Empathy in Patient Care

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Antecedents, Development, Measurement, and Outcomes

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In dedication to those who devote their professional lives to
understanding human suffering,
eliminating pain,
eradicating disease and infirmity,
curing human illnesses, and
improving the physical, mental, and social well-being
of their fellow human beings.

Foreword

Empathy for me has always been a feeling "almost magical" in medical practice, one that brings passion with it, more than vaunted equanimity. Empathy is the projection of feelings that turn *I **and** you* into *I **am** you,* or at least *I **might be** you.* Empathy grows with living and experience. More than a neurobiological response, it brings feelings with it. Empathy helps us to know who we are and keeps us physicians from sterile learned responses. Originally the emotion generated by an image, empathy began as an aesthetic concept, one that should have meaning for medical practices now become so visual.

Empathy comes in many different guises. Empathy can be looking out on the world from the same perspective as that of the patient: to understand your patients better, sit down beside them, to look out at the world from their perspective. But empathy can be far more, therapeutic even, when physicians try to help their sick patients.

As a gastroenterologist, I have always been interested in what people feel, more than in what their gut looks like. When the flexible endoscopes began to change our vision in the 1960s, I gave up doing "procedures." Taking care of patients with dyspepsia or diarrhea up to that time had been a cognitive task: We deduced what might be seen from what our patients told us. Fortunately for our confidence, few instruments tested the truth of what we thought. The endoscopes I disdained proved forerunners of more discerning apparatus that now makes it easy for physicians to "see" an abnormality they can equate with the diagnosis. Gastroenterologists no longer trust what they hear—but only what they can see.

"Imaging," as X-ray studies have been renamed, has vastly improved medical practice. In the twenty-first century, surgeons are more likely to take out an inflamed appendix than they were in the twentieth century, thanks to the ubiquitous CAT scans that depict the offending organs. Cancer of the pancreas once was allowed to grow unchallenged in the belly when physicians had only a "barium meal" to hint at a malign process, but now they can see it at a much earlier stage. Paradoxically, such prowess makes the patients' story more important than ever: CAT scans uncover so many harmless anatomical abnormalities that, more than ever, the physician must be sure that what is to be removed from the patient will prove to be the origin of his or her complaints.

"Imaging," so seductive to the physician, sometimes stands in the way of the empathy that this book is all about. One of my favorite aphorisms, of untraceable provenance, holds that ***"The eye is for accuracy, but the ear is for truth."*** It is easy to see a cancer of the pancreas in a CAT scan as you jog by the view-box, but it takes far longer to listen to the anguish of the patients at the diagnosis which encapsulates their abdominal pain. And modern physicians have so little time.

Moreover, this enhanced ability to see what is amiss has turned many minor symptoms into diseases, in a frenzy of reification. "Heartburn," which patients once talked about, has now been renamed "GERD," gastro-esophageal reflux *disease,* which doctors must see to recognize. That once innocuous complaint, which boasted the badge of duty but could be banished by a little baking soda, has become a disease requiring treatment, not just a change of heart or mind. And it has become almost universal, thanks to the media hype magnifying attention to every little qualm of digestion.

The triumphs of medical instrumentation have led some medical students to worry that the physicians they will become may have little to do for patients as the twenty-first century moves on. They point to the "Turing experiment": Talking to someone behind a curtain, can you detect whether the answers come from a living person or a computer? Sooner or later, they fear, patients will talk to a computer with about as much idea of what or who is responding as Dorothy before the Wizard of Oz. How will tomorrow's physicians compete with the all-knowing and all-seeing "Doc in the Box!"

I hope they will learn that the sick need the right hand of friendship, for neither robots nor computers can compete with humans when it comes to empathy, sympathy, or even love for those in trouble or despair. Empathy is a crucial component of being truly human and an essential characteristic of the good physician. Yet critics assert that modern physicians lack empathy. If that is true, the selection process may be at fault: Physicians are winnowed by victories, from the competition to get into college and then the struggle to get into medical school. Having clambered up the greasy pole, students may have little feeling left for the defeated, the humble, those who have not made it to the top. Once in medical school, they don white coats—unwisely I think—helped to see themselves separate from their patients and the world. As they learn to be experts fixing what is damaged, they learn the primacy of the eye over the ear.

