Lessons From a Cultural Explorer

By Dr. Paul Haidet, MD

As a general internist, health services researcher, and medical educator, I have spent a good part of the past ten years “reading between the lines” in an attempt to understand the culture of medicine and medical education. Funny thing, culture. When you’re an outsider, everything is painfully obvious, but when you’re in it, it’s invisible. Author Daniel Quinn speaks of “Mother Culture whispering in our ear.”1 Internist and organizational consultant Tony Suchman describes it as a series of conversations that play out over time and weave meaning through a community.2 However you define it, the fact remains that it is our culture that shapes our thoughts and behaviors, because it constructs our common sense notions about how things are (or should be).

My research has been about patterns of communication between doctors and patients. Did you know that just the way that doctors and patients talk can have an impact on not only patient satisfaction, but also how fast patients’ symptoms resolve, how well controlled their blood pressure and diabetes are, how many preventive services they receive, and whether health care disparities are perpetuated?

There’s strong research evidence to support all of these, and more. Yet, our medical culture whispers peculiar things in our ear when it comes to communication and relationship skills.

Implications of Aging

By Nicolai Wohns, MSI

From 1900 to 1999, life expectancy in the United States increased by 30 years, from 48 years in 1900 to 78 years in 1999. Much of this progress can be attributed to decreases in early-life mortality via vaccination, improved sanitation and nutrition, and innovations in medical care such as antibiotics.

Advances in decreasing early-childhood mortality have been so successful that subsequent work, although unquestionably valuable, will suffer from the law of diminishing returns. Improvements leading to decreases in mortality in elderly persons from specific diseases, such as stroke, cancer, coronary heart disease, and diabetes have lead to longer life. This, however, renders them susceptible to other common illnesses and to declines in mobility and function, which are often disease-independent.

So what are the next steps to improve health and longevity? Until the mid-twentieth century diseases that accompanied senescence, or biological aging, were presumed to be unavoidable elements of the aging process.

A Humorous Beginning

A Glimpse at History

By Sunny Sahajwani, MSI

If you meet an epileptic patient, or see a seizure, it would be immediately perceptible that something is not right. The body convulses incongruously, and it becomes difficult to assess consciousness. Essentially, the normal biological rhythm and balance have gone astray. Physicians have made great strides in understanding epileptic pathophysiology as abnormal neuronal activity. Most of our medical knowledge, such as the understanding of epilepsy, has been the result of relatively recent discoveries. The neuron, for one, was not known as a functional unit until the late nineteenth century, first noted by the famous Spanish anatomist Santiago Ramón y Cajal. Yet, epilepsy, of course, has been around since before Hippocrates of Cos was born in 460 B.C., when the foundations of conventional medicine were being laid. Understanding the path from early medicine to current practices will reveal how the questions that were asked then determined the questions we ask now. Our progress has been defined by concepts that slowly evolved, building one upon the other to reach the crescendo of medical knowledge we are currently privileged with.

Hippocrates is considered to be one of the forefathers of today’s medical principles, even through his practice differs greatly from our own.

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Rimsha Ahmed, MSI

The fruit of knowledge, its juices tempting with promises of tasting eternal glory, and its scent, powerful and enticing, lures man to pursue the bounds of science. Mary Shelley's character, Dr. Viktor Frankenstein, exclaims, "When I found so astonishing a power placed within my hands", I hesitated a long time concerning the manner in which I should employ it." And yet, the power of this fruit becomes overbearing, eventually seizing control of his senses, such that he can no longer resist the temptation of success, the lure of all-encompassing scientific knowledge, and the appeal of possessing power as creator. Viktor Frankenstein thus brings upon his own demise by tasting the fruit of science.

"the splendor of power and responsibility... can easily become perverted into sheer desire to... obtain agreeable results"

For readers familiar with Shelley’s classic, Frankenstein, it comes as no surprise that the story, a labyrinthine tale questioning the bounds of science, religion, creation, power and responsibility, should emerge as a compelling and controversial literary example for questions regarding our current and future world of medicine. Most notably, the novel opens gateways into numerous discussions concerning the nature of humans, the philosophy of personhood, and perhaps most markedly, the role of the physician. Thus, this brings to question, who is the physician? What significance does he or she have in society, and how does the value and integrity of his or her character influence the person being treated?

