

## A letter from the United States: The romance of medicine - voyages and heroes

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*Becoming a physician is a lifelong journey, not merely the completion of medical school and postgraduate training. For those pedagogues that wish to train doctors as technicians the notion that there is something heroic and romantic in a physician's life is quaint, old fashioned, and out of date! In today's teaching hospitals virtual patients come via digital technology in computed x-ray and magnetic resonance images, automated laboratory test panels, electrophysiologic studies, and algorithmic histories. Doctors have no need to leave their computer and increasingly doctors do not leave their computers for the bedside, the home, the neighborhood, or the country of their "patients". Contemporary doctors are in danger of losing their bedside clinical skills and with them go the role of physician as a wise, widely traveled human being knowledgeable about the rigors of inhospitable environs, the hardness of the species, the despair of poverty, and the seductive dangers of wealth. There is similarity of this kind of physician to mythic heroes, and they still have stories to tell (Rev Méd Chile 2009; 137: 438-43).*

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## Un mensaje desde Norteamérica: Lo romántico de la medicina - viajes y héroes

*Convertirse en médico es una jornada de toda la vida, que no termina al graduarse de una escuela de medicina ni al completar una formación de postgrado. Para aquellos docentes que pretenden formar médicos como tecnólogos, la noción de que en la vida del médico haya algo romántico y heroico suena a arcaico, fuera de moda y de lugar. En los hospitales docentes de hoy los pacientes se convierten en entes virtuales mediante la tecnología digital con imágenes radiológicas computarizadas o de resonancia magnética, "perfiles" de laboratorio automatizados, estudios electrofisiológicos e historias clínicas forzadas por algoritmos. Los médicos no necesitan dejar de lado sus computadoras para atender a sus pacientes en sus camas, en sus hogares, sus barrios o países. Los médicos contemporáneos arriesgan perder las competencias clínicas y con ello se perdería el rol de aquellos médicos que sean seres humanos competentes en conocimientos, que viajen mucho conociendo los rigores de ambientes inhóspitos, las características complejas de nuestra especie, la desesperanza de la pobreza y la seducción peligrosa de la riqueza. Hay una similitud entre este tipo de médicos con los héroes mitológicos y los que aún quedan tienen muchas historias que relatar.*

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A penetrating essay by Abraham Verghese was published in the December 25, 2008, issue of the *New England Journal of Medicine*<sup>1</sup>. Dr. Verghese, a thoughtful and persuasive commentator, describes the dichotomy that divides contemporary hospital practice and medical training from an older medical world: the so-called golden age of medicine in the 1950s and 1960s. His lament and caution ought to be required reading for all doctors, but especially for doctors presently in training. My university, medical school, and post-graduate education went from 1955 to 1970. I grew up as a physician when there were heroes, traditions, and romance in medical training and in the teaching and clinical practice of medicine.

I discussed his paper with students and housestaff at a morning report shortly after the 2009 New Year and gave my usual admonitions that doctors are caretakers of people not machines. One of my faculty colleagues and partners responded by describing Dr. Verghese's thesis as "quaint" and divulged that I was the only physician in our practice group that had refused to be included in the electronic medical record system of our practice. At 71 years and trying to reduce clinical obligations my absence from the computer logs is not missed. The debate waxed and then waned. My plea was for this group of 20 or more housestaff and students to learn and practice their bedside skills: the fundamental connection between patient and doctor. In fact the very first connection between patient and doctor.

My colleague then labeled me as "quaint"! An appellation I happily accepted. He then related the diagnostic advantages of handheld ultrasound machinery, computer transmitted radiographic and magnetic resonance imagery, and the incredible computational choreography of laboratory, imaging, and text clinical data.

I confess I reminded him of the chaos in our practice office that happens every time the power fails or the "computers are down". I offered no compassion. I took a pen from my jacket pocket and reminded the group that there are other ways of recording data. Surprisingly none of the students and housestaff left, despite beeper pagers and telephone calls.