Sadly, current medical school education squeezes empathy out of the students who learn the body and forget the spirit/mind, while their teachers inculcate more detachment from the "still sad music of humanity." Later, the experience of postgraduate hospital training quenches the embers of empathy, as they see young lives cut too short by disease and old lives suffering too long. They learn to talk about the case rather than the person, medical writing is objective and impersonal, and imperturbability becomes their watchword. Medical students, so many studies have shown repeatedly,

lose their empathy as they go through medical school training that "clinical medicine" has been relabeled "cynical medicine."

That is what this book is intended to counter, just as the program it depicts has changed medical education at Jefferson.

In *Empathy in Patient Care*, Dr. Mohammedreza Hojat expands on what we physicians do not see, but can only imagine. **The Jefferson Longitudinal Study of Medical Education,** which he has headed for so long, provides the bedrock for this volume. He and his colleagues have studied how empathy begins—how medical students develop—and how empathy affects "outcomes"—how patients fare. We humans are social beings who need to live with others and who depend on interpersonal relationships for support. That need for human relationship, Hojat finds essential to the patient–physician dyad, as much as to the work of the ministry. Basing his conclusions on data obtained by the research instruments he has utilized and perfected, Dr. Hojat does not just talk about empathy, he measures it.

A Ph.D. psychologist of estimable attainment, Dr. Hojat has been drawn to viewing empathy as integral to the practice of medicine. The whole aim of this longitudinal study is to select medical students who will be empathic practitioners and to keep them empathic throughout life. "Attainment" and "success" provide the benchmarks of this long-term comprehensive psychosocial study of what makes for successful medical students and turns them into good physicians.

Teachers must find paths to refresh students' feeling for the human condition early; for that, the humanities loom so important. Beginning in college, premedical students—at least those who are not committed to a career in research—should focus less on the hard sciences and far more on the social sciences and literary fields. Liberal studies should make it easier for them to fold real human emotions into the care they give and—just as important—into their character. The humanities are not forgotten in this book, which recommends more experience with poetry and literature to nurture an empathic attitude in medical students.

It may be easier to recognize the absence of empathy than its presence. Knowing that it had its first openings in the Nazi concentration camp at Theresienstadt (Terezin), I cannot watch the play *Brundibar* without anguish. Its children/actors sing a song of defiance and survival on stage, but they know, Maurice Sendak its illustrator avers, that at its end they will be shipped to Auschwitz, to burn in the ovens of the death camps. Where was the empathy that makes us human in the German guards and officials of that place? In other concentration camps, it is said, prisoners who were musicians were ordered to play chamber music for the guards and officials who, afterwards, would send them off to be gassed. Not much empathy there. Pleasure in music, but no humanity.

Empathy is both rational *and* emotional, for many physicians. Dr. Hojat devotes attention to how much empathy comes from thinking—what the

trade calls cognition—and how much from emotion. When we reason, he asks, do we also have emotions appropriate to our thoughts? Surely the answer must depend on what we are thinking about, but here I yield to his appraisal of the data.

His distinction between empathy as a cognitive act and sympathy as an emotional attribute physicians may find more daring, since for us sympathy involves compassion. We physicians, licensed by the state and more knowledgeable than our patients because of experience, try to feel what they experience. Can we feel too much? Get too involved? Can doctors take care of friends? Is it possible for a physician to manage the medical problems of spouse or children? Are people better off being taken care of by a friend who treats them as patient than by a stranger? Such questions arise from reflecting on his studies.

Dr. Hojat's strong views on human connections are echoed by the phrase, "A *friend* a day keeps the doctor away!" Friends, marriage, all social arrangements help; falling sick, illness, and disease test those relationships. Aging tests them too, especially in the loss of friends, so few left for the funeral. Dr. Hojat attends to some optimistic psychological studies from California claiming that emotional support for women with breast cancer improves their longevity—but, I must caution, most of the time, prognosis depends more on the presence of metastases in lymph nodes than on the circuits of the brain, or even on the spirit.

Hojat finds the roots of empathy nourished by the mother–child relationship, even as he elucidates the nature–nurture conflict. Emotional support in childhood must be enormously fruitful, and the nurturing of infants crucial in establishing a model. Culture must have equal influence, along with the central role of genetic endowment.

Hospital chaplains understand the importance of connections when they talk about "being there" with the patient; no need for talk, just being there, actively present. Dr. Hojat traces the physiological path of that clinical mystery, as he puts it, a gift to the patient. Or is it our duty?

