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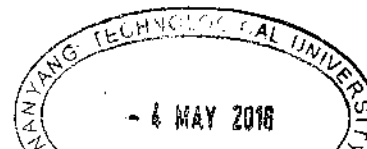
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HUMANITAS

Readings in the Development of the Medical Humanities

Edited by Brian Dolan



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Colour photograph showing an anatomical model advertising a pharmacy in Delhi, India. The model is behind glass and surrounded with bottles. The pharmacist's name, Kaviraj A N Roy, BSc, MASFRMP, is written on a label at the top left of the glass case. A man, the pharmacist, sits reading a book.

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“Not many students today perceive the value of a rigorous education in the cognitive elements of traditional humanism. Some will perceive them later in life, when medicine itself becomes so routinized as to verge on boredom.”

—Edmund D. Pellegrino, MD

This book is dedicated to all the students who desire to pursue *humanitas* – education in humanism – to broaden their perspectives on the art and science of healthcare.

Henry Borsook, "The Humanities in Medicine," *American Journal of Cardiology* 1: 1 (1958), 121-131.

Henry Borsook (1897-1984) was a British-born, Canadian-raised scientist-physician with a PhD in biochemistry and MD from the University of Toronto. In 1929 he was appointed to a faculty position in Tracy Hunt Morgan's newly established biochemistry division at California Institute of Technology (Caltech) where he remained until his retirement in 1968. After that he continued research until 1977 as an emeritus professor at Berkeley. An expert in the biochemistry of protein synthesis, his interests grew to include the science of nutrition, and later partnered with the philanthropist Clifford Clinton, owner of Clifton Cafeteria Line in Los Angeles, to produce and distribute a soybean-based Multi-Purpose food for impoverished populations around the world. Diverse in his interests, he was founder of the Anaximandrian Society at Caltech, where students came to Borsook's house monthly to discuss research papers in the history of biology. Borsook's own career is an interesting case-study of the correspondence between humanitarianism and biochemical medical research, especially when linked to his philosophical engagement with the topic "The Humanities in Medicine."

In 1957, Borsook delivered the Franz Groedel Memorial Lecture to the American College of Cardiology. Groedel, a pioneer in electrocardiography and founder of the American College of Cardiology, endowed the series to "serve as a yearly reminder of our humanistic obligations" as clinicians and medical researchers. Thus, as Borsook observed, the same stream of funding that brought the instruments of physics into biology labs and clinics left as a further legacy of Groedel's success a titled lecture series intent to bring the humanities into medical consciousness.

Published in the first issue and first number of the *American Journal of Cardiology* (1958), Borsook's article continues a theme raised in

previous articles reproduced here relating to the development of ideals among medical graduates. The ideal, argues Borsook, is to embrace a holistic view of disease that does not reduce a suffering patient (one with dis-ease) to broken parts that focus a physician's attention. Holism – an ancient concept that saw a philosophical revival in the interwar years – gives rise to the epitome of humane treatment; holistic views see the disease as the *essence*, in the Platonic and Hippocratic sense, of a suffering patient, which differ in kind but, like tables that are shaped and assembled differently, are essentially the same.

Borsook points out that "the humanities in medicine" is not a phrase interchangeable with "humane medicine" – the former provides tools to create conditions for the latter. What is notable about Borsook's article is the very way he historicizes and contextualizes "the humanities," showing the range of disciplinary learning to be a product of a traditional "liberal education," where liberal amounts to a freedom of intellectual inquiry, as opposed to learning through rote memorization or uncritical catechism. What Borsook argues here, and illustrates through historical, literary, and philosophical references, is that medical students (and indeed all professionals under continual self-improvement) would instill values and ideals of humane care by embracing philosophical liberalism over the prevailing dogma of medical training.

Borsook's article is subtle and smart. While using a multitude of historical anecdotes to illustrate the pioneering work of earlier scientists, he is careful to point out the necessity of understanding that social values themselves change through time, so that it is important to see things in context and "to apprehend the different systems of values by which men lived." This suggests a relativist historical perspective. He is also prescient in his concerns about the technologization of medicine, repeatedly warning against seeing patients as mere statistics. "It will be sad," he writes, "if medicine ever ceases to be an art and becomes only science, solely a matter of test, technic, and prescription by IBM machine."

This article thus begins to articulate concepts developing mid-century in humanities disciplines that reflect a critical engagement with social thought and methodological maturity. His article also represents an important contribution to the philosophy of medical education by adhering to the principle that students' sympathies – what we prob-

ably today prefer to call empathy – toward patients can be taught and shaped through study of the humanities. A final note of interest here is Borsook's suggestion that such study should be interdisciplinary, embracing anthropology as well as the literary, philosophical, and historical disciplines he previously discusses.

See also

Norman H. Horowitz, "Henry Borsook, 1897-1984." *Engineering and Science* 47: 5 (1984), p. 24.

The Humanities in Medicine

Henry Borsook, M.D.

I am deeply moved by the honor and privilege of delivering the Franz Groedel Memorial Lecture this year I ask you to accept my sincere thanks. It is interesting, indeed noteworthy, that the late William G. Kerckhoff, who gave Dr. Franz M. Groedel, whom this lectureship commemorates, funds to build at Bad Nauheim a laboratory to be devoted to research in cardiovascular disease, also gave the California Institute of Technology in Pasadena funds to build the William G. Kerckhoff Laboratories of the Biological Sciences, of whose staff I am a member. Franz Groedel sought, from the beginning of his career, to use the methods and instruments of physics in medicine; he was one of the pioneers of clinical electrocardiography. The Kerckhoff Laboratories of Biology were built at Pasadena to bring to biology the methods and ideas of physics, chemistry, and mathematics. The title of the Groedel Lecture is "The Humanities in Medicine." It is to "serve as a yearly reminder of our humanistic obligations." The hope was expressed that it may "inspire us to take an active role in shaping the motivations of the medical student and the ideals of the graduate." The title implies that there are problems such as how to bring together the humanities and medical science, how medical practice may be scientific and yet kept consonant with the patient as a person. Both kinds of problems are related. It is a matter of mixing vinegar and oil. In medicine, as a science, the proper manner is objectivity, rigor, and un-excusing logic. Eloquence, personal warmth, sympathy, and temperament are eccentricities in science; they are the life blood of the humanities.

There is a danger that we may be using the term "the humanities" as if it meant the same as "humane." My old Webster's Collegiate Dictionary defines "humane" as

Having feelings and inclinations creditable to man; benevolent. Synonyms: kind, merciful, compassionate, sympathetic, tenderhearted, lenient, clement, forgiving.

"The humanities" the same dictionary designates as an archaic term referring to "branches of polite learning, especially the ancient classics." Nowadays the term "the humanities" is broadened to mean nonscientific learning: history, literature, and philosophy; but there is still in its meaning something of its classical ontogeny. Even then, the terms "the humanities" and "humane" have directly in common only that they both pertain to humans. When the Greek and Roman classics were written society was not humane; there was slavery, there was cruelty everywhere, in war, in law, in sport. Thoughtful, educated men

It is hoped the Medical Humanities will "inspire us to take an active role in shaping the motivations of the medical student and the ideals of the graduate."

could be only pessimistic about the realities of the world in which they lived. The Epicurean philosophy taught that if you do not attract the notice of the world it will not hurt you; wisdom is to withdraw to a quiet private life with a few friends. For the Stoic all is predetermined; virtue is to choose in accordance with the divine plan, and if you do not choose you will have to anyway; nothing but this grim, if noble, virtue is of any value. Both philosophies rejected the world; both were philosophies of escape. The centuries and countries of the revival of the classical learning were not notably humane. Humanitarianism became the mode in society only in the nineteenth century, with the rise of liberalism, at a time when the classical learning and the obligatory study of the nonclassical humanities were in their decline.

Yet who of us has not hankered after the polite learning! If only our art of medicine were not so long and life so short! If only we had time for both! Our present-day notion of "liberal," as in a liberal education, is a Greek idea, connoting what is to be expected of a free man. Plato in the Laws distinguishes between two kinds of doctors, one a slave, the other a freeman.

The slave doctors run about and cure the slaves, or wait for them in the dispensaries—practitioners of this sort never talk to their patients individually or let them talk about their own individual complaints. The slave doctor prescribes what mere experience suggests as if he had exact knowledge; and when he has given his orders, like a tyrant, he rushes off with equal assurance to some other servant who is ill; . . . But the other doctor, who is a freeman, attends and practices upon freemen; and he carries his enquiries

far back, and goes into the nature of the disorder; he enters into discourse with the patient and with his friends, and is at once getting information from the sick man, and also instructing him as far as he is able, and he will not prescribe for him until he has first convinced him; at last, when he has brought the patient more and more under his persuasive influences and set him on the road to health, he attempts to effect a cure.

The latter is a philosopher's ideal physician. But this is based on physicians as they were to the degree that Greek statue represented a man as he actually looked.

Medicine of the Greeks

The Greek physicians of 430-400 B.C. were the fathers of modern medicine. It is only decent piety to try to understand them. There were two chief medical schools. Neither was in the great capital, Athens, but in the provinces, at Cnidos on the coast of Asia Minor, and at Cos off that coast. The physicians worked for a living; they could not have been rich, or an apprentice taking the Hippocratic Oath would not have sworn,

To hold my teacher in this art equal to my own parents; to make him partner in my livelihood; when he is in need of money to share mine with him.

Greek medicine was the first intellectual discipline, and this was in the fifth century B.C., to abjure, not only superstition, but also general philosophic postulates and systematizing. The Coan author (430-420 B.C.) of "Ancient Medicine" began,

All who, on attempting to speak or to write on medicine, have assumed for themselves a postulate as a basis for their discussion — heat, cold, moisture, dryness, or anything else they may fancy — obviously blunder . . . Wherefore I have deemed that [medicine] has no need of an empty postulate as do insoluble mysteries, about which any exponent must use a postulate, for example things in the sky or below the earth. . . . For there is no test the application of which would give certainty. But medicine has long had all its means to hand, and has discovered both a principle and a method.

It was the Golden Age of Greece, the wonderful fifth century of boundless confidence and optimism that was soon to disappear from the Mediterranean

for four centuries. Both schools based their teaching on direct observation of cases and case histories. It is unfortunate and unfair that nearly all we know of the Cnidian school is from the criticism of it by its rival, the Hippocratic school at Cos. The author of the "Regimen in Acute Diseases," who may have been Hippocrates himself, begins:

The authors of the work entitled Cnidian Sentences have correctly described the experiences of patients in individual diseases and the issues of some of them. So much even a layman could correctly describe by carefully inquiring from each patient the nature of his experiences. But much of what the physician should know besides, without the patient's telling him, they have omitted; . . . And whenever they interpret symptoms with a view to determining the right method of treatment in each case . . . I censure them because the remedies they used were top few in number—purges and to drink whey and milk . . .

The many phases and subdivisions of each disease were not unknown to some; . . . but their account was incorrect. For the number will be almost incalculable if a patient's disease be diagnosed as different whenever there is a difference in symptoms, while a mere variety of name is supposed to constitute a variety of illness.

The Cnidians emphasized diagnosis, and carried differentiation to absurd lengths. They used few remedies, which was certainly better at that time for their patients. One may imagine them as practical, unphilosophic, middle-class men, diligently comparing observations and puzzling over them, as one does when there is not to hand a workable hypothesis. The Cnidians, we may surmise, insisted on sticking to the facts of observation, nothing but the facts, and all the facts. They were on the straight road of science, but over two thousand years back.

The Hippocratic school was not so purely scientific. And it was the nonscientific impurity, probably, that has made its reputation throughout the centuries. Like the school of Cnidos, the school of Cos brushed superstition aside, and based itself on direct observation and the recording of case histories; but whereas the Cnidians emphasized the differences, i.e., diagnosis, at Cos they taught the unity in disease, they described the natural history of disease, as a pathologist today might write about inflammation in general. Their case histories show a close observation of signs and symptoms and their sequence, of the sputum and urine; these are recorded baldly, without inference. In their

textbooks, as it were, they taught that diseases have a natural course, which the physician must know thoroughly in order to treat the patient properly and to be able to decide beforehand whether the patient will get well or die. For purposes of treatment and prognosis they did not, apparently, think it necessary to go further in diagnosis than to distinguish chest complaints, most commonly tuberculosis, and different kinds of malarial fevers. Diseases, they taught, are caused by a disturbance in the composition of the constituents of the body, by imbalance, disharmony. Nature tries to restore the balance, the harmony, which is health. *Vis medicatrix naturae* was the central Hippocratic doctrine. Nature may succeed or fail. All the physician can do for the patient is to remove by regimen all that may hinder Nature in her beneficent work of combating the disease. The notion of the crisis, the very word, was brought into medicine by Hippocrates.