"Noble!" "Romantic!" "Foolish!" "Adventurous!" "Risky?" "Daring!" Adjectives that have been applied to my activities over the past forty years;

friendly comments that I prefer to deflect. I realize there is something appealing about academic physicians traveling to remote places and working with unique human populations to study their health and ecology and to offer medical care. The adventuresome professor questing for knowledge, enduring natural and manmade treachery, surviving exotic hardships, offering the fruits of modern science to isolated, little known people and places is a popular icon in the literature and folklore of the great civilizations of East and West. Indiana Jones is the most recent incarnation of the heroic scholar. On occasion I am categorized as something similar and, on occasion, I lament the increasingly apparent lack of romanticism and heroism in the medical education establishment and medical studentry of the United States.

Perhaps it is best to start with the notion of "hero"; the icon of the smart, selfless, self-possessed person blessed with stamina and sentiment. Heroes and heroism are endangered entities nowadays. The popular media is egalitarian, anti-elitist, and feeds upon celebrity and wealth; an interesting hypocrisy fostering appearance and avarice but demeaning the quiet doing good of ordinary seeming, but extraordinary people. Celebrity and heroism are not identical; they may coincide. Most heroes are not celebrities. Few celebrities are heroic. Modesty is an essential characteristic of genuine heroes which does not lead to celebrity. The mythic hero, so well described by Joseph Campbell<sup>2</sup>, must leave home on a mission, travel to unknown, foreign and strange lands, undergo trials and tribulations, succeed in fulfilling the mission's objectives, and return home. Travel into the unknown is essential. In mythic times travel was geographic—movement in space and time. Heroic journeys were most often over long distances and long time spans like the journeys of Hercules and Jason. The destinations were inhospitable; the inhabitants different and frequently bizarre like the Cyclops and the harpies that tormented Ulysses. It is the time and distance model that dominates folklore and fuels the popularity of the romantic adventure stories. More recent versions of the heroic myth and heroic journeys specify the mission as imaginative: an intellectual and scientific journey with travel into the unknown carried out in laboratories and libraries. The home that is left behind is old

and ordinary in a monotonous, commonplace geographic site. The impulse that drives these journeys falls into one of three categories: first, survival; second, fulfilling an assigned task or series of tasks; and third, curiosity.

A hero does not just travel and survive. Heroes return and change their world by telling their story and using the lessons learned and powers acquired to inspire their listeners. In addition to bravery and cleverness, the characteristic of a scholarly hero is linguistic aptitude: the capacity to communicate with multiple different creatures by word, gesture, or deed. The myth of making a scholar hero routed the individual away from the ordinary and familiar to a realm of the extraordinary, dangerous, sometimes grotesque and cruel, sometimes sacred (Figure 1). Confrontation, combat, and compassion in the netherworld require a hero-in-making to be bold and brave but above all to learn. Knowledge and skill, including a capacity for cleverness and disguise, allows a hero-to-be to return to the realm of ordinary and familiar where, because of newly acquired powers and knowledge, she or he could by generosity and example challenge and change the existing system of belief and governance. Neither the geographic nor the intellectual hero is silent or unsung. Heroes are written about or write. They make trouble, generate new ideas and behaviors, and dispel or disperse old rules and rulers.

My acquaintance with academic romantic adventure began during adolescence, long before medicine entered my dreams, with Sir Arthur Conan Doyle's Professor Challenger<sup>3</sup>, Sir H. Rider Haggard's Professor Ptolemy Higgs<sup>4</sup>, and Sinclair Lewis's Martin Arrowsmith<sup>5</sup>. Challenger and Higgs are traveling, geographic explorers. Arrowsmith is an explorer of scientific experiment in a journey amongst ideas and facts in laboratories and clinics, not among mountains and deserts. Each of these characters' travels is a story or multiple stories which contain the mythic fundamentals of rites of passage: separation-initiation-return.