His words on brain imaging bring everything into balance, as up-to-date as possible. Nevertheless, I wonder whether psychiatry as talk-therapy will survive the burgeoning skills of computers. Neurobiology seems to suggest that the mind is like a secretion from the brain, like insulin from the pancreas, that the tide of neurotropic drugs can sweep clean. I prefer to dream that the mind arises from the brain more like smoke from a burning log, to obey quite different physical laws. Just as smoke flies free from its earth-bound roots, so from our protoplasm springs poetry, from the circuits of the brain our hope for a Creator. Yet Leibnitz wisely asked, if we could stroll through a brain as through a room, where would we find charity, love, or ambition? A Creator may have fashioned the channels, but will we ever locate them in that gray matter of the brain? Much depends on culture and environment, as the author so wisely points out.

Empathy is crucial to clinical practice, to treatment especially, though not all physicians agree. Some time ago, an essay "*What is empathy and can it be taught?*" was quickly rejected by a well-known journal of opinion, its editor observing that "Empathy has no place in medical practice." After the essay appeared in a less austere journal, however, many supportive letters and comments encouraged a book on that topic, one that welcomed the return of emotion to medicine.

Hojat sees empathy as largely cognitive, but some will think of empathy as present at birth, innate, waiting to be developed but unlikely to be created by any act of will. That could be too much like play-acting, for if the physician–patient relationship is as central to practice as I believe, there are mystical relationships not yet pictured by our models.

Psychologists will find much of interest in the chapters on techniques and testing. A remarkable collection of abstracts from the Jefferson Longitudinal Study, published in 2005, supports the conclusions in this book. One hundred fifty-five of those abstracts eventuated in papers published elsewhere provide the outcome data that has changed much at Jefferson. Some, unfamiliar with such studies, will wonder about psychometrics, and how often answers can be "socially desirable," as Dr. Hojat puts it. They remember that to test how well a subject bears pain in a laboratory setting cannot replicate the state of mind of a patient lying in a bed despairing of unfamiliar abdominal pain and wondering what will happen next. Knowing that an experimenter is causing your pain makes it a lot easier to bear than when you are in the dark. Psychometrics is a complicated science.

The "wounded healer" represents a model. Something good has to be said for the narcissistic satisfactions that comes from patient–physician relationships: working with patients, caring for them and sharing their emotional life but respecting boundaries. That can be therapeutic for physicians. The physician who has been sick is more likely to be empathic in future practice. Physicians who have had their own troubles have confessed that they have found surcease in talking with patients. Physicians who "burn out" or are bored are often, I imagine, those who regard their tasks as purely medical and technical. Countertransference can play a dynamic therapeutic role for physicians, at times.

The social revolutions of the late twentieth century brought the physician–patient relationship from the distant "professional" ideal of William Osler to one that encourages an intimacy that must vary with the cultural norms. Physicians of the twenty-first century in America ask about sexual habits and proclivities, questions which once were taboo. With the fading of parentalism, we are far more frank about the uncertainties of our practices. Prudently, Dr. Hojat has studied the influence of culture and environment, the expectations that mold our behavior. As educators, we might wish to have had empathy poured into our students before they come to medical school, but, as the Jesuits knew, for that we would have to train them from early childhood. The habits and norms of physicians vary with the passage of

time; the ideal of what is proper for a physician to do or say also has varied remarkably: Sometimes touching the patient is appropriate and comforting, and sometimes it is misunderstood and inappropriate.

Empathy varies with age and experience. Am I more empathic now than 40 years ago because I have experienced so much more? Does empathy develop? Or does it atrophy or weaken? In recognizing the differences between men and women, Hojat comes down firmly on the side of women as more empathic than men, at least in Western culture. Women are new in medicine, at least in America still finding their way; and the data may change with the "maturation" of their medical practices.

Not all physicians need empathy, for patient–physician encounters comprise many different relationships. Chameleon-like, physicians have to vary with circumstances. Treating a patient with pneumonia is quite different from evaluating someone with abdominal pain of uncertain origin. Their faith in the efficiency of computers has convinced some physicians that empathy is an unnecessary addition to their character. Time is at such a premium; family care doctors complain that they do not get paid for being nice to patients. They have to see more patients ever more briefly just to pay expenses. That must be why fewer graduates are choosing primary-care or even internal medicine.

Analysis of videotaped interviews must be a good way to refresh and recover the empathy that students bring to medical school. They can relearn empathy in discussing why patients have asked certain questions, and what answers are most fitting, and what comfortable phrases may make patients feel better. Rita Charon and others have gotten medical students to write about diseases from their patient's perspective; a very appropriate stimulus to empathy and understanding, the "narrative competence" that Hojat praises.