As young, future doctors, an abundance of "self- seeking" and "other- conceiving" questions and answers await us on our journey. Yet the fact remains, that in an effort to preserve and nourish our patient's humanity, we must be able to treat them with sincerity, respect, and dignity. I once heard that hospitals are wonderfully dehumanizing institutions. Could any truth exist in such a claim? Perhaps, take for example, sterile hallways, generic furniture and paintings, beeping equipment, and the one-size-fits-none gown that patients are subjected to during their time of illness. Despite efforts to make the hospital as friendly and welcoming as possible to weary individuals, it will never emanate the soothing comfort of home. Thus, in order to care for the well-being of a complete individual, one with life and inherent dignity, one with inner human worth, it is essential for physicians to understand the implications of their actions upon others.

For doctors like Viktor Frankenstein, those engrossed solely in scientific achievements and medical pursuits, the patient becomes but a means to some personal and academic end. As the person’s individuality is thwarted in exchange for goals of successful treatment, use of innovative methods and triumphant medical breakthroughs, the splendor of power and responsibility bestowed upon the physician can easily become perverted into sheer desire to control and obtain agreeable results. As medical students, we face numerous questions each day, which strive to shed light upon the practice of medicine and the act of becoming a physician, as a balance between medicine as an art and as a science. However, unlike Viktor Frankenstein, I can claim with considerable confidence that neither I nor my peers wish to regard society or our future patients as mere monstrous experiments. Yet despite noble intentions, there exists a delicate and perpetual sway between the balance of medical science and pursuits with that of medical art and humanity. Shelley’s work thus exemplifies the complexities of the roles and responsibilities of the physician, as healer, leader, and creator, and serves to question and challenge notions of duty and power, in order to shed light upon the different paths one may take on their journey of the pursuit of medical excellence.

Healing and Belief
Christina Huang, MSI

At the age of 24, Yao ventured south to the sunny beaches of Phuket, Thailand to sell her virginity to a foreign tourist and send money to her family up north. Prostitution seemed lucrative enough. She wanted to escape from the grind and struggle of living and laboring in manufacturing plants in Bangkok. When she had the motivation, she flitted about Phuket selling her services. When she felt depressed or was unable to find work, she found solace at the shelter where I lived and worked last summer. She always insisted that her clients use a condom, warning them that you never know who had HIV. Yet in Phuket, one month, two customers, and a needle injection later, Yao tested positive for HIV.

She fell in love with a customer, a middle-aged, terminally ill German named Mickey whom she never asked for money. They opened a restaurant together, but their
happiness was brief: eight months after the opening he died from cancer. Mickey left her money to purchase land for her family. After his death, Yao continued running the restaurant until the great tsunami of 2004 destroyed everything.

It was a doctor, a Frenchman, who solicited Yao’s services six years ago during her early days as a bar girl. He was her second customer and she still remembers his name; she even knows where he works in his clinic to this very day, all these years later. He had said he could improve her complexion with a simple injection. Immediately after the injection Yao had a premonition, and one month later her presage was confirmed with a positive HIV test.

Soon after, Yao contracted cytomegalovirus retinitis, a disease particularly rampant in those who are immunocompromised. It caused blurred, shadowy vision and severe photosensitivity. Her CD4 count fell to 100 as her blindness progressed.

Yao has lived at the shelter now for two years. She has become an integral fixture of the shelter, observing and consoling the transient flow of positive women and children that enter the shelter’s compounds. She is fluent in English, German, and Thai. She can read and write in two languages, a skill not provided by her primary school education but rather from street smarts, a natural intelligence that taught her to survive on field mice and frogs as a child, and an insatiable curiosity about the world and the people she can learn from. Her misfortunes are numerous; her fears and her hopes equally plentiful. She excites and saddened as gracefully as Phuket’s beach tides and still loves as easily as the first day she met Mickey. She is by no means hardened by the grating world around her.

I was appalled when I learned the French physician, a man who taught to heal, still practiced 20 kilometers away. I was ready to march up to his door and start a ruckus. She calmed me, holding my hands and looked straight past me but seeing me all the same.

“I must have done something wrong,” Yao said. She blames herself. In her eyes, she must have done something wrong in a past life and, in this life, she is merely paying for past wrongdoings. I thought, well she must have been the devil incarnate in her past life to deserve misfortunes such as these.

