By John B. West
Professor Emeritus of Medicine

Birth, marriage, death – and becoming emeritus: these seem to be the major milestones in life from my present perspective. After fifty years of doing research, finding the wherewithal to do it, writing textbooks, and planning lectures, it is a bit of a shock to realize that one can get up in the morning without the need to plan the day this way.

This transition could lead to a serious mid-late life crisis, and I certainly sympathize with bankers, company directors, or whatnot who are reduced to playing golf all day long. Fortunately because of the benevolent attitude of the University of California, I can continue to teach and do some research as long as I remain productive. This enlightened policy is not found everywhere. I have friends who are retired professors of medicine at London University, where I used to work, who are at the height of their productivity at this age.

Of course we must keep the milestones referred to above in perspective. Take birth, for example. The newborn baby finds himself (or herself) in a desperate predicament. Having been supplied with oxygen from the placenta for about nine months, he now suddenly finds that this source is no longer available. The analogy in an adult is having his head held under water. The only solution is for the baby to start using his lungs which he finds are full of liquid and therefore require enormous efforts to expand because of large surface tension forces. Thus for a few tumultuous seconds, the baby puts up a frantic fight to receive oxygen. But that is not all. The blood flow to the lung has been minimal for nine months, and this suddenly needs to increase some seven times to distribute the oxygen to the whole of the body. Without doubt, being born is the most cataclysmic event in our lives and we can all congratulate ourselves on a successful outcome.

Becoming emeritus seems to be an excuse for reminiscing, and I plan to do this briefly. I am comforted by the fact that, unlike the case with my textbooks, reading what follows is not required or even expected. Actually, reminiscences can be helpful in small doses. All of us have read obituaries of colleagues and inwardly exclaimed, “Fancy that – I wish I had known it when he was alive!”

I grew up in Adelaide in Australia, and after completing my medical degree at Adelaide University, moved to London. This was a common practice at the time because post-graduate studies were not well developed in Adelaide, though of course this is no longer the case. In London, after a year or so, I had the good fortune to get into the Postgraduate Medical School, Hammersmith Hospital, which was by far the best medical school for young doctors from abroad. A remarkably serendipitous event occurred shortly after I arrived at Hammersmith. The Medical Research Council’s cyclotron, the first that had been built specifi-
cally for medical research, came on line, primarily to determine the potential of neutron radiation therapy. Not much came of this, but it turned out that the cyclotron also produced exotic short-lived radioisotope gases – one of the most interesting being oxygen-15. This has a half-life of only two minutes, which means that in that time half of it disappears because of radioactive decay. I can remember a meeting where it was announced that oxygen-15 was now available, and did anyone have any ideas on what to do with it?

We said that we would inhale it, which we did. Counters were situated over the chest so that when the radioactive gas entered the counting field, there was an abrupt increase in counting rate that measured the regional ventilation. Then during the subsequent breathing period, the rate of removal of the radioactive gas gave the pulmonary blood flow. To our astonishment we found that the blood flow was very low at the top of the upright human lung, and much greater at the base. This was the first demonstration of the gradual increase in blood flow down the lung, and was a very unexpected and important finding. It was soon shown that the cause was gravity; the blood pressure in the lung is very low with the result that the weight of the blood determines its distribution.

This finding prompted us to look at other effects of gravity on the function of the lungs including the distribution of ventilation, gas exchange, alveolar size, and mechanical stresses. Then over the next few years we worked with an isolated lung preparation to analyze the various factors responsible for these regional differences.

This work started in the late 1950s, and by the middle 1960s a great deal had been learned about the effects of gravity on pulmonary function. At that time the NASA Apollo program was in full swing and I thought it would be interesting to measure pulmonary function in space to see what happens because of radioactive decay. I flipped through a book on pulmonary function in space. Icing on the cake was that we received the first funding from NASA in early 1969 and this continued uninterrupted until the end of 2006, some 37 years.