For all their criticism that the Cnidians used too few remedies, the Hippocratics used hardly any more. They were fussier: the barley gruel had to be prepared just so; more or less fluid for the disease in this stage or that; there were rules about bathing, and so on. Both the patient and his family no doubt benefited from the exactly detailed care that was prescribed. Hippocrates stressed prognosis:

I hold that it is an excellent thing for a physician to practise forecasting. For if he discover and declare without being told, by the side of his patients, the present, the past and the future, and fill in the account in the gaps given by the sick, he will be the more believed to understand the cases, so that men will confidently entrust themselves to him for treatment. Furthermore, he will carry out the treatment best if he know beforehand from the present symptoms what will take place.

The case histories show, Plato's description of the ideal physician notwithstanding, that Hippocrates attended slaves as well as their masters; the case histories of both are recorded in the same manner. Hippocrates took into account the mental state of the patient:

She was silent and did not converse at all. Depression, the patient-despaired of herself. There was also some inherited tendency to consumption. It was no longer possible to do her any good, and she died.

In Thasos a woman of gloomy temperament, after a grief with a reason, without taking to bed, lost sleep and appetite, and suffered thirst and nausea.

As night began there were fears, much rambling, depression and slight feverishness. Early in the morning frequent convulsions; whenever these frequent convulsions intermitted, she wandered and uttered obscenities; many pains, severe and continuous.

As one reads Hippocrates' case histories and his teaching, one feels a mind probing ceaselessly for correlations. One must take account (he insists) of the patient's symptoms, of course, but also the climate, the season, the weather, the sex, age, and diet. The temptation of a correlation is to believe it. Hippocrates believed some of his: that there are critical days in a disease, these are a fixed number, in some cases odd, in others even, when the battle between Nature and the disease reaches a climax—the crisis; diseases are connected with the seasons and the winds, and it is chiefly the change itself in the season which produces disease.

Where the Cnidians abjured all philosophy and dealt only with diseases, the Goans were distinguished by their philosophy, which was that of Nature, and this led them to a doctrine of health. Health was Nature's way, disease was violence which Nature combated. Hippocrates taught what we call Hygiene, a regimen that preserved health: one must take account, not only of the kind of man a person is, but of what he eats and drinks, how he lives, and how the climate and seasons affect him. Hippocrates was the father of preventive medicine.

To Plato and Aristotle, Hippocrates was "Mr. Medicine"; it was through them that his fame was perpetuated. Plato used the Hippocratic emphasis on "disease" rather than on "diseases" as a powerful example in his doctrine of essences, of the idea of a thing. The Ionian philosophers, Hippocrates' predecessors, had conceived the universal whole as Nature. Hippocrates brought it down to earth in his idea of Nature in a man's body. Nature was health: the right proportion, the right mixture, the right balance of opposites (Heraclitus). The doctrine appealed because it was optimistic: Nature was on our side: *Vix medicatrix naturae*—she would cure if given a chance. It was optimistic also because Nature's way was no dark secret, we could learn it. To Plato the physician was the model for the philosopher. For the Greeks, for whom culture of the body was an integral part of culture as a whole, it was an easy step from the special case of the health of the body to the general idea of spiritual health: harmony, the balance of opposites, hence symmetry, was Nature's way. Hippocrates' idea had still an additional appeal to the Greek philosophers. For them law was so wonderful an idea, it must be divine. Nature's way in the body, as Hippocrates saw it, was its purpose, its law. So from medicine, from

our own most direct, personal experience we could learn Nature's law. From Hippocrates, Plato drew the Greek ideal of the golden mean, of proportion, which is health in mind, in body, in all things.

It is a noble philosophy. It was medicine's glory and a catastrophe for over 2,000 years; because medicine became inextricable from philosophy. From then until the end of the eighteenth century medicine was taught as some system, some dogma or other. It was as important, or more important, to be versed in rhetoric—a Sophist art—than to know the facts of medicine. There were few facts and many philosophies.

From the Greeks to the 18th Century

The centuries resounded with the arguments of contending dogmas of the schools. The Alexandrians surpassed the Greeks in anatomy, and some, drawing on their newer anatomic knowledge, insisted on nothing but mechanical explanations for all symptoms. Others, from the study of anatomy, and with no physiology, taught that it was useless to inquire into the causes of things; it is better to observe the facts and then do what one can; but observation of the facts and doing what one can was to juggle with analogies. No wonder a Pliny could brag that for 600 years the Romans got along very well without doctors. The drugs which they used were also superstitions. Galen's pre-eminence came from having read everything. He gave every phenomenon its name, every medical problem its solution. Drugs pertained to the hot, cold, moist, or dry, and one cured by opposites.

The medicine of the Arabs was little more than a retrograde gloss on Galen. Their real advance was in pharmacy and the therapeutic use of drugs; theirs was the first pharmacopoeia; they established the first apothecaries' shops. But their pharmacology was tainted with alchemy, and when it passed into the hands of the Europeans, it was mixed with witchcraft and magic.

Medicine then was book learning; educated laymen knew the names of famous physicians of the past and had a smattering of their doctrines. From the lay literature we can see how little medicine changed century after century. In the prologue to the *Canterbury Tales* we are told of the doctor

... being grounded in astronomy,
He watched his patient's favorable star
And, by his natural magic, knew what
Are the lucky hours and planetary degrees
For making charms and magic effigies.

The cause of every malady you'd got.
 He knew, whether dry, cold, moist or hot;
 He knew their seat, their humor and condition.
 He was a perfect practicing physician . . .

He was well versed in Esculapius too
 and what Hippocrates and Rufus knew
 And Dioscorides, now dead and gone,
 Galen and Rhazes, Hali, Serapion,
 Averroes, Avicenna, Constantine,
 Scotch Bernard, John of Goddesden, Gilbertine
 . . . he was rather close as to expenses
 And kept the gold he won in pestilences.
 Gold stimulates the heart, or so we're told,
 He therefore had a special love of gold.

Chaucer's dates are 1340 to 1400. Sir Thomas Browne (1605-1682), some 250 years later, wrote

the substance of gold was invincible by the powerful action of natural heat; and that not only ali-mentally in a substantial mutation, but also medicamentally in any corporeal conversion.

The thirty-seventh chapter of Montaigne's second book of essays has been an armory of assault weapons on medicine century after century down to Bernard Shaw. Montaigne was a sufferer of the stone when he wrote it; it was published in 1580.

"I see no kind of men," he wrote, "so soone sick, nor so late cured, as those who under the jurisdiction of Physicke . . ."

"No man unless he be a foole ought to undertake (purges). Cause a purgation to be prepared for your braine; it will be better employed under it than to your stomacke."

"A sick man was asked by his physician how he was. 'I have sweat much,' he said. 'That is good,' replied the physician. Another time the patient said he had a great cold and quivered much. 'That is very well,' said the physician again. On a third occasion the patient said he swelled and puffed up as if he had dropsy. 'It is not amiss,' the physician said. The patient exclaimed, 'I die with being too, too well.'"

"How many debates, doubts and controversies have they among themselves about the interpretation of urine."

Yet Montaigne protests that his best friends were physicians. "It is not them I blame, but their art."

In 1673 Molière's "Le Malade Imaginaire" appeared. Molière (1622-1673) was a dying man when he played in the first performances. The patient, Argan, has been imagining that he is ill, and wants his daughter to marry a physician so as to have a doctor in the family. Beralde, the brother of the invalid, is remonstrating with him :

Beralde: He would dispatch you with the most implicit faith; and he would in killing you, only do what he has done to his wife and children, and what, if there were any need, he would do to himself.

Argan: What must we do then, when we are ill?

Beralde: Nothing, brother. Nothing. We must remain quiet. If we leave nature alone, she recovers gently from the disorder into which she has fallen. It is our anxiety, our impatience, which spoils all; and nearly all men die of their remedies, not of their dis-eases. [Montaigne]

Argan: But you must admit, brother, that this nature may be assisted by certain things.

Beralde: Good Heavens! brother, these are mere ideas with which we love to beguile ourselves. When a physician speaks to you of aiding, assisting, and supporting nature, to take away from her what is hurtful and to give her that which she wants, to reestablish her and to put her in the full possession of her functions: when he speaks to you of rectifying the blood, of regulating the bowels and the brain, of relieving the spleen, of putting the chest to rights, of mending the liver, of strengthening the heart, of renewing and preserving the natural heat, of being possessed of secrets to prolong life till an advanced age, he just tells you the romance of physic. But when you come to the truth and experience, you find nothing of all this; and it is like those beautiful dreams, which on awaking leave you nothing but the regret of having believed them.

About a half century later, LeSage (1668- 1747), the French dramatist and novelist, in his "Gil Blas" has a physician, Dr. Sangrado, thus instruct his new apprentice, Gil Blas:

Bleeding and drinking water are the two grand principles; the true secret

of curing all the distempers incident to humanity. Here you have the sum total of my philosophy. You are thoroughly bottomed in medicine [in three weeks] and may raise yourself to the summit of fame on the shoulders of my long experience. While I dose the nobility and clergy, you shall labor in your vocation among the lower orders.

The following is part of a conversation between Dr. Sangrado and one of his distinguished patients, the 70-year-old Canon of Valladolid Cathedral,

The question here is to remedy an obstructed perspiration. Ordinary practitioners in this case would follow the old routines of salines, diuretics, volatile salts, sulfur and mercury; but purges and sudorifics are deadly practice. Chemical preparations are edged tools in the hands of the ignorant. Your usual diet? 'I live pretty much on soups,' replied the canon, 'and eat my meat with a good deal of gravy.' 'Soups and gravy' exclaimed the petrified doctor, 'Upon my word it is no wonder you are ill. High living is a poisoned barb, a trap set by sensuality to cut short the days of wretched man. We must have done with pampering our appetites: the more insipid, the more wholesome. The human blood is not a gravy!

Smollet translated LeSage. In his "Roderick Random" there are physician-surgeons who belong in the dreadful pictures of Hogarth. Bernard Shaw's "The Doctor's Dilemma" belongs in this group, even though when it was written in 1906 it was more than a century out of date. The criticism of doctors in this play is that of Molière in "Le Malade Imaginaire" in twentieth-century terms.

The foregoing quotations are probably unfair to the doctors of their time. Nevertheless, one is struck by their sameness. It must be that doctors' language and method of treatment changed very little from the Middle Ages through to the end of the eighteenth century. Every physician, good or bad, had a philosophical system by which he treated his patients, and he held to it, come what may, to the bitter end of his patients. The worst of these physicians were charlatans, the best were quacks, and the more sincere the quack, the more dangerous he was to the patient. Medicine, as a therapeutic art, was, in the main, premature until the end of the nineteenth century. But doctors might have done better by their patients, for all the paucity of their facts, and their misconceptions, if they had not been obsessed by their systems. Systems such as theirs were bad medicine because they were constructions into which the physicians forced their patients. Systems which claimed to explain everything did not encourage observation of new facts.

Surgery in the Early Centuries

Surgeons were more highly thought of as healers because they were more down to earth and more successful, even though their social status was lower. The physicians were differentiated from surgeons from very early times. Asklepios, whom Homer calls "the good leech," had two sons, Machaon, a surgeon, and Podalirius, evidently a physician. Homer called Machaon "Shepherd of the Host," and when Machaon was wounded before Troy (doctors fought then), Idomeneus, a famous, tough spearman, urges Nestor quickly to get Machaon to the ships.

"For," he says, "a leech is worth many other men, to cut out arrows, and spread soothing medicaments."

All that one finds said of Podalirius is that he had the gift from his father of recognizing what was not visible to the eye and tending what could not be healed. There is no record of anyone saying that the physician son of Asklepios was "worth many other men." There is a puzzling passage in the Hippocratic oath:

I will not use the knife, not even, verily on sufferers from stone, but I will give place to such as are craftsmen therein.

