tape record our meeting because it will help me remember all the things you have said. I assure that our conversation is completely private and your comments will not be attributed to you. They will be used only to help us understand how people feel about the care they have received here at the MUHC and from McGill physicians. The most important thing is for you to be completely honest and to tell me your true thoughts and feelings. If you have any questions as we go along, please don't hesitate to ask."
"McGill's medical School is planning changes to the way we educate doctors. It wants to improve their education and ultimately the way they work with patients. I am going to ask you some questions about your experiences with healthcare and doctors."

Section 2:   Getting to know the patient (5 minutes)

 "Before we start, I'd like to hear a little bit about you. Could you tell me your first name, where you live, and who else lives in your home with you? Perhaps you could also tell me briefly about the condition that resulted in you being cared for at the hospital. Thank you."

Section 3:   Background (10 minutes)

   a. Let's talk about what it means to be healthy. How do you feel about yourself when you're healthy.
   b. Now, how do you feel when you're ill? I'm interested in having you describe not the illness, but your feelings about being ill.

Section 4:   Patient expectations of their physicians - Physician as Professional (15 minutes)

   a. We've all had experiences of doctors and some who are good and some who aren't. When I say "a good doctor", what comes to your mind? What do you think makes a doctor a "good doctor"?
   b. You told me before about the feelings you have when you are ill. How does a good doctor make you feel when you are ill? How does he or she do that?

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c. If I said to you that a physician was "very professional", what does that mean to you? Is being professional the same as being a "good doctor"? What is the difference?

d. Let's talk a bit more about "professionalism" of the doctor. I'd like to know what you think are the things that make up professionalism. What things do you expect from a highly professional doctor?
Note: Prompts could include
   - up-to-date knowledge?
   - being part of a team?
   - having a degree from a well-known university?
   - interest in, and commitment to, the health of the community?

e. What if someone wasn't a good or a highly professional doctor, what would that mean? How do you know that someone isn't a good doctor or a highly professional doctor?

Section 5: Patient expectations of their physicians - Physician as Healer (15 minutes)

a. I'd like to explore a word with you. That word is "healer". What is a healer (and/or healing)? Is a good doctor automatically a healer? (If so, why? If not, why not?) Can a healer be something different than a good doctor? (If so, why? If not, why not?)

b. How can you tell if a doctor is a healer?
Note: Prompts could include:
   - Is at your side throughout illness?
   - Is caring and compassionate? (What does the doctor do to communicate care and compassion?)
   - Cured you? (Is there any difference between healing and curing?)

c. Have you ever consulted an alternative healer in place of, or in addition to, your doctor? What kind of healer? Did this person bring you something your doctor did not or could not?

Section 6: Broader context (5 minutes)

a. If you could give some advice to the people who educate and train the doctors at McGill, what would you tell them? What changes would you like to see in what doctors know and how doctors treat you?

b. What's the most important thing a doctor needs to know or to be in order to become a good doctor?

c. Do you think that it's possible for doctors at McGill and in the Quebec health care system to be good doctors? Is it easier in Quebec for doctors to be good doctors? Or do you feel there are barriers in Quebec? What are those barriers?

d. Have you heard about plans for the new hospital at Glen Yards? What have you heard? When you think about all the things we have been talking about, would you expect to receive good doctoring at Glen Yards? If so, why? If not, why not? Is there any contradiction between good doctoring and Glen Yards?

Section 7: Closing (5 minutes)

a. I want to thank you for all your help today. I have learned a lot from you. Before we finish up here, is there anything I should have asked you that I didn't? Do you have anything more you want to tell me?

b. Would you be interested, at some point in the next several months, in talking again about this or a related subject?

Thank you!

Appendix B:
McGill Medical School Model of Physicianship Attributes:
Professionalism and Healing

ATTRIBUTES OF THE HEALER

Caring and Compassion: a sympathetic consciousness of another's distress together with a desire to alleviate it.

Insight: self-awareness; the ability to recognize and understand one's actions, motivations and emotions.