Another very serendipitous event occurred in 1960 when I was still in London. I found by chance that Sir Edmund Hillary (who had made the first ascent of Everest seven years before) was organizing a combined physiological and mountaineering expedition to the Himalayas. I applied to be a member of the physiological team and much to my surprise I was accepted in spite of the fact that I had never been high on a mountain before. The story I tell is that Hillary met me in London, asked me to climb a flight of stairs, and then pronounced me fit enough.

This was an extraordinary successful expedition. A group of seven physiologists wintered at an altitude of 5800 meters (19,000 feet) in a prefabricated hut, and we carried out a large series of physiological measurements. As far as we knew, no one had lived so high for such a long period before. In the spring we moved to a nearby mountain, Makalu, altitude 8481 meters, and obtained additional measurements of work capacity on a stationary bicycle up to about 7500 meters. The data showed that human beings at extreme altitudes were very close to the limit of tolerance to oxygen deprivation, and raised the question of whether it would be possible to reach the summit of Mt. Everest without supplementary oxygen. For many years after this I harbored the hope that one day it might be possible to obtain data at the highest altitude in the world.

The opportunity arose in 1981 when we organized the American Medical Research Expedition to Everest from UCSD, and were fortunate enough to have five people reach the summit. The general plan of the expedition was simple, that is to obtain physiological measurements on a group of fit people first at sea level, then at increasing altitudes, and finally on the summit of Everest itself. The expedition members comprised three groups of people. First there were six highly experienced Himalayan climbers whose job it was to put in the route to the summit. Next we had six so-called climbing scientists who were all MDs who had worked in high altitude physiology, but were also very strong climbers. Finally there was a group of older physiologists who manned the two laboratories at base camp, 5400 meters, and the main laboratory camp at 6300 meters altitude.

The expedition was enormously successful. A wealth of data was obtained in the two laboratories, and samples of alveolar gas from the depths of the lung together with venous blood were obtained at over 8000 meters. One of the climbing scientists, Christopher Pizzo, collected alveolar gas samples while sitting on the summit of Mt. Everest, and these were analyzed later at UCSD. A striking finding was the extent to which successful climbers increased their ventilation (that is the rate and depth of breathing) at extreme altitudes. For example, the alveolar partial pressure of carbon dioxide (a measure of ventilation) changed by a factor of five. In addition Pizzo recorded some data such as the barometric pressure, on a hand-held tape recorder on the summit, and the tape sounds like a patient in the terminal stages of respiratory failure. He was forced to take a breath between every three or four words. No one had made measurements at altitudes like this previously, and remarkably, no one has done so since. Of all the scientific projects that I have been involved in over the years, none has given me more satisfaction than describing the physiology of humans on the summit of Mt. Everest.

My interest in high altitude physiology and medicine continues and I edit a journal in this field. Recently I was invited by the Ministry of Railways of China to advise...
By Lawrence J. Schneiderman, Professor Emeritus of Medicine

In 1992 the public was outraged by news reports that a felon in a California prison for armed robbery had received a heart transplant at the Stanford Medical Center. Prison officials estimated that the total costs of his surgery and medical care, including security costs, could amount to $1 million before the inmate was released. The news provoked national outrage. Commentators and talking heads railed at the injustice. How come a prisoner can afford to get a heart transplant but their hardworking, law-abiding friends and relatives cannot?

An official spokesman for the California Department of Corrections provided the answer: the U.S. Supreme Court had ruled that “deliberate indifference” to a prison inmate’s health problems violated the US Constitution’s Eighth Amendment prohibition against “cruel and unusual punishment.” “We have a requirement,” the spokesman explained, “based in law and in losing many, many lawsuits, to provide medically necessary care to inmates. The courts have told us that inmates have a constitutional right to healthcare. You and I don’t, but inmates do. We have to do whatever is medically necessary to save an inmate’s life.”