Nowhere else in the Hippocratic literature is a physician prohibited from use of the knife. Indeed there are references to physicians doing surgical operations. The Hippocratic books dealing with fractures and dislocations are, by modern standards, by far the best. From Hippocrates on, a physician was a learned man, he had book knowledge and philosophy, and the Greek, upper class disdain of manual labor; the Oath refers to surgeons as craftsmen. Scattered references and the long lineage of barber-surgeons suggest that surgeons were a lower class than physicians. Paré (1510-1590) began as a barber-surgeon, and after he became famous wrote his books in French, not Latin. He was opposed by the faculty of medicine even though he was held in the greatest esteem by several kings and the army. The same writers who jeered at physicians were respectful of surgeons. Thomas Dekker in 1625 dedicated one of his books "To the noble gentlemen, Mr. Thomas Gilham, Chirurgian. I honour your Name, your Art, your Practice, your profound Experience." Montaigne in full blast against medicine, wrote of surgery, "Whereby I judge the arte of Chirurgury much more certaine; for it seeth and handleth what it doth; and

therein is less conjecture and divination.”

For all the greater respect accorded the surgeon as a healer, he did not come up to the physician socially until the end of the eighteenth century. A surgeon said of John Hunter (1728-1793): “More than any other man he helped to make us gentlemen.” Physicians had the classical learning, by this they were gentlemen, even if as healers they were considered inferior.

The Rise of Modern Medicine

It would take too long to even touch on the rise of modern clinical medicine beginning with Sydenham (1624-1689) and Morgagni (1682-1771). Fundamental changes in outlook did not start until the end of the eighteenth century, although the knowledge had been accumulating for nearly two centuries. Vesalius (1514-1564) and Fallopius (1523-1562) had built the foundations of our modern anatomy in the sixteenth century; even Harvey’s discovery of the circulation of the blood in 1628 had little effect on medicine for a long time. Malpighi (1628-1694) from the 1660s onward saw the capillaries with his compound microscope, the histological structure of lung, kidney, and glands; he described the developing chick embryo. Leeuwenhoek (1632-1723) was less systematic, more of an amateur microscopist; but he saw and drew muscle fibers, blood corpuscles, spermatozoa, and bacteria. Yet medicine lagged behind physics and astronomy; because the leaders in medicine were still striving for complete systems in the classical manner; and dazzled by the grand generalizations of astronomy and physics, they wished to do likewise in medicine.

A title to this part of my lecture might have been “Our Forefathers: Guides, Mentors and Bad Examples.” The fault was not only that they knew so little, but the philosophical posture kept them from learning. The classical philosophies were dogmas. Dogma is static. It is in the very nature of dogma that it claims more than it has a right to. No wonder independent spirits among the writers reviled physicians. In the Book of Genesis is stated:

God made the beast of the earth after his kind, and cattle after their kind, and everything that creepeth upon the earth after his kind: ...
And God said, Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth.

God in his infinite wisdom encompasses all creation; He comprehends all the wonderful, infinite diversity of the world; He understands all. But when man tries to understand, all he can do is to simplify by stripping off and casting aside all that makes for individual difference. In this simplification the phenomenon is belittled, it is cut down to the size of man’s mind. For example, there is little structural difference between the steroid male and female hormones, testosterone and estrone. The whole difference between the two is transposition of hydroxyl and ketonic groups and two more double bonds in the first ring of the female hormone, estrone. It need not be stressed that there is more to the differences between man and woman.

Herein is the root of the canker that classical philosophy was for medicine. Plato taught, for example, that all tables had in them the essence of tableness. This essence is the truth, the differences in shape and materials are accidental and unimportant. As an example he took Hippocrates’ teaching: “disease” is what is important, not “diseases;” disease, is, essentially, always the same, the differences are accidents of form like the shapes of tables. What does not fit into a classical system is left out, is not seen. It is at most an irritating irrelevance. A sick human being becomes a case.

It is illustrative that an early European writer such as Chaucer made fun of a doctor’s show of learning, his vanity, his greed, but he respected the doctor’s ancient authorities and believed in his medicines. Even a Rabelais lectured on Galen and Hippocrates. There is a different temper in the writers that came with and after the Reformation. The intellectual leaders of the Reformation, Erasmus, More, and Montaigne, revolted against the intellectual authoritarianism of the religious and philosophic systems of Rome; they did not abjure the hierarchy of the Church. And so, in the quotations above from Montaigne, Molière, and LeSage, the attack (and a savage one it is) is on the pretensions of medicine practised as one philosophical system or another. The Reformation was the revolt of the individual against the authority of system, whether in religion, politics, art, or literature. The sick writer wanted his own illness treated, and had no concern for the system, no matter how learned. He could have found authority for this too in Hippocrates.

The art has three factors, wrote the author of “Ancient Medicine,” the disease, the patient and the physician. The physician is the servant of the art. The patient must cooperate with the physician in combating the disease.

Of course Hippocrates did not know that each foot stood on a different road that led to two vastly different countries. Who can see so far? Two thousand

years later even a Sydenham who strove to study disease without preconceptions, and without necessarily explaining the disease (in this he was more Cnidian than Hippocratic), said:

Disease is an effort of nature to restore the health of the patient by the elimination of morbid matter.

Sydenham took Hippocrates as his model, the "natural history of disease," *Vis medicatrix naturae*, and all. A Sydenham could borrow all Hippocrates' words, but the forces that gave a doctrine of a bygone age its life could not be borrowed; they were spent. The fifth century B.C.—the seventeenth century A.D.? No. An idea to come again must be born in a new incarnation.

But we cannot think, we cannot see much without an hypothesis, a theory, a system. If systems are bad, and yet we cannot get along without a system, what are we to do? The writers of the Reformation were aware of the difficulty. The answer in religion, Erasmus proposed, is that every man must make his peace with God by himself. Montaigne gave the general answer, which is a basis for all empirical philosophy. (He would have hooted at a statement about him such as I have just made.) When he was asked for advice on the education of a young kinsman, he wrote:

The bees fly about here and there among the flowers, and from what they cull they make honey, which is all their own, neither thyme nor marjoram. So of pieces [of learning] borrowed of others, he may alter, transform and mix them, to shape out of them a piece of work all his own.

Montaigne is our philosopher. He noted:

'Amongst so many millions of men, you shall scarce meet with three or four that will daily observe and carefully keep a register of their experiments. Physics is grounded upon experience and examples.' He said with tongue in cheek, 'So is mine opinion. Is not this a manifest kind of experience and very advantageous.'

Montaigne's advice was to get the facts, all you can, but the facts, and then shape something out of them all your own. What could this mean in medicine? Make a theory, a general picture of a disease, and overall pattern. Superimpose on it and have stand out from it, the individual, both in contrast with the pattern and blending with it. To see the particular in the general is to catch life.

Of course this is what the good physician does all the time; it is what we mean by "judgment." It is to treat a sick person as an individual human being, and not as a case in a statistic.

The Patient in Modern Medicine

Our scientific medicine is a system too. Unlike our forefathers, we admit we do not know everything. But the establishment of the "Franz Groedel Memorial Lecture" testifies to the concern of the American College of Cardiology that in our scientific system, for reasons inherent in it and in our present society, there is danger that the result may be the same as in the former philosophical systems of medicine, in that the patient may be degraded from a human being to a case, to the detriment, humanity apart, of the good treatment of the patient. The problem has arisen out of the great scientific progress in medicine. Modern science, being what it is, entails specialization. Specialization is fragmentation. Instead of, as in systems of the past, making the mistake of seeing only the general, there is danger of seeing only separated aspects of the patient according to the specialty, of fragmentation of the patient. What are we to do?

"To see the particular in the general is to catch life. Of course this is what the good physician does all the time; it is what we mean by 'judgment.' It is to treat a sick person as an individual human being, and not as a case in a statistic."

Of course there is no turning back from scientific medicine, from specialization. The famous first aphorism of Hippocrates holds for us:

Life is short, the Art long, opportunity fleeting, experience treacherous, judgment difficult.

The development of psychology (another specialty) has led us to see that a person who is ill may undergo important changes in his outlook and personality, and that these changes need to be taken into account in treating him. The danger in the very success of psychology (and psychiatry) is that care of the patient as a human being will become a specialty. Are we to send

every patient to a psychiatrist to have this aspect of his illness looked after, as we send him to a radiologist for x-ray diagnosis or treatment? The psychiatrist is trained in these matters, why should he not be used as other specialists are? This is the way to dehumanize medicine completely.

Yet, how is the patient to get the benefits of all that modern medicine has to give him? There are the many interrelated problems of patients not having enough money, of doctors not having enough time, of there not being enough doctors, of the possibility that doctors may not be getting the right education for our time. All the pressures of modern life are toward standardizing us: "It is cheaper and more efficient this way," they tell us. And yet we know that the best medicine is to treat the patient as an individual.

Medical Education and Specialization

You know these problems better than I do. Probably no one of these problems can be solved separately. I beg your indulgence to make a few comments on what might be done in the way of the education of the doctor. The doctor's task requires sympathy and scientific knowledge. By sympathy I do not mean feeling sorry for the patient or his family; that, surely, we may take for granted. The sympathy I mean is insight into how the patient feels and thinks, in short, to understand him as a person, before and during his illness and what he may be like afterward. This is the art of medicine. Our great engineering works are often also fine works of art. How beautiful are the great new bridges, the mountain roads, and the dams! It will be sad if medicine ever ceases to be an art and becomes only science, solely a matter of test, technic, and prescription by IBM machine. I believe that sympathy can be fostered, that it can be taught. I know it will be objected that the sympathy I mean is like the feeling for poetry or the state of grace, that it is a state of grace. Yet, throughout the ages the state of grace has been taught, a feeling for poetry is fostered: it is done by indirection, by the study of noble examples, and by the luck of having a good teacher. Surely it needs no pleading that it is good for the student to know critically as well as sympathetically, the ideas, feelings and actions of the great men of the past. The study of the humanities predisposes to sympathy.

We need sympathy also in a broader historical sense: to apprehend the different systems of values by which men lived. Let me give you a recent example of how scientific concepts were formed by society's needs. The steam engine dominated nineteenth-century Europe. In order to make better steam engines the science of Thermodynamics arose. Its name connotes steam engine, its terminology even today is of the steam engine. Incidentally,

the first law of Thermodynamics was discovered by a physician, Mayer, and first given its mathematical exposition by another physician, Helmholtz. Thermodynamics dominated all nineteenth-century science. Physiologists, not thinking very much and overawed, probably, by their physicist colleagues, taught that the animal body was like a steam engine, with a stable structure that suffered only slight frictional wear and tear, which was replaced from a small part of the food, and that the bulk of the food was the fuel. Hence the terms "endogenous" and "exogenous" metabolism. This is an entirely unbiologic concept. It is now proved that there is no utility in distinguishing between fuel and structure. Some ostensibly stable structures are breaking down and rebuilding very fast. Half the liver protein in a healthy adult is new every week. Muscle, including cardiac muscle, is breaking down and rebuilding more slowly than liver, but, nevertheless, it too is in a dynamic state. A living thing is not like an engine, it is not like anything else, it is only like a living thing.

To return to my theme of the value of having students specializing in science also learn non-scientific subjects, I would draw your attention to the fact that in some of our leading engineering schools 25 per cent of the undergraduate curriculum is devoted to the humanities. This has been done for about a quarter of a century, and the consensus of opinion is that it is good. On the scientific side, it seems to me that what the modern medical student needs to be taught is how to be, as it were, an administrator of all the medical specialties. It is not good, I believe, to teach the subjects of undergraduate medicine as introductions to or pseudo preparations for research in these subjects. It may be that what I have in mind would be best in graduate medical instruction. I have in mind somebody like the administrator of a great department of government, more nearly as in the British government than ours. The head of the department need not be, often is not, a specialist. He was chosen in the first place on the basis of his record at college. He has the kind of mind that can use the knowledge and advice of specialists; he can put it all together, he has the judgment to shape it into a possible policy, which he then presents to his cabinet minister, who takes the responsibility for it. I believe it would be possible to train a doctor so that he could appraise critically the findings of all the medical specialties, including psychiatry, and base treatment upon that knowledge. My proposal entails a reversal of the medical hierarchy, with the general practitioner at the top and the specialists below him. I believe that it could be worked out so that even less than brilliant minds could be taught to practice medicine in this way. Such men would prevent the fragmentation of medicine by specialization, as the clinical pathologist, aided by the roentgenologist, has done in the past.

We in medicine are involved in the general problem of our time of keeping up with the very rapid progress of science, the problem of finding a way for the healthy assimilation of the flood of new and often strange scientific knowledge into the life of society. In medicine there is, I think, a better chance of our solving our part of the problem than in other branches of science. The drive to do so is felt more directly because the need impinges directly on the individual; on his freedom from pain and disability, on his chances of living or dying. And the doctor is, I think, more broadly trained within his discipline, relatively, than the engineer, the physicist or the chemist. There is an opportunity for medicine to give a lead, and there is a chance that the consequences may not be as bad as was the lead Hippocrates gave to Plato and Aristotle.