What sets the modern scholar hero apart from the classic ancient hero are peculiarities of appearance, dress, and behavior. Hercules, Aeneas, and Jason were handsome, virile young men. Contrast them with Doyle's description of Professor Challenger:

*He sat in a rotating chair behind a broad table, which was covered with books, maps, and diagrams. As I entered, his seat spun round to face me. His appearance made me gasp. I was prepared for something strange, but not for so overpowering a personality as this. It was his size which took one's breath away—his size and his imposing presence. His head was enormous, the largest I have ever seen upon a human being. I am sure that his top-hat, had I ventured to don it, would have slipped over me entirely and rested on my shoulders. He*

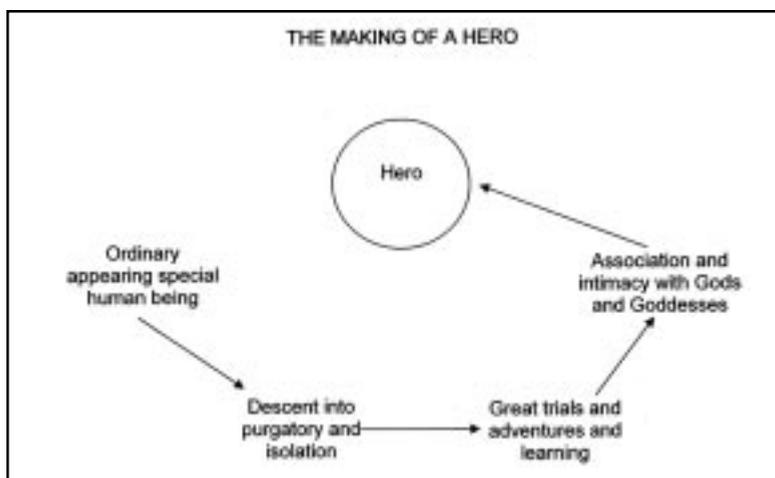


Figure 1.

*had the face and beard which I associated with an Assyrian bull; the former florid, the latter so black as almost to have a suspicion of blue, spade-shaped and rippling down over his chest. The hair was peculiar, plastered down in front in a long, curving wisp over his massive forehead. The eyes were blue-grey under great black tufts, very clear, very critical, and very masterful. A huge spread of shoulders and a chest like a barrel were the other parts of him which appeared above the table, save for two enormous hands covered with long black hair. This and a bellowing, roaring, rumbling voice made up my first impression of the notorious Professor Challenger<sup>2</sup>.*

and with Rider Haggard's description of Ptolemy Higgs:

*First, I will describe Higgs, who, I may state, is admitted, even by his enemies, to be one of the most learned antiquarians and greatest masters of dead languages in Europe, though this no one would guess from his appearance at the age of about forty-five. In build short and stout, face round and high-coloured, hair and beard of a fiery red, eyes, when they can be seen—for generally he wears a pair of large blue spectacles—small and of an indefinite hue, but sharp as needles. Dress so untidy, peculiar, and worn that it is said the police invariably request him to move on, should he loiter in the streets at night. Such was, and is, the outward seeming of my dearest friend, Professor Ptolemy Higgs, and I only hope that he won't be offended when he sees it set down in black and white<sup>3</sup>.*

Since I was skinny, bespectacled, rather ugly and shy, I suspect I identified more with these untidy, clever, and determined creatures than with their companions: inevitably tall, handsome, and manly. Their adventures were breathtaking and inspiring: disappearing into unknown terrain and “undiscovered” people and living with ancient customs and surrounded by ancient creatures such as the dinosaurs that populated “The Lost World”. These stories were far more entrancing than the rather tame adventures of Tom Swift or the Hardy boys. Exploring untrodden lands filled with novel peoples and animals, and both new and old ideas and ways

of seeing was intoxicating and addicting. I wanted to be like them.