That also requires the reading of stories and novels, the discussion of narratives, and it certainly requires more collegiality than trainees tell about in the beginning of the twenty-first century. Empathy can be strengthened through stories. I have no wish to add to what others have written about the medical school curriculum, but I am convinced that rhetoric—the equivalent of persuasion—needs a rebirth in medical practice. We physicians are more than conduits of pills and procedures, we need to build bridges between our medical practice and the world of suffering around us. Conversation is essential, continuing discussions about patient–doctor relationships, about human relationships in general. We can fan the passion of empathy in medicine by both science and poetry, reason and intuition; we can provide more than the robots and computers, for only men and women are capable of empathy.

Team medicine, now looming so large, may supply that remedy in some other member of the group. A nurse or medical student, someone other than a doctor, can readily ask questions and provide the comfort that the physicians on the team do not always find the time to give. Now that hospitalists go from one desperately sick patient to the next, medical practice in

the hospital has become too complex for any one person, and the emotional burdens of hospital care cannot be any less trying.

As technology takes over the physicians' task of making diagnoses, empathy will need more attention than equanimity. What physicians can do in the twenty-first century is vastly more effective than before. But physicians no longer find the time to talk to each other, let alone their patients. Conversation helps to develop empathy, empathy overcomes our isolation and in empathy we rediscover ourselves.

Dr. Hojat wisely provides an agenda for future research ranging from selecting prospective medical students for their empathy to evaluating the neurobiological components of empathy and compassion. He and his coworkers are keen to provide measurements that will predict clinical competence and clinical empathy to help in the selection of medical students. But it may be a long time before the personal qualities of prospective medical students will trump their scientific know-how or their desirably high scores in the MCAT. Gentleness does not loom as captivating as high science grades to most deans of admission. Hojat's utopia wisely provides goals which medical practitioners and teachers can ponder and try to reach for in their daily activities. We are in his debt.

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Preface

All human beings are in truth akin,
all in creation share one origin.
When fate allots a member pangs and pain,
no ease for other members then remains.
If, unperturbed, another's grief canst scan,
thou are not worthy of the name of human.

—Saadi (classic Persian poet, 1210–1290 AD)

Although the primary intention of this book is to describe the antecedents, development, measurement, and consequences of empathy in the context of patient care, some of the material presented goes beyond that purpose. For the sake of a more comprehensive analysis, one cannot isolate such a complex and dynamic entity as empathy in patient care from a string of determining factors (e.g., its evolutionary, genetic, developmental, and psychodynamic aspects) and multiple consequences (e.g., physical, mental, and social well-being). Thus, to achieve a broader understanding of empathy in patient care, I discuss the issue in the wider context of a dynamic system, the function of which rests on the following six premises:

- Human beings are social creatures.
- The human need for affiliation and social support has survival value.
- Interpersonal relationships can fulfill the human need for affiliation and social support.
- The interpersonal relationship between clinician and patient is a special case of a "mini" social system that can fulfill the need for affiliation and support.
- Empathy in patient care contributes to the fulfillment of the need for affiliation and support.
- An empathic clinician–patient relationship can improve the physical, mental, and social well-being of the clinician as well as the patient.

Human beings are designed by evolution to form meaningful interpersonal relationships through verbal and nonverbal communication. There is a system of needs in human beings for social affiliation—for bonding and attachment, for forming a social network, for feeling felt, for understanding and being understood. The grand principle is the same whether the individual is an infant, a child, an adolescent, or an adult or whether the

individual is male or female or is healthy or ill: *Being connected is beneficial to the human body and mind.*

The aforementioned principle is indeed the theme underlying all 12 chapters of this book. In some chapters, it may seem that I take my eyes off the intended target of patient care, but I always return to the underlying theme to link the discussion to the clinician–patient relationship. When appropriate, I frequently use the terms "clinician" and "client," rather than "doctor," "physician," and "patient," to make the discussion more general and thus applicable to all health care professions, not to medicine alone.

Empathy is viewed in this book from a multidisciplinary perspective that includes evolution; neurology; clinical, social, developmental, and educational psychology; sociology; medicine; and medical education. Some theoretical aspects of antecedents, development, and outcomes of empathy are discussed, and relevant experimental studies and empirical findings are presented in support of the theoretical discussion. The book is based on my years of research on empathy in medical education and practice at Jefferson Medical College that resulted in the development and validation of the Jefferson Scale of Physician Empathy, a psychometrically sound instrument that is being used by many researchers in the United States and in other countries (see Chapter 7).