A few weeks ago I was at a symposium on the subject of sickle cell anemia. Among the participants were clinicians, pathologists, chemists, physicists, and geneticists. The findings of an anthropologist and of an epidemiologist were cited: malaria is involved in the persistence of sickle cell anemia. Some of us felt it was a pity that the anthropologist and epidemiologist were not personally invited. Anthropology, the *logos* of man, it would seem is a proper subject for the medical student; and geography too. We are returning here, in principle, to a teaching of Hippocrates.

In the argument over the hydrogen bomb are clinicians, radiologists, geneticists, physicists, the military, politicians, and those with the responsibility of government. Just now it is more an argument than a discussion in which men of different points of view try to understand each other and come together.

Obviously, it would be wrong to describe present day science, let alone present day medicine, as being altogether like the astronomers' picture of our expanding universe, with all its different disciplines moving farther and farther apart in chaos. They can be, they have been, here and there they are brought together, and out of them is shaped "a piece of work all [its] own." But this does not happen by itself. We have to will it, to go out and seek situations and means of doing it, to foster the purpose in our teaching. In medicine there is a choice in several senses as to whether to practice as an isolationist or as part of the entire world.

In the long bibliography of Franz Groedel there is a paper of 1929 entitled "Heart Disease and Modern Life—A Preachment to the Profession and the Public." The paper begins:

It is not rational for the heart patient to lose hope—the most important cause [of heart disease] is modern life. A good method [of treatment] is to go away from home for some weeks or months—to go to a place which is especially adapted for the treatment of overworked people.

He recommended Bad Nauheim.

It is not only the Nauheim cure which will help a patient; if the patient has a will to become healthy and if the physician understands to prescribe individually the treatment according to personal circumstances, nearly every heart case may be improved or cured.

I believe that Franz Groedel knew the following passage in Montaigne on cures at spas such as Bad Nauheim. "I have by occasion of my travels seene almost all the famous Bathes of Christendome and some years since have begun to use them: I have as yet found no extraordinary good or wondrous effect in them – Yet have I seene but few or none at all who these waters have made worse – and no man can without malice denie, but that they store up a man's appetite, make easie digestion . . . Whosoever goeth to them, and resolveth not to be merry, that so he may enjoy the pleasure of the good company resorts to them, and of the pleasant walks or exercises, which the beauty of those places where bathes are commonly seated doth affoord and delight men with all; he without doubt loseth the better part and most assured of their effect . . ."

Dr. Groedel's paper concludes with a quotation from Hippocrates, from "Airs, Waters and Places." His preachment in this paper is according to Hippocrates' precept for the good physician.

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The following three articles are presented as a group, in the manner they originally appeared in the *Journal of the American Medical Association*, reflecting a panel discussion and commentaries presented before the 65th annual Congress on Medical Education sponsored by the American Medical Association council on medical education in 1969.

The first article in "The Medical Curriculum and Human Values" series, subtitled "Panel Discussion," presents views and arguments from four medical students attending different schools around the country. Each student was a member of the Commission on Medical Education within the Student American Medical Association (SAMA), an organization established through sponsorship of the American Medical Association (AMA) in 1950, but at the time of these presentations had become independent, with student representatives acting as liaisons between the two bodies on AMA committees. It was at a SAMA Medical Education Conference, preceding the AMA's Congress on Medical Education, that students first articulated the problems with the medical curriculum. Students then "confronted" deans at a meeting of the Association of American Medical Colleges (AAMC) to air their grievances. At first characterized as a "radical minority" of confrontational students, it was decided that their views on the limitations and imbalances of the curriculum needed further consideration. Dropping the explicit language of "radical minority," the students themselves helped define a role for "student activism" in placing human values central to the practice of medicine.

Three general areas are addressed by the students with regard to the "dehumanizing nature of the present curriculum." First, the struc-

G. Thomas Couser, "What Disability Studies Has to Offer Medical Education," *Journal of Medical Humanities* 32 (2011), 21-30.

Editor's note: As with other more recently published articles in this volume, I asked authors if they would be willing to reflect on their piece and add introductory comments that would help frame it, or enable them to address issues raised since its original publication. The following remarks are from the author G. Thomas Couser.

I was very gratified to learn that this article had been selected for reprinting here because I have a particular investment in it: if anything I've ever written could make a difference in the lives of disabled people, this is it. I welcomed the opportunity to reflect on it from my current perspective, but I found myself putting off rereading what I had written. My procrastination was a function of my discouragement about the reception of the article to date: had I been too critical of biomedicine and its approach to disability?

The original stimulus to this piece was Hofstra's establishment of a medical school in 2008. As the founder and director of Hofstra's undergraduate Disability Studies program, I thought I might have an opportunity to influence the new school's curriculum, so I tried to show how it might benefit from the perspective of critical disability studies. But despite my efforts to engage the relevant administrators, that has not happened, as far as I can tell.

In preparing these reflections, I came across an earlier article, "Medical Education and Disability Studies," which looks at the issues more empirically (Fiona Kumari Campbell *JMH* [2009] 30:221-235). From it, I learned that the integration of Disability Studies into the medical curriculum had been attempted as early as the 1990s, but with

little success—apart from a flagship program at Bristol University in the United Kingdom.

It is troubling that biomedicine seems so resistant to the insights of disability studies. But perhaps this response is understandable. The crux of the matter may be, as Campbell suggests, that medical professionals' sense of themselves as healers and carers makes it difficult for them to acknowledge that healthcare may be hostile to disability (p. 225).

But in its advocacy of "health," biomedicine sometimes conflate illness and disability, thus pathologizing conditions that may be merely anomalous and not inherently unhealthy. By hailing disabled people as sick, the medical paradigm constructs their conditions as requiring medical intervention, which is not always helpful or desired. This approach effectively devalues those who are disabled, projecting a desire for cure where it may not exist. Many disabled people are surprisingly well adjusted to their conditions, especially if their impairments are congenital or acquired early. In contrast, nondisabled people, *especially medical professionals*, typically estimate the quality of life of disabled people as quite poor. Hence the danger of the medical "bias" in favor of health.

In reviewing my article, I felt I had been fair. I give biomedicine credit for saving and improving the lives of many disabled people. I note that the medical and the social paradigms of disability should be regarded as complementary rather than opposed. At the same time, I remain concerned that my critique of biomedicine — which is not original with me — has not had a more favorable reception. There is much work to be done to ensure that our healthcare system treats disabled people fairly and respectfully. It will require more than (misguided) disability simulations and the occasional workshop: it will require some rigorous conceptual work, some new thinking. I hope the republication of the essay here will be of service in that endeavor.

What Disability Studies Has to Offer Medical Education

G. Thomas Couser

Abstract. Disability studies can be of great value to medical education first, by placing the medical paradigm in the broad context of a sequence of ways of understanding and responding to disability that have emerged in the last two thousand years or so; second, by reminding medical professionals that people with disabilities have suffered as well as profited from medical treatment in the last two hundred years; finally, by providing access to a distinctive point of view from which the experience of disability looks very different than it may from the outside.

I had been writing about narratives of illness and disability for about fifteen years and teaching disability studies for about ten years when, in 2007, my university, Hofstra, announced its decision to create a brand new medical school. This announcement caught me quite by surprise, but it prompted me to think seriously about what our program in disability studies, which I had founded five years earlier, might have to contribute to the new medical curriculum. I began by reviewing the syllabus of my Introduction to Disability Studies, a course I teach every year to undergraduates (few of whom seem to be “premed,” in the sense of aspiring to attend medical school). To my gratification, I came to believe that the course – and disability studies, generally – has much to offer to medical students because (1) it addresses matters necessarily of interest to medical professionals, and (2) it does so from a distinctive and valuable angle.¹

The course description reads as follows:

This course approaches disability not as an individual tragedy or medical problem but as a cultural construct – akin to gender and race – that undergirds social practices and cultural representations in various media. It is thus intended to complement the more service-oriented approaches to disability that might be emphasized in courses offered by the School of

Education, Health, and Human Services. It seeks to illuminate the broad and complex topic of disability from various distinct disciplinary angles—primarily literary, historical, philosophical and ethical, and political. History furnishes an account of the experience and treatment (or mistreatment) of disabled people; literary analysis addresses the cultural representation of disability (primarily but not exclusively by nondisabled persons); philosophy interrogates the crucial notion of the “normal”; ethics addresses questions of justice; politics explores current issues on which disability impinges (such as welfare, euthanasia, and abortion).

The broadly interdisciplinary nature of the disability studies is no accident; one of the deep lessons of this relatively new field is that disability can be fully understood only when examined from multiple perspectives and with consideration of its impact in so many areas of life.

In disability studies today, a distinction is made among three major models, or paradigms, of disability – the symbolic, the medical, and the social – as they emerge in a historical sequence as Western culture develops. This sequence locates medicine’s distinctive approach to disability in a broad framework, highlighting not only its power but also its limits. Under the symbolic paradigm, which is characteristic of traditional faith-based cultures, a particular condition is considered a sign of a moral or spiritual condition. Under the medical paradigm, which is characteristic of modern fact-based cultures, a particular condition is seen solely as a dysfunction of a particular body that which may be prevented, cured, corrected, or rehabilitated. And under the social paradigm, which is characteristic of post-modern culture, particular conditions are seen as socially constructed in the manner of race and gender; thus, how they are understood varies from time to time and from place to place.²

The key feature of the symbolic paradigm is that some anomaly in the body represents a legible and reliable sign of a moral condition or divine disfavor. The outer appearance of the body reveals the moral or spiritual status of the person. This paradigm maps the supernatural onto the natural, the metaphysical onto the physical, the intangible onto the tangible. Present in both the Hebrew Bible and the New Testament, the symbolic paradigm is *deeply* embedded in Western culture from very early on.

For example, in the book of Leviticus, 21:18-2 (King James), restrictions are placed on those high priests who perform certain ritual ceremonies. As they are to be in proximity with the deity, they are required to be without “blemish”—where blemishes are enumerated as a long list of what we would consider disabilities: blindness, disfiguration, lameness, dwarfism, and so on.

In the gospels, Jesus is at pains to disassociate holiness from strict observance of the Law and to associate it, rather, with being in a right relation to God. He demonstrates this by using his power to heal people whom we would regard today as diseased or disabled. The most dramatic are the cases of those who are explicitly described as possessed by evil spirits—as found in the Gospel according to Mark 1–3, 5, 7–8. This is presumably the origin of the Christian practice of faith healing. The good news is that the diseased and disabled may be healed; the bad news is that they are characterized as in need of spiritual cleansing. Thus, this paradigm adds moral insult to physical injury.

Although the symbolic paradigm has been largely discredited, it cannot be totally discounted. Faith healing is still practiced and continues to harm vulnerable people. For example, one newspaper recounts the inadvertent suffocation of a teenager with epilepsy who was beaten, then crucified, in a gruesome attempt to exorcise him.) But the symbolic paradigm may also infiltrate mainstream understandings of disease and disability, undergirding what some observers believe is a contemporary “moral panic” over obesity. Obesity does entail significant health risks, of course, but the widespread public concern over the “epidemic” of obesity seems to reflect, in part, moralistic concern about over-consumption and self-control. Many people believe that obesity is primarily a function of poor self-control—in effect, that it reveals an individual’s moral failing. In any case, the symbolic paradigm continues to thrive in cultural representations of illness and disability; consider the cliché of the maimed or scarred villain in popular fiction and film.

The advent of the medical paradigm is associated with the birth of the clinic, usually assigned to the eighteenth century. But it is adumbrated in the Renaissance, notably in Sir Francis Bacon’s seventeenth-century essay, “Of Deformity.” There Bacon argues that deformity is not, contrary to popular belief, an index of bad character: “Therefore, it is good to consider of Deformity, not as a *Signe*, which is more Deceivable; But as a *Cause*, which seldome faileth of the Effect.”³ According to Bacon, people with deformed bodies react to others’ scorn in ways that lead them to be either overachievers or crooks. Bacon suggests that any correlation between character and body shape is not divinely ordained but rather a defensive human response to negative attitudes. The slippage from sign to cause marks a crucial step toward a modern, empirical view of physical anomaly.

The medical paradigm tends to demystify and naturalize somatic anomaly, stripping away any supernatural or moral significance and characterizing physical variation solely as a matter that science may investigate and attempt to remedy. Compared to the symbolic paradigm, the medical paradigm offers

much benefit for people with anomalous bodies. People who once might have been persecuted, prosecuted, even executed (as witches) because of conditions like Tourette syndrome, epilepsy, and schizophrenia might now be regarded as candidates for medical treatment and be absolved of responsibility for their conditions.