To be honest I do not remember identifying a specific target such as a particular academic degree or region to explore. Rather I found that circumstances opened opportunities which only needed curiosity, energy, and minimal contemplation and courage to pursue. I zigzagged my way through schools and college and professional and academic careers. Reflecting on my 70 plus years it would have been infinitely less rewarding and much less fun to have pursued a single career target.

Fictional adventure stories and adventurous scholarly heroes, never forgotten, were displaced by the accounts of real scholar adventurers like Charles Darwin, Alexander von Humboldt, Sir Richard Francis Burton, Dr. David Livingstone, Sir Aurel Stein, and a host of other scientific travelers. I learned that with study, hard work and good luck, scholarly travel and exploration were within reach of ordinary mortals like me. The reality of their experiences and their enormous influence upon the intellectual history of the Western mind provided the foundation for the popularity of real and fictional adventure travel and mystical fantasy and science fiction encompassing J.R.R. Tolkien, Jules Verne, Arthur C. Clark, Ray Bradbury, Terry Brooks, Stephen Donaldson, and Ursula Leguin. All of them incorporate “the journey” as an essential theme. For well done novels the reader is taken along on the journey opening new vistas and emotions, sharing the fears that come with danger, and the jubilation that comes with triumph and ultimately the comfort of returning home. My reading in high school and university included liberal portions of scholarly and imaginative travel which came to abrupt suspension for six years with medical school and house staff training.

Medicine, historically, has never been deficient in heroes or heroism. Pick up and scan any of the standard histories of medicine and you will find a host of pioneering physicians and surgeons whose intellectual and geographic travels have opened the human body and mind. Their excursions set in motion the growth of biology and medicine. There are mythic figures like Asclepius and Hippocrates, documentedly real people such as Avicenna, Maimonides, Ga-

len, Vesalius, Sydenham, Jenner, and more recent contemporary figures such as Pasteur, Koch, Ross, Leishman, Hanson, and some that I have been privileged to know personally such as Paul Beeson, Eugene Stead, and Lewis Thomas. They are heroic because they took risks and journeys of intellect and place to ask questions, make observations and experiments, and provide service. Some died on their quests, others returned to their professional and native homes, and they all transformed the biology, teaching, and practice of medicine.

To my mind present medical education is deficient in heroism and romance. I believe that the physician's role includes a certain amount of heroism. Heroism for me includes the concept of voyaging, the travel and adventures of mind and body that expand experience, cultivate curiosity and compassion, and generate the urge to describe and to inspire, to write and to teach. Rites of passage are fundamental events that shape the lives of novices and professors and require description and explanation. So medicine for me is a heroic voyage and its practitioners and professors heroic scholars or scholarly heroes, enmeshed in the connections among the spirit and body, environment and health, culture and care. I am not a hero of the mythic or fictional kind but I take seriously the criteria for hero-hood, strive to achieve and to teach them. I take issue with misguided regulations and pedagogy that make the process of becoming a physician comfortable, technically routine, risk averse, physically and spiritually bland.

What most worries me in the present trend of clinical medicine and medical education is the substitution of a real person, a body, personality, and personhood with images, lab and functional test values, and untestable reportage by sonographers and radiographers who do not know and may not have seen the patient. It seems we have created the "virtual patient".

Technology has become so sophisticated and competent that the anatomy and functional biochemistry of an individual human being can be recorded, stored, and regurgitated. In the future a distant viewer could comment, perhaps diagnose, and prescribe without ever seeing,

speaking to, or touching the victim. Indeed in many medical schools the fundamental sciences of anatomy and physiology, subjects which used to require cadavers and laboratory animals, have replaced the real flesh and blood with computer and video images. History taking and physical examination are taught using actors and clinical procedures such as venapuncture, gram staining, urinary catheterization, and ophthalmoscopy are hardly taught at all. Third and fourth year clinical clerks spend more time in lectures and looking at computers than they do at the bedside with living unwell patients. Dissecting a human cadaver and taking a history and examining a real patient is viscerally stirring—threatening, humbling, and connecting to the human species. The use of computers, fabricated models, and trained actors sanitizes and dehumanizes early medical education, and paves the way for the emphasis upon molecular biology, organ specialization, and the technology of representational imaging, in the end with the creation of virtual patients.