The book is written for a broad audience that includes physicians, residents, medical students, and students and practitioners of other health professions including the disciplines of nursing, psychology, and clinical social work. In particular, faculty involved in the education and training of health professionals can use the book as a reference in their courses. The book is divided into two parts. The first part consists of Chapters 1 through 5, in which empathy is discussed from a broader perspective in the general context of human relationships. This part lays the foundation for the second one, without which the discussion of empathy in the second part would look like a structure without supporting pillars.

In the second part, consisting of Chapters 6 through 12, the focus shifts more specifically to empathy in the context of patient care. The two parts are closely interrelated, evident by frequently referring readers to different chapters in the other part to avoid redundancies. Each chapter begins with a preamble presenting the highlights of the text and ends with a recapitulatory paragraph that provides a global view of the chapter.

Because the book is intended to serve as a reference source on the topic of empathy in patient care, on many occasions I have cited multiple references for critical issues for those who need to further review the issues beyond what I have presented in this book. Although a critical review of the literature was not among the intended purposes of the book, occasionally when appropriate I reported additional information such as the measuring instruments, and described the sample used in the cited research to help readers judge the validity of the findings.

Chapter 1 presents a historical background about the concept of empathy and discusses the ambiguity associated with the definitions and descriptions of empathy. The longstanding confusion between empathy and sympathy is described and specific features of each construct are listed to distinguish between the two. In addition, distinctions are made between cognition and emotion and between understanding and feeling. Finally, the implications of such distinctions are outlined to avoid confusion about the conceptualization and measurement of empathy in the context of patient care.

Chapter 2 is based on the assumption that human beings are evolved to connect together for survival. Thus, the importance of making and breaking human connections in health and illness is emphasized. The beneficial effects of a social support system on health and the detrimental effects of loneliness are presented to underscore the nature, mechanisms, and consequences of interpersonal relationships. The chapter concludes with a notion that the relationship between clinician and patient is formed by the drive for human connectedness and serves as a special kind of social support system, with all its beneficial healing power.

In Chapter 3, empathy is viewed from an evolutionary perspective, and the psycho-socio-physiological function of empathic engagement is described. Also discussed in this chapter are recent findings from neuroimaging studies on the brain and a new line of research on the mirror neurons in the brain that hold promise of increasing our understanding of the neuroanatomy of empathy and how we perceive other people's experiences, feelings, and emotions. In addition, the chapter discusses the genetic studies of empathy and the link between neurological impairment and deficiencies in empathy. The chapter ends with the notion that the foundation of the capacity for empathy developed during the evolution of the human race and that the neurological basis of empathy is hard-wired.

Chapter 4 discusses the psychodynamics of empathy by emphasizing the importance of prenatal, perinatal, and postnatal factors in the development of prosocial and altruistic behaviors. In particular, the effects of the early rearing environment, especially the mother's availability and responsiveness, in the development of internal working models that operate in a person's later interpersonal relationships are described. Experimental studies are presented to show that early relationships with a primary caregiver influence the regulation of emotions that becomes an important factor in interpersonal relationships in general and in empathic engagements in particular.

Chapter 5 briefly describes several instruments that researchers have used most often to measure empathy in children and adults. The contents of the items in these instruments indicate that most of these instruments are useful for measuring empathy in the general population, but their relevance in the context of patient care is limited. Thus, a psychometrically sound instrument, developed specifically to measure empathy in the context of patient care was needed to satisfy an urgent need to measure empathy among students and practitioners of the health care professions.

In Chapter 6, empathy in patient care is discussed in relation to the World Health Organization's definition of health and the triangular biopsychosocial paradigm of illness. In that context, empathy in patient care is defined, and three key features in the definition are emphasized: cognition, understanding, and communication. The chapter concludes with the point that the patient's recognition of the clinician's empathy through verbal and nonverbal communication plays an important role in the outcome of empathic engagement.

Chapter 7 describes in detail the developmental phases and psychometric properties of the Jefferson Scale of Physician Empathy (JSPE), which was developed specifically to measure empathy among students and practitioners in the medical and other health-related professions. Empirical evidence is presented to support the validity (face, content, construct, and criterion-related) and reliability (internal consistency and score stability) of both the student version (S-Version) and the health professional version (HP-Version) of the JSPE. The chapter ends with the thought that the evidence supporting the scale's validity and reliability should instill confidence in those who are searching for a psychometrically sound instrument that can be used in empirical research on empathy among students being educated for the health professions or among individuals already practicing in those professions.