Biomedicine offers much to people with many impairments; for starters, it offers some of them life itself, making it possible for people to survive impairments that once would have been fatal. Thus, while wars have always numbered amputees among their veterans, only in the latter half of the 20th century have there been paralyzed veterans—thanks to modern antibiotics. Yet the reach of biomedicine reach always exceeds its grasp. And its commendable ambition to explain mysterious medical conditions sometimes leads it to reinscribe prejudicial tropes. Typically, this takes the form of the discovery – which is really the invention – of an “X syndrome personality.” For all his early modern skepticism, Bacon in effect limits people with deformities to two variants of what we might call “the deformed personality syndrome”: (1) the overachiever, known today as the supercrip, and (2) the angry, devious cripple. Similarly, as Oliver Sacks has pointed out, for most of the twentieth century, migraine was explained away as a function of a personality type.⁴ When medical science confronts anomalous somatic conditions that elude definitive explanation, it sometimes psychologizes them in a way that falls back on the symbolic paradigm. And when biomedicine remystifies disability in this way, its tropes may be more insidious than those of the earlier paradigm; backed by the authority of science, they may be accorded undeserved credence.

The social paradigm was developed by disabled scholars and advocates in the U.K. and the U.S. in the last quarter of the 20th century. It has several variants, but common and essential to all is the notion that, like race and gender, disability is a social construct which varies both from culture to culture and over time. Indeed, this is not just one more paradigm but a meta-paradigm that exposes both of the previous paradigms as constructions of particular cultures or mindsets. In this poststructuralist approach, a crucial distinction is made between *impairment*, which is located in the body, and *disability*, which is located in the body’s social and cultural context. This is, admittedly, confusing, since these terms are commonly used synonymously. And it is somewhat counterintuitive to use the term, disability, for the extrinsic disadvantages of impairments (sometimes referred to as handicaps). But this distinction, which is at the heart of the new disability studies, allows us to recognize, analyze, and alleviate disadvantages, like discrimination and exclusion, that may appear to be, but are not, intrinsic to particular impairments.

The classic illustration of this distinction is the difference between being unable to move one's limbs (a physiological fact) and being unable to negotiate one's wheelchair through a built environment that lacks ramps or elevators (a socially created constraint). Thus, the social paradigm emphasizes the way in which culture (in all its dimensions, not just material) enables and empowers individuals with "normal" bodies and dis-enables and disempowers those with "deviant," or "abnormal," bodies. In contrast to the medical paradigm, this one places the onus on society to accommodate anomalous bodies. The key move made by disability studies scholars is thus a conceptual figure-ground reversal: whereas the medical paradigm locates the problem in the figure, the social paradigm locates it in the ground—or in the relation of figure and ground. In this model, of course, medicine is part of the context, or ground. As such, it comes under considerable scrutiny.

The distinction between impairment and disability helps explain why many disabled people were so disappointed by Christopher Reeve's disability advocacy after his injury: in their view, Reeve was overinvested in a cure for spinal-cord injury and insufficiently attentive to the many ways in which paralyzed people are disadvantaged by social and cultural restrictions. Even if research does find a cure for spinal cord injury, which is certainly to be desired, it will not make ramps obsolete, because paralysis has many causes. Biomedicine will always be playing catch up; the need to modify the environment and ensure access is all the more urgent given the inevitable lag between research and cure.

The shift of emphasis from body to environment has far-reaching implications. A powerful illustration can be found in American disability rights laws culminating in the Americans with Disabilities Act (ADA) of 1990, which, after having been eviscerated by court decisions, was restored to its original scope by the ADA Amendments Act (ADAAA) just a year ago—an historic event that passed with hardly a ripple in the mainstream media. Like laws barring discrimination on the basis of race and gender, the ADA bans discrimination on the basis of somatic difference. *Unlike* other civil rights laws, however, the ADA actually calls for *unequal* treatment: the law explicitly requires public institutions, public transportation, businesses and employers to make "reasonable accommodation" for people with disabilities and to treat them *differently* from others. As the social paradigm mandates, the law calls for modification of the environment rather than of the impaired body. As places designed for use by injured people, hospitals ought to be paragons of accessibility. When it comes to *physical* accessibility (accommodating those who travel on wheels rather than on foot and those who cannot manipulate

doorknobs), this seems to be the case. But when it comes to accommodating those with communication or cognitive disorders, architectural accessibility is not enough; accommodation needs to go much further.

The medical and social models are often characterized as conflicting with, or opposed to, each other. And it is true that the first cohort of disability studies scholars, a group of white male professionals in Britain, was somewhat hostile to medicine. Most of them were paraplegics who did not require much medical attention or benefit much from it; their lives were limited more by social and cultural obstacles than by their inability to walk. Their overriding concern, at that time, was with equal rights, with access to public life and economic opportunity. Hence their strong preference for the social model over the medical, which they characterized as patronizing and marginalizing. (Bear in mind that, in the 1970s, the practice of medicine was quite paternalistic.)

Today, however, there is considerable debate among disability scholars over whether the social paradigm has had the unfortunate, and ironic, effect of effacing the body, of deflecting attention from the painful realities of some impairments, particularly degenerative conditions. A leading British disability scholar, Tom Shakespeare, has aggressively challenged the orthodoxy of the social model, which he sees as gravely flawed and needing to be replaced. In *Disability Rights and Wrongs*, Shakespeare has criticized the social model for undermining political organization along the lines of particular impairments and for generating counterproductive suspicion of medical research and development. And the field is now reckoning with the fact that the minority model (the idea of disabled people as an oppressed group) does not adequately address the needs of those with conditions like serious mental illness and cognitive deficiencies. Removing barriers, or offering accommodation, is less helpful for people with these conditions than for the iconic wheelchair user.

It seems to me that choosing between the models is not a matter of choosing between the empowering and the oppressive. In fact, I am unsure that it is always *necessary* to choose between them. Ideally, they are complementary; the social model picks up where the medical leaves off. Each attends to a different dimension of a common goal: ensuring optimal functioning and quality of life for those with anomalous bodies. Each has a necessary and valuable function, and both may need to be deployed to maximize human capability. But medical professionals need to be aware that, and why, some disabled people will favor the social over the medical paradigm. As Martha Nussbaum writes:

People with physical disabilities want medical care for their needs, the way we all do. But they also want to be respected as equal citizens with options for diverse

forms of choice and functioning in life, comparable to those of other citizens.... Thus making care available when people want and need it should be sharply distinguished from forcing people into a situation in which they have to depend on others, even if that is not what they want.⁵

It is important for medicine not to prejudge or devalue people with disabilities so as to deprive them of autonomy.

In addition to placing the medical model in this broad, but abstract, historical sequence, disability studies can also supply concrete detail, putting flesh, so to speak, on the skeletal outline. Lennard Davis has memorably characterized the historical plight of disabled people as follows: "For centuries, people with disabilities ... have been isolated, incarcerated, observed, written about, operated on, instructed, implanted, regulated, treated, institutionalized, and controlled to a degree probably unequal to that experienced by any other minority group."⁶ Much of this treatment has been benevolent in intention, but much of it has also been constraining and even destructive in its effects. And much of it, of course, has been carried out by medical professionals. So disability studies also offers to medical education an important historical reality check.

Disability history offers a salutary perspective on the power that has accrued to biomedicine even before it has attained much curative effect. A good place to start is with Davis' essay, "Constructing Normalcy: The Bell Curve, the Novel, and the Invention of the Disabled Body in the Nineteenth Century." He analyzes how several historical factors came together to generate a quantitative sense of normal human somatic traits. Among those factors were the rise of the middle class in post-feudal and post-revolutionary Europe; the Industrial Revolution, which relocated rural laborers to urban settings and introduced them to harsh and rigid factory regimens; the development of statistics, which produced the normative bell curve; and the interest of democratic governments in gathering data about their citizenry, the body politic. Seemingly a neutral objective practice, the quantitative norming of human traits inevitably assigns value: it tends to characterize the abnormal, the *statistically* deviant, as inferior, even potentially dangerous to public health. Further, it tends to encourage the *normalizing* of the population, the impulse to eliminate or minimize outliers. And its close relative, ranking, which obtains when the valued position is at one end of the continuum rather than in the center (as with IQ), can have even more insidious effects, as well. In any case, the advent of norming really puts the *power* in what Michel Foucault referred to as biopower: modern states' regulation of citizens' bodies by various practices and institutions, some medical, some quasi-medical.

An effective illustration is the increasing use of human growth hormone, at the present time, to "treat" extreme shortness in children who have no underlying pathology. In "The Short of It," Stephen Hall shows how simply being at the wrong end of the bell curve has been pathologized on the basis of ill-founded stereotypes about short people. The power of the pharmaceutical industry is crucial here: once HGH had been synthesized and was more affordable, the inclination to prescribe increased. In any case, extreme shortness has been treated, medically, as a pathological condition. The same can now be said for shyness, which is diagnosed and treated as "social anxiety disorder."

As this last example suggests, biomedicine may unnecessarily pathologize what appears to be abnormal or deviant human *behavior*. The ongoing revision of the *Diagnostic and Statistical Manual of Mental Disorders* offers real-time access (as filtered through mass media, of course) to the process by which certain behaviors – like compulsive shopping – are officially determined to be disabilities and thus reassigned from the category of moral failings to that of minor mental illness. Useful by analogy here is the example of homosexuality, which was once seen primarily as a moral evil, then pathologized as a mental disorder, then depathologized and ultimately dropped from the *DSM* in 1974. All too often when an effective treatment is available for a particular anomaly, whether physiological or behavioral, modern medicine tends to declare that variation pathological, even if it is functionally harmless, like being short or being shy.

One of the prime targets of ranking, of course, has been I.Q., and consideration of the consequences of the ranking of intelligence takes us into the zone of eugenics. In "Carrie Buck's Daughter," Stephen Jay Gould has detailed the misdiagnosis of Carrie Buck and her illegitimate daughter as mentally retarded and the involuntary sterilization of Carrie and her sister, who thought she was undergoing an appendectomy. It was the Buck family, of course, who elicited Oliver Wendell Holmes's now infamous comment: "Three generations of imbeciles are enough" (Buck v. Bell, 1927). My only reservation about that essay is that Gould's energy goes almost exclusively into showing that Carrie and her daughter were not, in fact, intellectually deficient; rather, Carrie was a victim of rape who was subsequently institutionalized largely out of class prejudice masked as concern for public health. Unfortunately, establishing that Carrie was no imbecile dodges the issue of the reproductive rights of people who *are* cognitively disabled, but the essay provides a bridge from the emergence of the bell curve to its eugenic applications.

As is now increasingly well known, the Nazi T4 program to euthanize

people with physical and mental impairments was, in effect, the culmination of American and British eugenic philosophy. In their powerful documentary, *A World without Bodies*, disability studies scholars, David Mitchell and Sharon Snyder, give an incisive, vivid account of the program. Part of the film is narrated by Mitchell as he wheels his chair through a gas chamber once used to execute the disabled. It was then “mothballed” and now is part of the campus of a psychiatric hospital in Bernberg. The Nazis did not destroy the evidence of the killing of diseased and disabled people, unlike the extermination of other groups of victims. The point for medical education, of course, is that in both Carrie Buck’s Virginia and in Hitler’s Germany, it was medical personnel who carried out the policies in question. Those trained to care somehow rationalized sterilizing and executing those deemed not genetically healthy. Thus, one of the lessons of disability studies for medical education is that with regard to people with disabilities medicine has, again and again, violated its own injunction to “do no harm.”

The disability critique of the nineteenth-century invention of norming is instrumental to the creation in the twentieth century of the “minority model” of disability, which undergirds legislation like the ADA. This variant of the social paradigm suggests that some seemingly pathological differences should be accepted as valuable in their own terms—as valid, if atypical, ways of being. The most obvious and compelling example of such a condition is hereditary deafness. Deaf people (with a capital D) consider sign language their first language and their community a distinct linguistic and cultural entity. Thus, in a postcolonial era, they have strongly opposed the use of cochlear implants as having ethnocidal implications.