The love she tries to give, the nurturing of the shelter’s orphans, the money she sends her mother – all are part of the debt she believes she must repay to replenish her karma and live a new life with more joy than hurt. Wealth is not her desire. She wishes to have her same poor parents in her future lives – even if her father was an absent alcoholic and whose convalescence from drinking increased the burden on her mother.

I believe that rarely in the US or the western world would it be possible to encounter a woman who puts the blame entirely on herself, who believes that this string of uncontrollable devastations are in fact her own doing even without her own action. The agency she assigns to her past self forces her present life to suffer the consequences. She acknowledges and accepts this knowingly, though with sadness that she was once capable of evil in a past life.

Western instinct would be to shift the blame to the community, to the government, to socioeconomic factors, and especially to the French doctor or to God’s will. Is it the ultimate sacrifice, or is it the ultimate display of pathetic resignation that Yao refuses to prosecute the physician, demand more services for her illness, and lash out in anger at some fate changer? She is not looking for a fight. Her fight is with herself.

As many women have died or moved on at the shelter, Yao remains immobilized by her limited vision and also by a belief that staying here will truly heal her. She practices yoga, listens to English radio, and sews purses despite her blindness, to sell to tourists. The resilience she shows is no better or worse than the resilience shown by patients at Penn State or hospitals around the United States. It is her method of coping with this illness that differs entirely from ours, something I struggled to understand for many months. But it is this belief that also sustains her will to live, to survive, and to create goodness in the world. And for this the world should be grateful.
effort to form patterns that would explain disease and physiology. As the incidence of certain diseases rose and fell with the seasons, Hippocrates naturally linked each humor with a season. In the winter, phlegm was most abundant, explaining the oversecretion of mucus and sputum and the prominence of the common cold and bronchitis. The spring favored blood and was the cause of nosebleeds and bloody feces (dysentery). Under summer and autumn yellow and black bile took over and were responsible for vomit. The humors created the backbone of early physiology.

“The whole history of medicine is a progressive discrimination.”

- Lester King, M.D.

For Hippocrates, epilepsy, or the Sacred Disease as it was known, had a pathology based in the observable humors. Considered hereditary, certain individuals were plagued by the sacred disease due to overproduction of phlegm throughout the fetal stage. Excess phlegm descends and impedes the flow of air to the brain, where air was thought to normally goes first, resulting in a total blockage of air to all body parts. Struggling for air the body convulses and foam forms at the mouth. Resolution is finally found when blood heats up the phlegm and returns the patient’s body to normal. Without modern means to test for phlegm, fluids, and the movement of air, Hippocrates could not prove epilepsy occurred from lack of air (although today we know that cerebral hypoxia is an important symptom connected to seizures). The accuracy of the biology is not important. Rather, the relevance of his inference lies in the critical application of known human physiology to explain disease.

Hippocratic physicians felt that the eye of reason could discern anything invisible to the observable eye. He was stepping away from divine influence into a realm of reality, an acknowledgement that disease could be studied, explained, dissected, and treated. Hippocrates stated, “its [epilepsy’s] nature and cause are divine only just as much as all others are, and it is curable no less than the others.”

Building upon the theory of humorism, many scholars expounded upon the Hippocratic ideas. Perhaps the next greatest influence came from Galen of Pergamum (in present day Turkey) in the second century A.D. Starting at the age of seventeen, Galen studied medicine for eleven years. While it may sound normal in our day, this length of study was actually quite uncommon because the title of physician, while respectable, was easily obtainable through favors or the study of a few books. Once he had completed his study, he took his first post as a physician to the gladiators. He subsequently held various positions in the Roman Empire, renowned as one of the greatest healers and philosophers of his time.¹