Chapter 8 discusses the interpersonal dynamics involved in an empathic relationship between clinician and patient, and proposes that both can benefit from empathic engagement. The chapter presents several experimental studies that describe how role expectations, the tendency to bind with others for survival, uncritical acceptance of and compliance with authority figures, and the effects of the clinical environment can influence clinicians' and patients' behavior in clinical encounters. In addition, the chapter argues that such psychological mechanisms as identification, transference, and countertransference, plus placebo effects, and cultural factors, personal space, and boundaries make clinician–patient encounters unique. The chapter ends with a notion that for achieving a better empathic engagement, the clinician should learn to listen with the "third ear" and to see with the "mind's eye."

Chapter 9 describes the link between empathy, sex, psychosocial variables, clinical performance, career interest, and choice of specialty. It is argued that women may be endowed at an early age with a greater sensitivity to social stimuli and a better understanding of emotional signals that can result in a greater capacity for empathic engagement. This argument is reflected in studies reporting sex differences in the practice styles of male and female physicians. The chapter also reports a number of desirable personality attributes that are positively correlated with empathy and a number of undesirable personal qualities that are negatively correlated with empathy. Data reported in this chapter suggest that high scores on measures of empathy are associated with greater clinical competence and interest in people-oriented specialties as opposed to technology- or procedure-oriented specialties.

Chapter 10 reports the theoretical link between empathy and positive patient outcomes and provides evidence concerning the quality of clinician–patient relationships that lead to more accurate diagnoses, and to patients' greater satisfaction with their health care providers, better compliance with clinicians' advice, firmer commitment to treatment plans, and a reduced tendency to file malpractice suits. The reported studies in this chapter confirm the link between clinician–patient empathic engagement and positive patient outcomes.

Chapter 11 describes obstacles to the development of empathy in medical education and practice—the cynicism that students develop during their professional education, the changes evolving in the health care system, and the current overreliance on technology. The chapter also presents some evidence suggesting that empathy is amenable to change by targeted educational programs and describes a variety of approaches used in psychological and health education research to enhance empathy: interpersonal skills training, perspective taking, role playing, exposure to role models, imagining, exposure of students to activities resembling patients' experiences while hospitalized or during encounters with health care providers, the study of literature and the arts, development of narrative skills, and the Balint approach to training physicians.

In Chapter 12, the final chapter, empathy in the context of patient care is viewed from the broad perspective of systems theory. I suggested that a systemic paradigm of empathy in patient care includes the following subsets that interactively operate in the system: the clinician-related, nonclinician-related, social learning and educational subsets. The elements within each subset and the interactions of the elements within and between subsets during clinical encounters that lead to functional (positive) or dysfunctional (negative) patient outcomes are discussed. Finally, an outline of an agenda for future research on seven topics involving empathy in patient care is presented. The chapter concludes that the implementation of remedies for enhancement of empathy is a mandate that must be acted upon and that any attempt to enhance empathic understanding among people is a step toward building a better civilization.

It is my hope that this book can help to improve our understanding of empathy in the context of patient care. A problem that is well understood is a problem that is half solved. The more that health professionals understand the importance of empathy in patient care, the better the public is served.

Acknowledgments

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There is a popular saying in the Persian language: "Forever remain my masters those from whom I have learned." Following this piece of advice, I must begin with my mother—that angel from whom I heard before taking my first breath, who taught me to say my first word, who is engraved vividly in my mind as the foremost symbol of love, care, and empathic understanding.

Then there are others: among them, those who are the most valuable of all human resources, the teachers. There are many of them, but I would like to mention two of my undergraduate psychology teachers, Professors Reza Shapurian and Amir Hooshang Mehryar, who not only opened up a window for me to the study of human behavior but also instilled self-confidence in me by asking me, when I was a novice undergraduate student, to write a critical review of their book for publication.

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I would like to express my sincere gratitude to everyone I have acknowledged so far and to those colleagues at the Jefferson Medical College who offered me a sabbatical leave to pursue the self-rewarding endeavor of writing this book.

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A Personal Odyssey

Life is full of surprises!