Less obviously, some people with autism now argue that their condition is not a pathology but rather a valuable neurological variant. A readily available testament to this effect is a mesmerizing eight-minute YouTube manifesto called “In My Own Language.” It begins with startling footage, shot by the subject herself, of a young woman at home where she is absorbed in telltale autistic behaviors in her apartment. She rocks back and forth, hums tunelessly and waves her hands; she bangs household objects together rhythmically; she moves her hand back and forth under running water from a tap; she holds a book open in front of her, but instead of reading it, she rubs her face in it. Eventually, one hears a synthesized voice reading a text typed at lightning speed by the subject. Contrary to the standard characterization of autistic people as being trapped in their own private worlds, the author of this manifesto, A. M. Baggs, proclaims that she interacts with her environment more fully than “neurotypicals,” who pay attention only to each other and not to

the sights, sounds, and textures of their immediate surroundings. What looks deficient, she claims, is not unhealthy but merely different. Even less obviously, but more significantly, the same stance has been taken by individuals with some mental illnesses.

In practice, disabled people are not a monolithic group. They can be divided along many lines—according to their particular impairments, according to whether those impairments are mental or physical, formal or functional, visible or not, stable or “progressive,” and so on. But the most consequential division may have to do with the time and circumstances of the onset of the condition in question. People with congenital conditions or early-onset conditions are far more likely than those with conditions acquired in maturity to (1) rate their quality of life highly, (2) identify as “disabled,” (3) declare they don’t want to be fixed or cured, and (4) invest mainly, if not exclusively, in the social paradigm.

Historically, disabled people have challenged, and thus frustrated, medicine by presenting conditions that medicine *cannot* cure or correct. But today, some of those who have been disabled all their lives may present bodies that *defy* medicine to fix them, even if it can. I believe that we will continue to see these sorts of challenges as the power of biomedicine grows with new technologies and the decoding of the human genome. Here the medical and social paradigms actually *are* in conflict.

This last acknowledgment brings me to a consideration of areas in which disability studies has most to offer, in a practical way, to medical professionals

“Historically, disabled people have challenged, and thus frustrated, medicine by presenting conditions that medicine cannot cure or correct. But today, some of those who have been disabled all their lives may present bodies that defy medicine to fix them, even if it can.”

today, for it provides an indispensable perspective on some very important issues in health care. One of these has to do with the beginning of life, another with its

end: selective abortion and physician-assisted suicide, respectively. On these two issues, disability advocacy groups have taken positions that are outside the mainstream of bioethical thinking. Their concern is that both practices are rooted in ignorance or prejudice about living with disability; both practices are considered to devalue lives that many disabled people live with considerable

gratification. When it comes to eugenics and euthanasia, disabled people are like canaries in the coal mine, the first to be threatened with harm. But unlike canaries, they are aware of their vulnerability, and in recent decades, they have come together to resist threats to their welfare and their survival.

The mission of medicine, its *raison d'être* and professional imperative, is to heal and make whole, and its power to do so will continue to increase. But the flip side of that orientation may be a tendency to turn away from that which can't be corrected, that which frustrates, or embarrasses, medicine. (This is a problem, I understand, in treating terminal and chronic illness.) Disability studies can help here through its crucial distinction between impairment and disability. One often hears disabled people referred to as "suffering from" X. Sometimes this is the case, of course, but conditions that are inherently painful or causes of constant suffering are rarer than many think. The phrase is really a speech formula that assigns or *presumes* suffering in the absence of testimony. More important, many disabled people claim that they suffer more from the stigma, marginalization and exclusion of disability than they do from their impairment itself.

This bears directly on choices regarding which children should be born and under what conditions assisted suicide should be permissible. One of the virtues of disability studies is that it has encouraged the creation of a growing repository of testimony by people living with disability, most recently, in the form of numerous memoirs. The deep subtext of this body of literature, taken as a whole, is that living with disability, though rarely easy and always challenging, is not only possible but also gratifying. I suspect that such testimony is an underutilized resource in medicine. For testimony regarding mental disability and selective abortion, I recommend Michael Bérubé's memoir of having a son with Down syndrome, *Life As We Know It*. Some 90% of prospective parents terminate a pregnancy when a fetus tests positive for Down syndrome, which is, and should be, their right. However, too many do so without a real sense of what a child with Down syndrome might be like—*who* such a child might become; thus they might benefit from the testimony of parents like Michael and his wife, Janet Lyons. In his blog, Michael periodically updates readers on Jamie's accomplishments. Now a teenager, he knows the words to a large number of Beatles' songs, and as a professor of English who was never any good at memorizing poetry, I view this achievement with envy and even awe.

For testimony on living with a severe neuromuscular impairment, I would recommend Harriet McBryde Johnson's memoir, *Too Old to Die Young*. Many parents would abort a fetus if they knew would their child would be as disabled as Johnson. Indeed, complete strangers have approached her on the

street to say that if they had to be like her, they'd kill themselves. If one has never been disabled, it's easy to *think* that a condition like hers is intolerable, that death would be better. But we can't really know that until and unless it becomes our fate, which is the value of memoir as vicarious experience, personal testimony of what it's like to live with a compromised body.

As it happened, Johnson lived far longer than expected, hence the title, *Too Old to Die Young*. In 2008, she died suddenly and unexpectedly—at the age of fifty (still quite young, from my perspective). But she wrote lyrically and compellingly about the distinctive pleasures afforded her by her shriveled and helpless body. These were things she enjoyed not *despite* her condition but *because* of it: being bathed from head to toe by her personal assistant each morning, enjoying the refreshing breeze caused by her effortless movement through the hot humid air as she commuted to her law office in Charleston in her motorized wheelchair. Her longevity was presumably, in part, a function of good medical care, but what made her life so gratifying was her environment, broadly construed to include the right to attend public school, college, and law school; wheelchair access to theaters, concert halls, restaurants, stores, and so on. Thus, many of her pleasures were activities also cherished by non-disabled people, and not being segregated from them was crucial.

It is all too easy for nondisabled people to underestimate the quality of life that many people with disabilities experience. And where there is suffering, it is critically important to distinguish that which is intrinsic to the condition from that which is extrinsic. While the alleviation of extrinsic suffering is not the business of medicine, life-and-death decisions made in medical venues may be distorted by the failure to make this distinction. This is where disability studies has a critical and very practical role to play. Many disabled people fear the advent of a stealth eugenics—a kinder, gentler eugenics carried out by supposedly free agents, pregnant women and elderly and disabled people. Until the world truly welcomes and fully accommodates those with disabilities, these choices are not truly free. These concerns are not only understandable but legitimate; ultimately they affect us all, and the medical profession needs to take them seriously.

In conclusion, I have tried to demonstrate that disability studies can be of value to medical education in several ways: first, by placing the medical paradigm in the broad context of a sequence of ways of understanding and responding to disability that have emerged in the last two thousand years or so; second, by reminding medical professionals that people with disabilities have suffered as well as profited from medical treatment in the last two hundred years; finally, by providing access to a distinctive point of view from which

the experience of disability looks very different than it may from the outside.

I tell the students who take my courses for various reasons – some career-related, some personal – that I consider “disability literacy” an important attribute of an educated citizenry today because so many public policy issues have a disability dimension. I hope it is obvious by now why I consider disability literacy even more critical as an attribute of contemporary medical professionals: because they operate where theory meets practice, where thinking about human variation is powerfully brought to bear on bodies and minds at risk.

Notes

- 1 I refer to disabled people (or people with disabilities) collectively, when they are hardly a monolithic group. Similarly, I will use the term, medicine, as a kind of shorthand for the medical-industrial complex, which is also not monolithic. Finally, I will be describing disability studies as though it were more cohesive than it is.
- 2 The discussion of these paradigms draws on chapter two, “Paradigms Cost,” of my *Signifying Bodies: Disability in Contemporary Life Writing* (Ann Arbor: University of Michigan Press, 2009), 16-30.
- 3 Sir F. Bacon, “Of Deformity,” in *The Essayes or Counsels, Civill and Morall*, ed. Michael Kiernan (Cambridge: Harvard University Press, 1985), 133-34.
- 4 O. Sacks, *Migraine: Understanding a Common Disorder*, rpt. (Berkeley: University of California Press, 1985), 140.
- 5 M. Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership* (Cambridge: Harvard University Press, 2006), 189; I have reordered her sentences.
- 6 L.J. Davis, *Introduction, Disability Studies Reader*, 2nd ed. (New York: Routledge, 2006), xv. 26 *J Med Humanit* (2011) 32:21-30

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Paul Ulhas Macneill, "The Arts and Medicine: A Challenging Relationship," *Medical Humanities* 37 (2011), 85-90.

Editor's note: As with other more recently published articles in this volume, I asked authors if they would be willing to reflect on their piece and add introductory comments that would help frame it, or enable them to address issues raised since its original publication. The following remarks are from the author, Paul Ulhas Macneill.

For many years, I have been responsible for teaching ethics to medical students: both in Australia and Singapore (and with some teaching in the UK, the USA, Canada and New Zealand). My concern is that medical education, in all these places, emphasises medicine as a science rather than an art. Any effective practitioner of medicine knows better however: medicine is equally — if not more so — an art. The science is relatively easy to grasp. But the art is more challenging, and the art is difficult to teach. It is complex and lacks the simplicity and clarity of the 'biomedical model' and its attendant metaphor of the 'body as a machine'.

There have been many attempts to 'humanise' medicine by adding courses to medical degrees including communication skills, ethics, history of medicine, and the medical humanities. My concern however is that the medical humanities — along with all the recent additions to medicine — are not taken seriously by students. As a consequence, the response has been to justify the medical humanities by their instrumental effectiveness. The effect of this approach — as I argue in the following essay — is to pacify and domesticate the humanities. It strips the humanities of their power to shock and transgress, to shake certitudes and confront difficult complexities. Ultimately it is to demean art and

each of the arts and it deprives medical education of the full power of the arts as a critical and expansive force.

This essay is part of a broader exploration, for me, of the arts on their own terms, and the power of the arts to challenge and refine our understanding in other disciplines. In my own field I have been exploring a relationship between ethics the arts and I have recently published a book entitled *Ethics and the Arts* (Springer, 2014). In that book, I explore the potential for art and ethics to be mutually challenged and changed in that meeting. Similarly, in the following essay, I argue that the arts should be presented in all their power and ambiguity. In that context also, there is a potential for both medicine and the arts to be challenged and changed in that meeting.

My dad was an oil painter and I was fortunate to grow up surrounded by art and music. I imbibed an understanding that meaning is to be found in each of the arts — whether or not that can be reconciled with other sources of knowledge. To me, good art is complex — not confined to the simple beat of pop, or scientism. A good movie — such as 'Winter's Sleep' (by Turkish filmmaker Nuri Bilge Ceylan) — may appear simple, but it captures complexity. Life too is complex. Ideally medical educators will make use of simple models, but they will also also introduce students to the complexities of life. My essay is a challenge to present the arts on their own terms, not just for their instrumental effectiveness. When we take the arts seriously they potentially shake the simplistic certitudes of medical education and the models and metaphors on which it is (currently) founded.

The Arts and Medicine: A Challenging Relationship

Paul Ulhas Macneill

Abstract. This paper discusses various justifications for including medical humanities and art in healthcare education. It expresses concern about portrayals of the humanities and art as benign and servile in relation to medicine and the health professions. An alternative is for the humanities to take a more active role within medical education by challenging the assumptions and myths of the predominant biomedical model. Another is to challenge quiescent notions of the arts by examining examples of recent provocative work and, to this end, the paper considers the work of performance artists Stelarc and Orlan who have subjected their bodies to modifications and extensions. Their work challenges, and potentially undermines, conceptions of the body, medicine, and humanity's relationship with technology. Similarly, other artists, working with biological cultures, have raised controversial issues. Recent work of this kind defies easy understanding and resists being pressed into the service of medicine and other health professions for educational purposes by opening up topics for exploration and discussion without providing unitary explanatory frameworks. The paper goes on to discuss the implications for medical education if this is the approach to the arts and humanities in healthcare education. It suggests that there needs to be a shift in the foundational assumptions of medicine if the arts and humanities are to contribute more fully.

The medical humanities includes a broad spectrum of disciplines and different ideas about the place of the arts and humanities in medicine.^{1,2} Two of the major rationales for including the humanities in medical, nursing and other health professional courses are that they provide instrumental benefits to students, and they are enriching for individual health professionals.³⁻⁸ These are benign portrayals of the humanities in relation to medicine and the health professions more generally. Recent critical reviews propose that the humanities take a more active role within medical education by challenging the assumptions

of the predominant biomedical model and by engaging more critically with the myths of medicine and the overstatement of medical competency.^{7,6} This is an appealing strategy because it draws on the interrogative and analytical strengths of the humanities and puts them in a different position of power in relation to medicine. Another approach is to challenge the depiction of the arts as benign and passive. To this end, the paper discusses the artists Stelarc and Orlan, whose performances dramatise and draw attention to assumptions about the human body within both medicine and society. This highlights a need to move away from purveying the arts and the humanities as materials to service medical and other healthcare courses, and towards accepting them on their own terms. A discussion along these lines inevitably leads (again) to the value of the humanities and the arts in healthcare education.