Galenic philosophies and discoveries spread across Europe and the Middle East and were the cornerstone of medicine until rapid medical advancements started in the eighteenth century.² Galen’s ideas on the organism were rooted in a holistic ideology that took all things surrounding the body, within the body, and the environment to be interconnected. Taking the idea of humorism, Galen added the idea of faculties. Galen would witness a pattern in his observations of the human body and categorize them into faculties. For example, the uterus, bladder, gall bladder, and rectum all exert what was considered to be a “retentive” quality, i.e. for storing the fetus, bile, urine, and feces, and thus were grouped together into a “retentive” faculty. As the body demands, these same organs reciprocally display an “expulsive” faculty to eliminate their contents. For example, the uterus, bladder, gall bladder, and rectum all exert what was considered to be a “retentive” quality, i.e. for storing the fetus, bile, urine, and feces, and thus were grouped together into a “retentive” faculty. As the body demands, these same organs reciprocally display an “expulsive” faculty to eliminate their contents. Galen enumerated a large list of faculties he observed, many of which might seem confusing and misguided today. Noticing the transformation of food into chyme, he described the stomach and intestine to contain a faculty of “alteration”. The absorbed chyme was then “altered” into blood by the portal veins and liver, releasing the nutrients to spread as needed by the organs’ faculty of “attraction”. Galen used his eye of reason to describe findings that reflected unity across organs and also recognized the extreme complexity of human physiology.³

Hippocrates, Galen, and the physicians of our past expressed, at times, ideas wildly incongruous with what we teach today. They were pioneers in critical thinking that helped lay the foundation for the scientific revolution of the seventeenth century and hence have helped us find the right answers as our tools to discriminate right from wrong have improved. By learning from our past and rebounding from mistakes, we can unlock greater potential as a society and as individuals, continuing the march forward.

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The Forum

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Lessons

From page 1

Paul Haidet, M.D.

I would like to share a few of the messages I’ve heard over the past decade, what I’ve come to understand about them, and how I would like to respond if I could have a conversation with Mother Culture. If you train yourself to step outside once in a while, to stand back and ask “what is this all about?”, you might hear some of these messages being whispered in your ear, too.

“Communication is mostly about being nice to patients.”

Well, sure it’s important to be nice to patients, but that’s not the only, or even the most important, goal of medical communication. I once went to a grand rounds about professionalism where the presenter showed a video of a resident counseling a patient to quit smoking. Unfortunately, the resident did a pretty poor job. She used only fear appeals (the psychologists say that telling someone they will die if they don’t change is a particularly ineffective way to motivate people to change behaviors), skirted and flat-out ignored some of the real issues driving the patient’s smoking, and failed to acknowledge how hard, for the patient, what she was suggesting would be to achieve. She was really nice about it though; she didn’t shout, berate the patient, or talk down to the patient.

When the presenter asked the audience how they thought the resident did, the audience immediately jumped on not the communication difficulties, but rather whether she had gathered all of the biomedical data necessary to make a complete differential diagnosis. When the presenter redirected the audience to comment on the communicative process, most of the voices replied that her communication skills were fine, and that she was very calm and gentle with the patient, completely ignoring the process issues around how she went about holding a conversation about smoking cessation. What our culture fails to acknowledge is that medical communication is a unique situation that our usual life experiences don’t necessarily prepare us for. Patients aren’t all happy.

Patients are often scared, depressed, angry, manipulative, paranoid, secretive, confused, scattered, and just plain not on their best behavior and we shouldn’t expect them to be. And being nice, while important to setting a respectful tone with patients, is not the only thing one needs to know to effectively communicate with patients. Medical communication is an advanced skill, and it won’t come through osmosis. It needs to be learned, sought, nurtured. Here’s a thought: find an attending when you get on the wards who is really great with patients. You know, one of those people you want to be like when you become the physician in charge. Go to lunch with them, ask them what exactly they were doing and thinking when you saw them really make a difference for a particular patient. If they can’t explain in detail what they were doing, challenge them to figure it out together with you.

“Medical communication is an advanced skill, and it won’t come through osmosis.”

“How new skills always feel when you are just starting out (we won’t talk about the time I tried to learn to ski). By sticking with it, and paying attention to the communication process (not just the biomedical content), I was able to build skill. And if an old dinosaur like me can do it, then you can too.

“If you get too emotionally close to your patients, you will burn out by the time you’re 40.”

This one is my favorite, mostly because I marvel at the irony of it. I passed 40 several years ago, have been practicing medicine for the better part of 18 years now, and I am here to...
Sources Cited:

Implications

From page 1

Nicolai Wohns, MS1

But fifty years of research in gerontology has shown the way to differentiate the physiology from the pathology. As a result, there appears to be much promise that can yield advances in the underlying mechanisms of aging.