Openness: willingness to hear, accept and deal with the views of others without reserve or pretense.

Respect for the Healing Function: the ability to recognize, elicit and foster the power to heal inherent in each patient.

Respects Patient Dignity and Autonomy: the commitment to respect and ensure subjective well-being and sense of worth in others and recognize the patient's personal freedom of choice and right to participate fully in his/her care.

Presence: to be fully present for a patient without distraction and to fully support and accompany the patient throughout care.

ATTRIBUTES OF THE HEALER AND THE PROFESSIONAL

Competence: to master and keep current the knowledge and skills relevant to medical practice.

Commitment: being obligated or emotionally impelled to act in the best interest of the patient; a pledge given by way of the Hippocratic Oath or its modern equivalent.

Confidentiality: to not divulge patient information without just cause.

Autonomy: the physician's freedom to make independent decisions in the best interest of the patients and for the good of society.

Altruism: the unselfish regard for, or devotion to, the welfare of others; placing the needs of the patient before one's self-interest.

Integrity and Honesty: firm adherence to a code of moral values; incorruptibility.

Morality and Ethics: to act for the public good; conformity to the ideals of right human conduct in dealings with patients, colleagues, and society.

ATTRIBUTES OF THE PROFESSIONAL

Self-regulation: the privilege of setting standards; being accountable for one's actions and conduct in medical practice and for the conduct of one's colleagues.

Responsibility to Society: the obligation to use one's expertise for, and to be accountable to, society for those actions, both personal and of the profession, which relate to the public good.

Responsibility to the Profession: the commitment to maintain the integrity of the moral and collegial nature of the profession and to be accountable for one's conduct to the profession.

Teamwork: the ability to recognize and respect the expertise of others and work with them in the patient's best interest.

Appendix C:
Demographic Information of Interviewees

Table 2: Demographic information of interviewees

	Pseudonym	Discipline	Years since Graduation.	Gender	Area of Undergraduate Teaching
1	Arneault	Internal Medicine	53	M	Physicianship
2	Beale	Internal Medicine	47	M	Basis of Medicine
3	Chaisson	Child Psychiatry	34	F	Physician Apprentice
4	Duchesne	Internal Medicine	9	F	None
5	Eaton	Pulmonary	40	M	None
6	Fuller	Nephrology	46	M	Basis of Medicine
7	Graham	Child Psychiatry	27	F	None
8	Houle	Surgery	50	M	None
9	Isaac	Surgery	39	M	None
10	Jameson	Ear, nose, & throat	19	M	None
11	Karim	Infectious Diseases	27	F	None
12	Lilly	Neurology	11	F	Physician Apprentice
13	Martin	Family Medicine	33	M	Physician Apprentice
14	Naveed	Endocrinology	11	F	Physician Apprentice
15	Ortiz	Family Medicine	11	F	Physician Apprentice
16	Petras	Physiology	45	F	Basis of Medicine
17	Quarta	Obstetrics/Gynaecology	36	F	None
18	Redden	Surgery/Urology	48	M	Physician Apprentice
19	Sauvigne	Respirology	10	F	None
20	Tambor	Family Medicine	30	M	None

Demographic breakdown:
Gender:
Men   10
Women   10
Number of Years in Service:
20 years and under: 6
Between 21 and 40 years: 8
41 years and above: 6
Involvement in undergraduate teaching:
Osler Fellows: 6
Lecturer and/or curriculum developer in Basis of medicine   3
Lecturer and/or curriculum developer in Physicianship   1
None   10

Appendix D:
Pilot Interview Script

This interview script is a series of open-ended questions based on the research questions. The interviews are intended to be a conversation between two people and the questions presented here serve to guide the interview and ensure that the dialogue covers all relevant areas. Interviews will begin by introductions and a brief overview of the objectives of the study. Participants will be asked to sign the consent form and asked if they have any questions before the interview begins.