Some of the impetus for these changes derives from animal rights groups and from people that continue hostility to autopsies and human dissection. The substitution of living and dead animals and humans is applauded and medical institutions hope to avoid unseemly and destructive raids on physiology and anatomical laboratories. The substitution unfortunately leads to the creation of generations of life scientists (biologists, anthropologists, and physicians) unused to the feel of live and dead flesh, untouched by the inevitability of pain, disease, and death; and unaware of the sacrifices for the education of life science pupils and professions. We are in danger of producing life scientists ignorant of life and living organisms. Experience with fake flesh and illness and dependence upon imagery without real bodies and real patients leaves students unconnected with fellow human beings. Molecular biology which uses cells and subcellular systems for research is not medicine; it is a tool to further dissect and explore living creatures, but not a substitute for a quadruped or a biped creature *in toto*. To quote Dr. Verghese:

*Pedagogically, what is tragic about tending to the iPatient is that it can't begin to compare with the joy, excitement, intellectual pleasure, pride, disappointment, and lessons in humility that trainees might experience by learning from the real patient's body examined at the bedside. When residents don't witness the bedside-sleuth aspect of our discipline—and its underlying romance and passion—they may come to view internal medicine as a trade practiced before a computer screen.*

Medicine more than ever needs the adventure of voyaging; doctors that can leave the computer screen for the bedside, the patient's home, and the countries and cultures from which patients come. It does not need to be a long voyage, but it requires boldness, curiosity, and some risk. We need a reawakening of the heroic.

Perhaps it is appropriate to conclude with a long excerpt from Charles Darwin's "Journal of Researchers" written after his return from the voyage of the *Beagle* (27 December, 1831 - 2 October, 1836) and published in 1839<sup>6</sup>. 2009 is the bicentennial of Darwin's birth and the sesquicentennial of the publication of the *Origin of Species*. Darwin was just 30 year old when these comments were published and reflect an appreciation for the value of adventure and the necessity to encourage it in the pursuit of science, compassion, and self reliance.

*In conclusion, it appears to me that nothing can be more improving to a young naturalist, than a journey in distant countries. It both sharpens, and partly likewise allays that want*

*and craving, which, as Sir J. Herschel remarks, a man experiences although every corporeal sense is fully satisfied. The excitement from the novelty of objects, and the chance of success, stimulate him to increased activity. Moreover as a number of isolated facts soon become uninteresting, the habit of comparison leads to generalization. On the other hand, as the traveler stays but a short space of time in each place, his descriptions must generally consist of mere sketches, instead of detailed observation. Hence arises, as I have found to my cost, a constant tendency to fill up the wide gaps of knowledge, by inaccurate and superficial hypotheses.*

*But I have too deeply enjoyed the voyage, not to recommend any naturalist, although he must not expect to be so fortunate in his companions as I have been, to take all chances, and to start, on travels by land if possible, if otherwise on a long voyage. He may feel assured, he will meet with no difficulties or dangers (excepting in rare cases) nearly so bad as he beforehand anticipated. In a moral point of view, the effect ought to be, to teach him good-humoured patience, freedom from selfishness, the habit of acting for himself, and of making the best of every thing, or in other words contentment. In short he should partake of the characteristic qualities of the greater number of sailors. Travelling ought also to teach him distrust; but at the same time he will discover how many truly goodnatured people there are, with whom he never before had, or ever again will have any further communication, who yet are ready to offer him the most disinterested assistance.*

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