—(A popular cliché)

A mother and her young daughter sat in the examination room, waiting for the doctor to show up. They looked anxiously at the closed door, expecting a stranger in a white coat to open it at any moment. Time seems to stand still when a patient is waiting for a doctor to come. It is interesting that patients always view a doctor as the most trusted of all strangers unless a strange thing happens, usually during their first encounter.

At the recommendation of the pediatrician, the mother brought her 13-year-old daughter to this pediatric cardiologist to be examined for heart palpitations. The pediatrician had indicated that, at age 13, occasional palpitations were not necessarily a serious cause for concern: They could be a result of too much caffeine for a coffee-lover like that young girl, a sign of test-taking anxiety at school, or a sign of a transitory emotional state. However, to eliminate the possibility of a serious heart condition, the pediatrician referred the girl to an expert in cardiology.

Here they were waiting for the expert to deliver the final verdict—either a clean bill of health or a long-term treatment that eventually could involve surgical procedures. The fear of the unknown that always haunts human beings was escalating with the passage of time. Finally, the doctor entered the room shadowed by a young woman also wearing a white coat. He pointed to her and said, "This is my resident." No greetings were exchanged, and the doctor seemed indifferent and in a rush. The encounter was cold. Without looking at the mother or the girl, he opened the medical chart the pediatrician had sent him and announced that additional tests were needed. The test he suggested was a heart monitor the girl would wear 24 hours a day, 7 days a week, for at least a month. After each abnormal heartbeat, the device would transmit the recorded signals to a monitoring center via a telephone line connected to the monitor.

When the anxious mother asked the doctor how her daughter could be hooked up to a heart monitor for a month without missing her classes, the cardiologist said the monitor was light and could be attached to a belt around her waist and connected to a watch-like device on her wrist. The only additional information he offered was that the monitor could be rented for a month and that the expense might not be covered by insurance. He

seemed to be more concerned about how the monitor would be paid for than about the mother's and daughter's need for comforting comments.

The doctor informed the mother that the next appointment would be in a month or so, after the heart monitor test was completed. The anxious mother expected, to no avail, more information about her young daughter's condition, some sign from the doctor that would make her daughter, who was looking hopelessly into the doctor's emotionless eyes, feel a little hopeful at least. As the doctor and his resident were leaving the examination room (where no examination had been performed), the mother, with a despairing look, asked the doctor: "Is my daughter's heart condition really serious enough to need constant monitoring for a month? Couldn't her condition be transitory?" The doctor looked at his resident and mumbled, "We've got another doctor in here," and the two left the room, leaving mother and daughter feeling desperate and confused.

The mother did not trust the expert, never rented the monitor, and the heart palpitation stopped abruptly when the daughter stopped drinking coffee. However, memories of cold encounters can last forever.

It is interesting that an adverse event occurring when a person is in a heightened state of emotional arousal tends to leave a deeper scar in the sufferer's mind than it would otherwise. Or it may be that a lack of empathic understanding has a more lasting effect than the presence of a "detached concern." Is it any wonder that many patients hate to go to a doctor's office? (By the way, that mother happened to be my wife and the 13-year-old happened to be my daughter.)

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This event, plus my long-standing curiosity about and fascination with the two opposing poles of human connectedness versus lack of connectedness—namely, interpersonal relationship versus loneliness—compelled me to embark on a journey that would lead to a better understanding of why empathy is so important in patient care.

Since my college years, I have been curious about why people behave as they do in making or breaking human connections. What are the foundations on which human beings build, or fail to build, the capacity to form meaningful interpersonal relationships? Has human evolution included development of the ability to form interpersonal connections? What roles do genetic predisposition, rearing environment, personal qualities, and educational experiences play in achieving personal and professional success, in clinician–patient encounters, or in student–teacher relationships, or even in achieving likeability or attaining the qualities of professional, educational, or political leadership?

While earning my master's degree at the University of Tehran, I attempted to satisfy my curiosity about the personal attributes leading to success by examining the qualities of popular students using a sociometric methodology.

I found that the human attribute of likeability, or popularity, was rooted in the early rearing environment and was also linked to positive personality traits, such as self-esteem. Furthermore, academic and professional success is the end result of these social skills. This research culminated in my master's thesis, *An Empirical Study of Popularity*.