Instrumental Benefits from the Humanities

A number of educational benefits are said to result from studying the humanities, including broader perspectives on medicine and the health professions, and an understanding of the patient within her particular circumstances and milieu.⁹ The humanities are occasionally spoken of as 'humanising' medicine,^{10,11} although the term has a variety of meanings including that the humanities "provide a different viewpoint" and a "critical and questioning attitude",¹¹ broaden the medical curriculum,¹⁰ and bring patients being back into focus "as unique persons living with an illness" within "particular cultures or communities."⁹ The expression also refers, on occasion, to developing self-awareness within the trainee health practitioner by giving attention to their own human-ness in the sense of feelings for others and understanding of their own limitations, concerns and prejudices.¹¹ However, the notion of the arts 'humanising medicine' has been criticised more recently.^{6,9,12} It is also noted that the reference to "humanities related to medicine" in *Tomorrow's Doctors* published in 2003 by the General Medical Council in the UK, was not included in the revised 2009 document.^{13,14} Perry observes an underlying assumption in the medical humanities that the "arts can assist in the development of the student as a communicative doctor."¹⁵ Macnaughton suggests that literature, drama and painting offer insight into the "nuances of communication between people, both verbal and non-verbal."⁴ Downie claims that the humanities provide "transferable skills" such as "sensitivity to nuances, ambiguities, and hidden meanings."⁵ Chen *et al* consider that the "attitudes and behaviour of a holistic and compassionate practitioner" can be "experienced vicariously through the medical humanities."¹⁶ Some claim that

studying the humanities promotes empathy,¹⁵ although many commentators are sceptical about this claim^{8,17-20} (also see p. 216 in Downie). Little argues, for example, that the arts only influence those already open to them.^{8,17} From a review of the literature, Perry *et al* found some evidence that arts programs in medical courses lead to changes of attitude and the acquisition of some skills but no evidence to indicate whether these changes are long lasting and bring about behavioural change.¹⁵

There is a more general concern about instrumental justifications for the medical humanities. Gillis describes the approach as “product oriented” and presents it as an argument that “through the humanities we make physicians more understanding people and by extension, more effective physicians, and for this reason [the humanities] should be a part of the medical curriculum.”¹⁸ This highlights a concern that the humanities and the arts are used as *mere* instruments to the end of producing effective practitioners.

The allusion here to Kant’s categorical imperative (that we should not use another human being ‘merely as a means’ to our own ends) is deliberate as it helps to isolate what it is about the instrumental justification that is troubling (Kant, p. 37).²¹ The concern is that we may be treating the arts as *mere* instruments to effect an end—a point that Macnaughton and Downie also address.^{4,5} While the humanities and the arts may provide an instrumental benefit to medical education, they are more than this in that they potentially offer benefits to individuals beyond their capacities as medical students.

Macnaughton, and Downie and Macnaughton, are careful to note that the medical humanities “also have an intrinsic *value* in their own right” and they consider that this value is itself essential to “what it means to be ‘educated’ as distinct from simply ‘trained’” (Macnaughton, p. 192).^{4,22} This provides a further justification for including the humanities because, without them, a course in medicine is an insular vocational ‘training’ rather than an education. Warner observes that this idea has been a “persistent refrain” since the early 1900s when some leaders of the USA medical establishment “warned that the allegiance to science driving the profession’s technical and cultural success was endangering humanistic values fundamental to professionalism and the art of medicine.” Many of these leaders argued for teaching the history of medicine as an antidote in order to maintain the “liberal education, civility and moral wisdom” of the profession and as a means for attaining the “ideal of the ‘gentleman-physician’ well versed in the classic liberal arts.”²³

Personal Development and Enrichment

‘Personal development’ and ‘personal enrichment’ are broader justifications for teaching medical humanities.^{4,8} Unlike the instrumental rationale, the humanities are justified, even if they do not make people better doctors, because they enrich and bring greater pleasure to their lives and because “the education process touches the student more deeply at a personal level” (Macnaughton, p. 195).⁴ Little (a surgeon and published poet), for example, writes that the “humanities offer an experience of the world of feelings and values, which can be as profound as people allow it to be” (Little, p. 170).¹⁷ He cautions however, that “[t]hose who hope to make better clinicians by teaching poetry may make some of their students into better or happier people, but I doubt that they will enhance their clinical skills”⁸ (see also p. 38 in Scheper-Hughes²⁴). For ‘teaching poetry’ we could equally read ‘music’, ‘theatre’, ‘film’ or ‘dance.’

Marcel Proust appears to agree:

This mysterious gift [flair in diagnosis] does not entail any superiority in the other departments of the intellect, and a creature of the utmost vulgarity, someone who admires the worst pictures, the worst music, may perfectly well possess it. (Proust, p. 380)²⁵

While personal enrichment may justify electives drawn from the medical humanities, this is not sufficient reason to institute a compulsory course, especially as “there are some who will always be indifferent to aesthetics, and yet be competent physicians” (Little, p. 164).¹⁷

The instrumental and the enriching depictions of the relationship treat the arts and humanities as providing support to medicine and comfort to practitioners. If this was the extent of the relationship, then the medical humanities would be solely justified by a health professional’s benefit, edification or entertainment. While I do not mean to deny a potential beneficial role for the humanities, or for the arts as entertainment and edification, the arts and humanities offer, and are, more than this. An aspect of this wider potential lies in their capacity to engender critique.

The Arts as Dangerous

Rees is critical of the *medical* humanities for being tame. He promotes a more interventionist approach by “refusing the ends given to” the humanities and

promoting “ethical questioning” that is “genuinely open-ended.” His concern is that:

Literature, art, poetry, music, film, are too often engaged as if they are non-critical resources which can be deployed in the service of the ends determined by the medical and medical ethical powers that be.¹²

He argues that there is an “ethical imperative” to positively reform the medical humanities. As an example he advocates an “existential reflection” about “caring for persons” – the predominant rationale of all the health professions – and proposes that the humanities advocate “caring for nothing” in order to address ultimate meaninglessness. This is an idea akin to Buddhist *sunya*: a recognition that at the core of any experience of being is a void or no-thing-ness (although Rees makes no direct reference to Buddhism).¹² He acknowledges that this is a ‘radical’ proposition. However, it may be *too* radical to be taken seriously as it attacks a core value of the healthcare professions and of many working within the humanities. In any case, there is no obvious reason for positioning “caring for persons” and reflections on “ultimate meaninglessness” as being in opposition to each other.

This should not, however, deflect us from his cogent critique of the medical humanities. Rees’s central argument is that conceptions of the arts as *non-critical resources* belittle the roles of the arts and artists. It is to treat the medical humanities as a “tool of medicine and medical ethics.” “Portentously elided”¹² he writes, “is the possibility that medical humanities is also dangerous.” Rees believes that the humanities have gained *entré* into medical education by adopting the ends of medicine and medical ethics and the result is to “defang all the potential criticisms. that literary and other sources can generate.” To illustrate the point he writes that:

One reads Shakespeare or Emily Dickenson, watches *Lorenzo’s Oil* or *Wit*, considers the late paintings of DeKooning or Rembrandt, in order to become a better doctor or improve the work of doctors, and not to question the work of doctors and the associated administration of medicine as an ethical profession.¹²

In this manner lions from the Serengeti become domesticated cats for a warm place in front of the fire. Left to themselves, and appreciated in an appropriate setting, the arts may be challenging, but in this context they are pacified. In my view, however, this is a pedagogical issue to do with the manner in

which the arts are employed by each humanities teacher. There is no inherent reason that the films, paintings and literature Rees refers to might not lead to “question[ing] the work of doctors and the associated administration of medicine as an ethical profession.” Nevertheless, there may be more general societal perceptions of the value of the humanities that incline teachers to present a subdued and limited account of these materials.

At the nub of this issue is a perception of the humanities as marginalised in relation to science-based knowledge. In a medical context, rather than confronting this marginalisation, the response has been to emphasise the utility of the humanities. Slouka, however, decries this tendency and mounts a muscular defence:

The humanities, done right, are the crucible within which our evolving notions of what it means to be fully human are put to the test ... They are thus, inescapably, political. Why? Because they complicate our vision, pull our most cherished notions out by the roots, flay our pieties. Because they grow uncertainty. Because they expand the reach of our understanding (and therefore our compassion), even as they force us to draw and redraw the borders of tolerance. The humanities, in short, are a superb delivery mechanism for what we might call democratic values. There is no better that I am aware of.²⁶

In a similar vein, Bleakley *et al* wrote that “One of the primary functions of art is surely to challenge the basis upon which we are civil. Art often sets out to shock our sensibilities and question our limits to taste.”²⁷ This is to draw “attention to the transgressive nature of art” and artists who “challenge societal norms working with and against the boundaries of taste and expectation.”²⁸ The role of the humanities is *not* therefore to “tiptoe through the minefield, leaving the mines intact and loaded” but to accept that provocation and discomfort (if not explosions) play a valuable role in learning. There is something antithetical about treating the arts as a mere resource for a specified purpose when their strength lies (in part) in their capacity to break bounds and to lead to unanticipated freedom of thought and appreciation.

The Medical Humanities as Critique

One of the more compelling arguments for a role for the humanities in medicine is to provide critical reflection on assumptions and predominant ‘taken-for-granted’ metaphors of medicine and the healthcare professions

more generally. However, the medical humanities have shied away from this role. Bishop is critical of the medical humanities for acting as a “compensatory mechanism for the mechanical thinking that has dominated and continues to dominate medicine.” His point is that the very attempt to humanise medicine in an instrumental way, has served to reinforce and perpetuate a dualism that already exists between the humanities and medicine, a dualism that is founded on an erroneous distinction. More importantly, it misses the possibility of the arts finding “human being at the margins of what it is always a struggle to say.”⁶ Davis and Morris also challenge a “science/humanities, facts/ values divide” by refusing to accept any “hard and fast boundary” between “biology” and “culture.”²⁹ To put this in the positive, as Davis and Morris do in their ‘Biocultures manifesto,’ “[s]cience and humanities are incomplete without each other.” As a consequence, “the biological without the cultural, or the cultural without the biological, is doomed to be reductionist at best and inaccurate at worst.”²⁹ The essence of these criticisms is that medicine, with the connivance of bioethics, assumes a dubious distinction between fact and value as if medicine is about fact (and aligned with science) and ethics and the humanities are about questions of value.

Shapiro *et al* raise the “problem of how certain biomedical narratives are privileged.”¹ Of particular concern are the “prevailing metaphors” which are “mechanistic (the body as machine), linear (find the root cause and create and effect) and hierarchical (doctor as expert)” and the “dominant narrative” which is a “story of restitution” in which the “patient becomes ill; patient is cured by physician expert; patient is restored to preillness state.”¹ Anyone engaged (as I am each year) in interviewing incoming medical students will know that the ‘body-as-machine’ and a ‘story of restitution’ are dominant narratives of students even before entry into a medical course. As many of my clinician colleagues acknowledge, these are inaccurate and misleading portrayals of medical practice, yet the metaphors have been remarkably resilient. One of their effects is to marginalise the humanities. On the hopeful side, however, as Shapiro *et al* note, there are “many reflective physicians and medical educators” who support “an expanded vision of medicine and medical education.”¹ For this expanded vision to have any effect, it needs to be “nurtured and enlarged” and displace (or at least be taken as a serious challenge to) the pre-eminent biomedical model in medical education.¹

Provocative Art as Critique

As one of the ways to explore and question assumptions of medicine, includ-

ing the metaphor of the ‘body-as-machine’, I examine the work of two leading international performance artists, the Australian Stelarc and the French artist Orlan, who have subjected their bodies to modifications and extensions. Their work deliberately challenges conceptions of the body, along with medicine’s relationship with technology in a number of ways. What their projects have in common is technological or surgical augmentation of their bodies. Both of them intentionally confront the notion that individual corporeality is intrinsic to identity.

Stelarc for example, in performances of THIRD ARM, has allowed internet audiences to activate electrodes in his body to effect movements of an additional prosthetic arm. In MOVATAR, the machine itself prompted movements of his body. He has described himself as “intrigued about identity, the self, free will and agency in these performances” when “his body becomes, or is partly, taken over by an external agency.”³² Unlike science fiction, this is not a thought-experiment but a direct physical experiment with his body incorporating (or being altered to include) technological extensions.