With remarkable innovations in human stem cell cloning and nanoprosthetics, to name a couple, we appear to be on the brink of a new era. Take macular degeneration: the leading cause of blindness, which is brought on by a cascade of pathology due to dysfunctional cells in aging retinas. Klimanskaya et al have developed a stem cell line derivative of retinal pigment epithelial cells that have been shown, remarkably, to attenuate loss of visual function in animal models. These cells have now been made in a form that is appropriate to begin human clinical trials. In the field of nanoprosthetics there has been success in the implantation of sensing electrodes in the brains of monkeys that allow them to manipulate robotic arms with great facility. And these are just the beginning.

Yet, as with any such beginning, reflection to pinpoint potential blindspots is a must. There are formidable concerns in regard to the prospect of the next round of age-retardation. With what amounts to a declaration of war against aging, we must be aware of the ethical implications.

An informed discussion of these implications relies heavily on a definition of aging, yet offering a concrete definition is not as straightforward as it may seem. The mechanism may shed some light, but that has not yet been thoroughly elucidated. It may be due to telomere shortening over time (as I was taught in biochemistry), or to the deregulation of reproductive hormones, or a combination of these and many other factors. Aging is defined by the International Longevity Center as a process that progressively converts physiologically and cognitively fit, healthy adults into less fit individuals with increasing vulnerability to injury, illness, and death. What is clear is that it is a natural part of the human life cycle. Or is it?

The fact that there is no clear societal understanding and consensus on what is called “anti-aging” medicine creates unnecessary confusion. For some, uses such as the cosmetic use of botulinum toxin to minimize wrinkles, applying “anti-aging medicine” simply refers to a medical solution to a cosmetic aspect of aging. Let us understand anti-aging not as “life-extending” supplements or other ridiculous scam tactics, but as the intention to extend life within what appear to be genetically determined limits, through control of the myriad diseases that afflict humanity, and through direct intervention in the biological process of aging. It should also suggest the ultimate possibility of identifying and even manipulating those genetic factors that may influence the genetically determined limits of the species.

Exciting stuff, but there are concerns that the
consequences of age-retardation might outweigh any potential benefits. In his influential article “Identity, Prudential Concern, and Extended Lives,” Walter Glannon of McGill University argues that a prolonged life would bring a disconnection between the physical and psychological lifespan of the individual, and ultimately lead to a loss of personal identity. He holds that the design and function of the human brain are such that the mind of a long-lived individual would not be able recall the past and consequently look forward to future life stages, because all memory of prior stages would be gone.

Glannon’s concerns reverberate in The President’s Council on Bioethics report “Age Retardation: Scientific Possibilities and Moral Challenges.” The report argues that, instead of following a linear path, life traces a sloping trajectory that bends from birth to death: what we know intuitively as the life cycle. It is a multifarious progression of unequal stages that merge and blend with one another with each resting on the next, a complex totality where “aging defines youth almost as much as it does old age.” It posits, therefore, that more life does not necessarily equate with better life and that it will not simply give us more years of youth but rather force us to reconsider every facet of our lives. Age-retardation will alter, as individuals, our sense of motivation, urgency, and meaning.

In addressing aging as a disease to be cured, we are, in essence, declaring war on death. A life lived from the start with weapons in express opposition to death is a life lived in express opposition to the constraints of mortality. This would have a profound impact on our perception of mortality and the life cycle.

It is self-evident that we are restricted by a finite amount of time to live. Consequently, we seek to spend our lives in the ways we deem most important and vital to us: in economic terms, the scarcity of a commodity contributes to its value. The very experience of spending a life contributes to our sense of accomplishment and commitment, and to our sense of the meaningfulness of the passage of time, and of our passage through it.

It is no wonder that a meditation on aging and the life cycle demands a discussion on the fundamental questions of human existence. As we think more about the individual and society, the significance of life takes on new shades and seems to become both lighter with clarity and darker with futility.

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About The Forum

The Forum is an editorial publication by students of the Pennsylvania State University College of Medicine that seeks to foster scholarly discussion in the academic body.

Each issue will examine topics in the social and biomedical sciences, puzzles in clinical settings, and extraordinary experiences drawn from our faculty and students.

We aim to present various perspectives in order to reach a deeper understanding of the issues confronting our rapidly changing world. Through The Forum, the unification of all sectors of the student body and faculty around today’s provocative issues will enhance our collective education.

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“Every man takes the limits of his own field of vision for the limits of the world.”
- Arthur Schopenhauer