While earning my doctoral degree at the University of Pennsylvania several years later, I continued to pursue my research interests, which eventually resulted in my doctoral dissertation, *Loneliness as a Function of Selected Personality, Psychosocial and Demographic Variables.* During this period, I studied factors contributing to loneliness, an indication of an inability to form meaningful interpersonal relationships. The findings showed that a set of personality factors, early experiences in the family environment, perceptions of the early relationship with a primary caregiver, early relationships with peers, and later living environment could predict experiences of loneliness in adulthood.

From the results of both studies, I learned that a common set of psychosocial attributes contributes to the development of a capacity (or incapacity) to make (or break) human connections. These psychosocial attributes are similar to the elements of "emotional intelligence," such as social competency and the ability to understand the views, feelings, and emotions of others: that is, the capacity for empathic understanding.

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As a psychologist by academic training, I entered a new territory of medical education research more than two decades ago. At the beginning, I was not sure whether my interests, knowledge, skills, and academic background in psychology could serve the purpose of medical education research. However, I soon discovered that the field of medical education research was a rich and challenging territory at the crossroad of several disciplines, including psychology, education, and sociology as well as medicine. As a result of learning more about the field, I became convinced that both the art of medicine and the alleviation of human suffering would flourish by incorporating ideas from the behavioral and social sciences into the education of physicians.

I started my career in medical education research at a great academic medical center, Jefferson Medical College of Thomas Jefferson University, where I was charged with administrative and research responsibilities for the Jefferson Longitudinal Study of Medical Education. This now well-known longitudinal study retrieves data about Jefferson's medical students and graduates from the most comprehensive, extensive, and uninterrupted longitudinal database of medical education maintained in a single medical school. The Jefferson Longitudinal Study was initiated under the supervision of Joseph S. Gonnella, M.D., a decade before I joined the faculty. Joe was then the Director of the Office of Medical Education and later the Dean of Jefferson Medical College and Senior Vice President of Thomas Jefferson University.

Currently, he is Emeritus Dean, Distinguished Professor of Medicine, and Director of The Center for Research in Medical Education and Health Care. Joe initiated the study because he had a vision (he jokingly says that schizophrenic patients have visions!) concerning the need to assess the outcomes of medical education at a time when most medical faculty members did not believe in the value of such an expensive and extensive study and thus were unwilling to devote resources to it.

My involvement with the Jefferson Longitudinal Study not only opened up a new research opportunity for me but also proved to be an extremely interesting beginning to my professional life. I enjoyed the freedom bestowed on me to add new dimensions (e.g., personality and psychosocial measures) to the longitudinal database to address psychosocial aspects of academic success in medical school. To me, that green light, which allowed me to include personality and psychosocial measures in the longitudinal study, was analogous to offering a cool glass of water to a thirsty man in the heat of a desert! The job provided me with a golden opportunity to incorporate my ideas about personality attributes into research on the contribution of those attributes to the academic attainment of medical students and to the professional success of physicians. So far, this highly productive research enterprise has resulted in more than 150 publications in peer-reviewed journals. Meanwhile, my long-term interest in why people behave as they do in making or breaking human connections shifted to a more specific interest in empathy in patient care. Then the question became: Why are some physicians more capable than others of forming empathic relationships with their patients? More important, how can empathy be conceptualized and quantified in the context of patient care? How does the capacity for empathy develop? How can it be measured? And what are the antecedents and consequences of empathy in the context of patient care?

A few years ago, in pursuit of answers to these questions, I began to develop an instrument for physicians that measures empathy in patient care (see Chapter 7). During that time, I was fortunate to benefit from the intellectual input and instrumental support of the group of medical education scholars and practicing physicians making up the team of the Jefferson Medical College physician empathy project (see Acknowledgments).

All the elements in this interrelated chain of events brought me to the uncharted terrain of empathy in patient care. Interestingly, empathy has proved to be an extremely rich area of research requiring a multidisciplinary approach that links views, concepts, theories, and data from diverse disciplines, such as evolutionary psychiatry; ethology; developmental, clinical, and social psychology; psychoanalysis; sociology; neuroanatomy; philosophy; art; and literature. What prompted me to embark on a search for the answers to my questions about how empathy develops and what its antecedents and outcomes are in the health professions was fascination with the richness of this uncharted territory, in combination with my long-time interest in the mysteries of interpersonal relationships, my academic background in the

behavioral and social sciences, and my professional experience in medical education research.

If a fortune-teller had told me at the beginning of my college years that I would end up with a career as a researcher in medical education, I would have laughed uproariously in disbelief! And that wise fortune-teller probably would have responded by saying, "Well, young man! Life is full of surprises." It is indeed!

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