Section I: What relevance do the concepts 'professional' and 'healer' have to physicians, the practice of medicine, and medical training?

a) Could you begin by telling me what your clinical work is at the MUHC and what responsibilities you have at the medical school?
b)   McGill medical school is taking a new approach to teaching medical students and calling it: "Physicianship: Physician as Professional and Healer." What are the merits and pitfalls of this approach?
c) Can you describe what it means for a physician to exhibit excellence in professionalism?
d) Can you describe what it means for a physician to exhibit excellence in healing?

Section II: What do physician-educators have to say about the importance of 'listening to the patient' in clinical encounters with patients?

One of the most striking findings of the "Patients' Perspective" study was the frequency and urgency with which patients said 'the most important thing is the doctor needs to listen to the patient.'
e) What comes to your mind when you hear that patients identify listening as one of the most important attributes of a physician?
f) What do you think patients mean by listening in this context? How do you define listening?
g) Why is it important that physicians listen to their patients?
h) What factors cause physicians to not listen to patients?
i) Can you describe an experience when you witnessed a colleague or medical student not listening to the patient?
j) What approach to medical training can improve physician listening skills?

Section III: What do physician-educators identify as critical factors that facilitate or hinder the establishment of healthy doctor-patient relationships, given numerous technological, economic, and social factors that are changing the nature of medical practice?

k) Based on your personal and/or professional experience, what changes have you seen take place concerning the doctor-patient relationship from previous generation?
l) What should medical education teach students about the recent proliferation of medical technology?
m) What position should medical educators take with regard to patients acquiring health and medical knowledge through their own research avenues such as the internet and other means?

n) In ensuring successful outcomes with future patients, what training perspective can assist medical students understand the merits and pitfalls of developing relationships with industrial partners (e.g. such as the pharmaceutical industry)?

Section IV: What aspects of medical training provide the foundation for excellence in medicine?

o) When you think about your medical school experience, what stood out for you as the most useful aspect?
p) What do you believe, if anything, was lacking from your education?
q) Was there any aspect of your education that you felt was detrimental to you succeeding in your work as a physician?
r) What activities should medical students involve themselves in during their formal education to ensure success in their future practices?
s) What is the most important factor that curriculum planners should consider regarding changes to the medical curriculum?

Appendix E:
Revised Interview Script

This interview script is a series of open-ended questions based on the research questions. The interviews are intended to be a conversation between two people and the questions presented here serve to guide the interview and ensure that the dialogue covers all relevant areas. Interviews will begin by introductions and a brief overview of the objectives of the study. Participants will be asked to sign the consent form and asked if they have any questions before the interview begins.

Section I: Introduction

a) Could you begin by describing what a typical work day entails for you?
b) What are your teaching responsibilities at the medical school?

Section II: What relevance do the concepts 'professional' and 'healer' have to physicians, the practice of medicine, and medical training?

c) To what extent are you involved in, or aware of, the Physicianship program as new curriculum at the undergraduate level?
d) Describe, in your terms, what it means to say 'physician as professional' and 'physician as healer'
At this point I could ask them to read and comment on the one page list of P & H attributes
e) Do you think that the Physicianship model is suited for training medical students?
f) Does a medical student need to emphasize different areas of professionalism and healing than a resident? Does seniority change Physicianship priorities?
g) Patients have told us that the words 'professional' and 'healer' are not particularly meaningful to them. (give examples). Do you think that we need to do something with that information – with what patients told us about terminology?

Section III: What do physician-educators have to say about the importance of 'listening to the patient' in clinical encounters with patients?

One of the most striking findings of the "Patients' Perspective" study was the frequency with which patients said 'the most important thing is the doctor needs to listen to the patient.' (provide examples)

h) What do you think patients mean by listening in this context? How do you define listening?
i) Should medical students have explicit teachings on listening? If not, why not? If yes, How so?
j) Do you make a distinction between listening and hearing?
   (if answers yes, then ask):
   Given that you have made this distinction, do you think it is important for medical students to be taught this distinction in relation to their interactions with patients? Is yes, why?