In my own ten minutes of fame (Andy Warhol owes me five more) I was interviewed about this case on television’s popular news program “60 Minutes” and tried to redirect the public’s anger: “Don’t blame the docs who are doing the heart transplant,” I pleaded. “Blame ourselves and our politicians who have made such a hodge-podge and patchwork of health care insurance in this country.”

There was a reason I wanted to redirect everyone’s outrage. At the time there were hundreds, perhaps even thousands of patients who could have used the heart. (Heart disease is, along with cancer, one of the top causes of morbidity and death.) All they lacked was health insurance coverage. Why? Because unlike the rest of the first world countries, the United States fails to provide universal health insurance. If they had had the means to pay for the heart transplant, any one of these citizens would have benefited more from the procedure simply by being able to live in the outside world. From an ethical perspective involving the allocation of limited resources, they would have had a higher medical priority than someone limited to the confines of a prison.

The relevant principle is health care justice. A just society seeks to implement the fair distribution of burdens and benefits for all its citizens. It seeks to distinguish between what is unfortunate and what is unfair. When illness strikes it is unfortunate. (Just look around: Despite our worthy efforts to make people feel responsible for their own state of health, cancer and drunken drivers strike the slim and fit as well as the overweight and slothful.) We would regard a society that fails to take responsibility for assisting a citizen in recovering from this misfortune as unfair. In other words, we would consider health care an obligation of a just society – a fundamental matter of fairness. Examining the problems encountered by the United States in addressing what most European nations consider an essential obligation of a just society gives us an opportunity to radically examine the notion of justice itself.

We will have to look to history and culture as well as the economic and political systems for answers. Quite obviously, the North American and European continents have had vastly different historical experiences. Among the features that characterize North American culture have been successful in doing this and it is a remarkable advance in high altitude transportation.

So what has changed now that I am emeritus? Nothing so far. I still have the same teaching commitments, continue a research program, edit a journal, and, through the indulgence of my department chairman, have an office. Long may it continue!

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and history is a self-image of rugged individualism, best symbolized by the American cowboy – a solitary, heroic figure who in reality rode the plains only briefly yet has continued to ride the plains for over a century in mythology. Along with this self-image is a distrust of a centralized bureaucracy (especially since it usually demands the cowboy’s tax support), a preference for private enterprise as opposed to government entitlements, even to the point of believing in the free-market approach to addressing all sorts of social needs – including health care.

Many Americans have come to conceive of justice in a way that is peculiarly American. To them justice exists in the lavish and widespread wealth and high standard of living that have been achieved by calling forth each person’s best efforts and allowing the benefits of these efforts to be distributed in a (theoretically) unfettered way. The material success of capitalism has confirmed the beliefs of the true believers. Small wonder that these true believers – and there are many – view with suspicion if not alarm any hand other than the “unseen hand” that “unjustly” tries to alter this state of affairs.

Two other features of United States society have interfered with achieving universal health care. Far more than European countries, the United States is inhabited by people who have immigrated from many different parts of the world. They constitute many different religions, ethnic groups, and races. Unlike the more homogeneous societies of Europe, like Scandinavian countries whose citizens tend to share such similar physical and cultural traits they could almost be (and, more than Americans, are) blood relatives, many Americans have difficulty seeing (and having empathy for) other very different Americans as members of the same family. They don’t easily embrace what is a standard concept in Europe, “solidarity.” Although this indifference is distressing, it may prove not to be a failing unique to the United States. The European concept of solidarity is being severely tested as more and more countries experience their own waves of immigrants and rising health care costs. In fact, it will be interesting to see which comes first: achievement of an all-inclusive universal health care by the United States or the abandonment of the principle of all-inclusive solidarity in Europe.

Another feature of United States society that has interfered with achieving universal health care is a toxic side-effect of the belief in the superiority of the free market as a solution for social problems – powerful, self-interested, profit-oriented health care institutions.

There are even more problems with the market-based approach to health care. I will mention just a few.

To begin with, health care does not fit into the standard economic relationship of production and consumption. In the usual business transaction the producer offers and the consumer chooses. In medicine, however, the physician makes the diagnosis and determines the treatment, hence in every important respect controls both production and consumption.