Orlan’s face has been surgically sculpted on numerous occasions to embody icons of feminine beauty including “the nose of Diana, the mouth of Boucher’s Europa, the chin of Botticelli’s Venus, and the eyes of Gerome’s Psyche.”³³ These operations have been broadcast live to galleries around the world as “baroque theatrical performances, in which she and her medical attendants wore fashion-designer costumes.”²⁸ Poetry reading and music accompanied the surgery, in an operating theatre decorated with large bowls of grapes. There is an apparent intention both to invert the usual power relationship between patient and doctor, and to shock. Jane Goodall has commented that:

Both artists are creators of scandal in the original sense of the term as a trap or stumbling block, metaphorically interpreted as a moral snare causing perplexity and ethical confusion (OED).

Some forms of risk-taking may be scandalous, but scandal in this sense tests the moral ground and puts morality itself at risk.³⁴

She interprets the work of Stelarc and Orlan as “good scandal done which generates complex confusions around high-intensity issues and cannot be resolved through the simple assertion of precepts.”³¹ For Zylinska, this goodness results “from the impossibility of providing a consistent, totalizing narrative about the events in question.”³² The point I wish to pick up on is this

capacity of these works to generate controversy and debate about the meaning and implications of the work without "providing a consistent, totalizing narrative."

Both Stelarc and Orlan have positioned their work as speaking of the "posthuman body", the "body as obsolete" and a "post-modern and cyber-cultural body." The idea of our bodies as extensions of technology leads Joan Broadhurst Dixon to describe the human as fluid and in question, and to conclude that "We are losing touch with our bodies, our human physical dimensions, and with it our meaty morality (or ethics)." ³⁵ Indeed there is now a genre of post-human literature of which Stelarc and Orlan's work has become a part. ³⁶⁻⁴² However, I am not examining their work as an adherent to a new of canon of thought about post-human beings, but rather, for its capacity to generate controversy and questions. Some of these questions will inevitably be about the value of the works themselves and their underlying presuppositions, and about the relationship between the artists and their medical attendants. Others may relate to the artists' claims about the body as obsolete and the 'cyborg' blending of body and machine. This in turn draws attention, potentially, to the assumptions of the 'body-as-machine' within both medicine and art.

Others observing performances of Orlan and Stelarc have not seen an *obsolete* body but are drawn to the meaty and suffering body. For Jones and Sofia, the artists' bodies "in the here and now" are bodies that "bleed and pulsate" and experience "the reality of pain." ⁴³ Both Stelarc and Orlan deny or downplay that pain is a significant element in their projects. However, Jones and Sofia observe that "[d]uring her operations Orlan tries to show no distress, but this doesn't mean that the pain disappears [it] is displaced onto the audience. something she herself acknowledges." They note similarly that "Stelarc asserts that the intrusions he makes on his body are a means to an end and are only coincidentally painful." Yet, for their audiences, "witnessing of pain is an important part of the performance of both artists, and one that not all can endure, especially when surgery is performed." Jones and Sofia consider that there is a "redemptive value from the audience's viewpoint" in that "their bodily suffering spares us the greater agony of having to find out more directly what is entailed in transforming ideals into flesh." ⁴⁵

These are just some of the controversies surrounding the work of Orlan and Stelarc. As provocations in the context of medical education, their work raises many questions concerning the role of medicine; whether we are indeed moving to a technologically augmented cyborg body; and ethical questions about whether any of this is ethically acceptable for art, or medicine, and on

what basis. ³⁸ Art is not immune from demands for social and ethical responsibility (Zylinska, p. 149-74). ^{44,45} Neither the art work itself nor commentaries by the artists (and others) presuppose any particular answers. The works themselves, and the commentaries, are however powerful provocations for students' own enquiry.

Beyond Orlan and Stelarc, there are other potentially challenging possibilities in the work of current artists. Catts and Zurr (from SymbioticA) have used tissue culture as "an effective methodology to confront the complexities and to contest dominant ideologies." ^{45,46} In their installation "Tissue Culture & Art (ificial) Wombs (AKA the Semi-Living Worry Dolls)", they cultured cells on polymer scaffolds as 'worry dolls', in a series from 'A' to 'G', with the promise that the dolls would take those worries away. Doll 'A', for example, represents "the worry about Absolute Truths and people who think they hold them." ⁴⁷ This artwork is "both 'tongue-in-cheek' and serious in attempting to draw attention to assumptions and ethical conventions within art, science and culture and open these up for critique and deeper understanding." ²⁸ Similarly, Julia Reodica cultivated her own vaginal cells for a 2004 project 'hymeNextTM' to produce a series of artificial hymens that "aim to confront modern sexuality, and provoke thought on the female body and the emphasis placed on virginity" (Zylinska, p. 161). ^{45,48} Eduardo Kac is renowned for his GFP Bunny Alba, the green fluorescent rabbit made by using transgenic materials (Zylinska, p. 150-2). ^{45,49} Bioart of this kind raises many questions about the danger of artists working with biological materials to culture, clone and generate new life forms, anddmore fundamentallyabout the relationship between science and art (Zylinska, p. 149-74). ⁴⁵

I have focused on the work of artists working 'at the edge' (so to speak) of their art, and in particular, provocative performance art involving alterations and extensions of the body, and bioart which makes use of new biological technologies. Equally, work in other genres of the arts gives rise to controversies. For example, David Foster Wallace's last novel *The Pale King* addresses the issue of boredom with "little resembling an over-arching narrative," no plot, just something sketched "here and there" like "shards in the tornado." ⁵⁰ Ross, in his *The Rest is Noise*, listens to the 20th century through its music in a journey into atonality, discordance, and beauty in surprising moments, glimpsed against the backdrop of the politicians, wars, demagogues, dictators and genocide. ⁵¹

The point I am endeavouring to make is that recent work in any of the arts tends to defy easy understanding and resist instrumental application. It also resists the artist's interpretation (as discussed above in relation to Stelarc

and Orlan) and is resistant to a ready translation into a teaching medium to make a particular point. New art of this kind demands to be taken seriously on its own terms (or not at all).

Another reason for suggesting this approach is that students in the health professions are conspicuously young (obviously so in medicine and dentistry, and true of the majority of students in nursing, social work and psychology). My impression of medical students (in Australia, Singapore and England at least) is that 19th and early 20th century art, literature and music has little interest for many of them. Current and more risqué artwork may be more appealing. Moreover, exploring current art is more likely to be a genuinely shared enquiry between the teacher and student, both of whom may experience similar responses. Using material that we as teachers are struggling to make sense of is not as conspicuously manipulative as drawing on classics to make particular (pre-determined) points about issues whether about medicine, or death, or living in poverty. We are comfortable with the classics – and have views about them – in a way in which we may not be with recent film, art, music or literature from artists who are playing with and against the boundaries of their own genre.

A further reason is that, rightly or wrongly, medicine and the health professions are projected and perceived as gung-ho, heroic, unlocking nature's secrets with promises of laboratory grown organs from our own cells, pushing the limits of human finitude, and rendering the secret codes of our genes open to scientific code breakers who promise to eradicate cystic fibrosis and diseases of old age. These ideas are strong provocations in themselves. They need to be met with equally strong images and responses from the arts.

However, I am not proposing that this should be the only approach. My underlying concern is with a manipulative and clumsy use of the humanities and the arts as instruments to achieve a specific purpose. This occurs when students are expected to read a novel to gain a particular understanding—where the teacher has a prescribed agenda in mind. The value of the arts and humanities is in their open-ended support of questioning, and their potential to “enliven and animate and develop new forms of engagement that allow for participation and discovery through enactment and embodiment and not just through abstraction or theory.”²⁸ It derives (in part) from a capacity of art to generate controversy and debate about the meaning and implications of the work and the subjects referred to. This is still an instrumental use of the arts, I acknowledge. The difference is that art is used *not merely* as a means, but with respect for each work of art in and of itself. The same respect can be extended to the classics—and is by good teachers. Even when familiar, the

classics need to be read for the surprise, the delight, or listened to attentively for that exquisite or devastating moment. They too resist easy translation. They can be discussed as works open to many interpretations. Art needs to be allowed its own impact and not be exploited solely, or predominantly, for some other purpose.

The Humanities, Arts, and Healthcare Education

If art and the humanities are to play a more critical role, rather than “attempting to ‘produce’ humanistic attributes widget-fashion” (to use Shapiro *et al*'s term), it raises the question of how this may be possible in healthcare education. For reasons of space I am constrained to offer the barest sketch of an answer to this question.

There is a good argument for offering humanities *electives* to medical students. However, arguments based on the “intrinsic *value* in their own right” of the humanities and their being “essential components of the educated mind” (Macnaughton, p. 192)⁴ are insufficient to substantiate *compulsory* courses in the humanities in my view. These arguments only have cogency if we accept as valid medicine's place as an *elite* profession and a concomitant need for “the ‘gentleman-physician’ well versed in the classic liberal arts.”²³ Little is correct, I believe, in observing that there are many competent clinicians indifferent to aesthetics and that the arts only influence those already open to them.^{8,17} It may be counterproductive to insist on teaching the humanities to those not interested, at least in the context of traditional medical courses.

In my view there needs to be a shift in the foundational assumptions of medicine and the metaphors by which medicine is taught if the arts and humanities are to contribute more fully to medical (and other healthcare) education. To persist with a metaphor of ‘body as a machine’ and ‘medicine as a science’ offers little space in which the arts and humanities can contribute in an appropriate way, other than as electives for those students with a special interest. The metaphors and myths of biomedical medicine are obviously limited, but like many such simplifications they have been effective in medical education for the last century. I claim, however, that the discontinuities and disjunctions have become too many and too great to persevere with these oversimplified models.

Shapiro *et al* go some of the way toward this conclusion in suggesting that there needs to be a lessening of the “ubiquitous divide between scientific/clinical medicine” and recontextualising of medicine to place the “medical humanities close to the core rather than on the periphery of the profession.”¹

At the Peninsula Medical School in the UK, Bleakey *et al* describe a more far-reaching shift of the kind I am suggesting, where the medical humanities have been adopted as “an explicit theme in the core undergraduate curriculum” as well as being represented in elective study units. As they report them, these changes represent a significant expansion of the underlying conceptions of medicine.²⁷ My sense is that, for the arts and humanities to play an effective role within medical (or other health professional) curricula, there needs to be a similar broadening of understanding. From my experience of teaching ethics in medicine, I am aware that a change, toward recognising ethics as underpinning medical practice, was required before it became accepted and integrated within medical education. For years, even after being adopted as a required course in many schools of medicine, ethics struggled as an add-on, an adornment in the school brochure, but not taken seriously by faculty.

Short of re-conceiving foundational metaphors in medical education, it still remains open to individual teachers to introduce elements of the humanities or arts in their teaching in any course within medicine, or for a medical school to introduce a substantial strand that has integrated the humanities (such as the personal and professional development modules in some medical schools). In skilful hands I believe this can work. However, teaching the humanities is a challenge within a medical course founded on the traditional biomedical model.

Conclusion

In this paper I have discussed different approaches to the arts and humanities in medicine and the healthcare professions. These include the humanities as providing instrumental benefits so as to make physicians more understanding of people and more effective physicians;⁸ the humanities as enriching the lives of healthcare professionals; the humanities as a source of critique in medicine and the health professions; and the importance of addressing the arts and humanities on their own terms. This has led to questioning “a humanities curriculum ... injected into, or grafted onto, a medicine curriculum as compensation, complement or supplement”²⁷ and to an exploration of the need for a fundamental realignment of medical curricula to address the fictions of the biomedical model and its concomitant fiction of clinical practice as science. It is in the context of a shift in conception of medicine of this kind, that the arts and humanities may find their place within healthcare professional education.

Whether or not this occurs, it is a mistake to treat the arts and humani-

ties as benign and passive additions to healthcare education. The intention of this paper has been to underscore the strength of the arts and humanities as supports for open enquiry. The paper is also proposing that the scope of the arts and humanities be more broadly encompassing to include material at the edge of the humanities *oeuvre*—such as the performance art of Stelarc and Orlan. Such material may have a special attraction and power for the relatively short time it remains challenging and difficult. Its potency will also diminish and it too will be seen as a quaint relic of concerns that are passé. However, as we turn that corner, artists will be creating yet another genre, and further challenging works with layers of meaning, because that is the nature of art.

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