Section IV: What do physician-educators identify as critical factors that facilitate or hinder the establishment of healthy doctor-patient

relationships, given numerous technological, economic, and social factors that are changing the nature of medical practice?

    k) Based on your personal and/or professional experience, what changes have you seen take place concerning the doctor-patient relationship from previous generation?

    l) What should medical education teach students about the recent proliferation of medical technology?
        Prompt: how can we teach students to see medical technology as an adjunct to patient care and not the primary goal?

    m) What position should medical educators take with regard to patients acquiring health and medical knowledge through their own research avenues such as the internet and other means?

Section V: What aspects of medical training provide the foundation for excellence in medicine?

    n) When you think about your medical school experience, what stood out for you as the most useful aspect?

    o) What do you believe, if anything, was lacking from your education?

    p) Was there any aspect of your education that you felt was detrimental to you succeeding in your work as a physician?

    q) If you were in charge of implementing activities in the curriculum that would contribute to the development of students who can best meet patient expectations (e.g. good listeners) what would these activities consist of?

Section VI: Additional questions

This section includes questions not initially thought of but which emerged though the reflection of on-going interviews. Some may eventually be integrated into the interview script while others may be dropped or asked only if there is extra time.

    r) Can you think of a one or two sentence motto that captures the essence of the Physicianship program?
        Prompt: to describe its fundamental essence, its core values

    s) Do you think the recent curriculum changes will enable teachers to better identify and deal with unprofessional behaviours of students? If so, how?

    t) Is there a difference between what medical students are taught and what they learn in the classroom and at the bedside? In other words, do medical students receive conflicting messages in their learning environments about how to think and behave as physicians?

    u) Do you see any discrepancy between the learning objectives of the undergraduate Physicianship program and the postgraduate CanMEDS evaluation guidelines? Do you think it is necessary to provide a 'learning bridge' between Physicianship and CanMEDS to help students through their transition into residency programs?

    v) If you were to redesign the curriculum based on your experience as well as what patients have pointed out as important, what would you emphasize, what would you remove or add? Do you have any ideas for curriculum reform on aspects of the curriculum not covered by Physicianship (e.g., basic science aspects)?

Appendix F: Consent Form

Project title:

Physician-Educator Perspectives on 'Physicianship' and Curriculum Reform at McGill Faculty of Medicine

Investigators:

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This research project seeks input from physician-educators about changes to the undergraduate medical curriculum at McGill University Faculty of Medicine. Fifteen to twenty interviews will be conducted with MUHC physicians who have dual roles in teaching and clinical service. The goal is to acquire your perspective with respect to (a) revisions to the undergraduate curriculum; (b) some of the main themes that emerged in phase I, in which patients were interviewed about the curriculum changes and the doctor-patient relationship; and (c) key issues in teaching medical students professionalism and healing. The research fulfills the doctoral requirements for the principal investigator, Justin Jagosh, who is completing a Doctoral degree in Communication at Simon Fraser University.

The interview will be tape recorded and later transcribed, but your identity will remain completely confidential. No part of the interview will be attributed to you in the final report. Only the primary investigator, Justin Jagosh will have access to the interview transcripts. The interview is scheduled to last between 15 minutes to one hour, depending on your availability. If at any time you would need to interrupt the interview, terminate, or continue at a separate time, there is no problem.

There is no direct remuneration for your participation in the study, but your input is very important to assisting the changes being made to the undergraduate medical curriculum. Please use your experience, both in teaching medical students, as well as your clinical practice, to provide perspective on the curriculum changes being made and still need to take place. A copy of the final report from this study will be made available to the Office of Curriculum Development at McGill Faculty of Medicine. Any concerns or questions regarding this study can be addressed to, Dr. Hal Weinberg, Director, Office of Research Ethics: hal_weinberg@sfu.ca or 604-268-6593.

THIS IS TO CERTIFY THAT I, _____ (print name) HEREBY agree to participate as a volunteer in the project named above.

Participant Signature:
_____Date:_____

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