As health care plans compete with each other by controlling costs they engage in various strategies of risk selection (“cherry picking”), enrolling the healthy and avoiding the sick, especially the really sick. At the same time, for-profit health care plans face a conflict of fiduciary obligation, often focusing on raising the value of their stocks to please their shareholders at the expense of serving their patients.

Finally, and most particularly, a little-known paradox separates health care from the usual market model. Whereas a successful business increases productivity and efficiency as it improves its procedures over time, in medicine it is just the opposite. As medicine improves its procedures it produces more survivors of once-fatal illnesses, hence creates a negative feedback by “plugging the system” with more elderly, disabled, and chronically ill.

Meanwhile unhappy Americans continue to stumble around looking for solutions. Despite overwhelming evidence that single payer universal health care is more economical, acceptable, and effective than all the alternatives, our politicians and policy makers quarrel without letup over the alternatives. Who should be the major payer? The federal government? State governments? Should large corporations be required to offer health insurance? What about small businesses? How much should be the responsibility of individuals and how should the tab be presented – via tax credits, payroll deductions, cash co-pays? Mandatory or voluntary? And so on and so on.

In other words, Washingtonian powers are preoccupied with how to pay for health care. Hardly any thought is given to what should be paid for – as though health care is a commodity that needs no examination with regard to what health outcomes should be achieved in a just society. Economics has obliterated ethics.

We can see the results – inconsistent, even incoherent rules, regulations and statutes that squeeze and contort the flow of health care dollars, and, not surprisingly, squeeze and contort the quality and distribution of health care services. Some Americans, some of the time, are covered by health insurance policies, some of them useful, some of them not. A large and growing number of others – now up to forty-seven million – are not covered at all. They can only envy the puzzling assortment of citizens in special categories whose health care coverage is guaranteed, including members of the military and veterans (okay), the over-sixty-five (oh well, that’s us), people with kidney failure (huh?), and prisoners (are you kidding!).

Why have these gated communities been constructed? For one simple reason: to control costs.

Are politicians and policy makers right to be transfixed by the inevitability of out-of-control costs under a universal system? Not if we accept a simple ethical stricture with regard to health care: In a just society everyone is entitled to everything. Everyone is entitled to what the philosopher Norman Daniels calls a fair opportunity, namely a “decent minimum” level of health care.

What is a decent minimum? In my opinion, it is a level of health care that enables a person to acquire an educa-
tion, hold a job, and raise a family. Or, if the person is unable to meet these goals, to attain a reasonable level of function within the person’s limits, as well as a reasonable level of comfort, whether it be from pain or other forms of suffering.

This definition accomplishes two things. It recognizes the importance of each person, not in isolation, but in relationship to other members of a just society. And it assures that society’s need for productive citizenry is recognized as a practical trade-off for the burden of health care costs all of us in that society have assumed.

Let’s consider diabetes mellitus – a common disease with life-threatening yet potentially preventable consequences. A decent minimum level of health care would start with guaranteed prenatal care to give the developing fetus and newborn the best chance for a healthy beginning, and continue with ongoing nutritional and life-style counseling to reduce risk factors such as obesity. If, despite these preventive measures, the person developed clinical diabetes he or she would receive guaranteed coverage for chronic disease management, including optimal glucose control by diet and medication, along with education and monitoring to prevent infections and organ damage. As long as the person was gaining an education, holding a job, or raising a family the decent minimum would include any and all necessary high-tech life-sustaining interventions, including renal dialysis and organ transplantation. Later in life, when the person was no longer pursuing those goals, the emphasis on decent minimum medical care would shift from high-tech life-sustaining interventions toward treatments that provide a reasonable level of function within the person’s limits, as well as a reasonable level of comfort, whether it be from pain or other forms of suffering.

At this point you might say: ‘Wait, isn’t this the United States of America? What about our hallowed respect for freedom of choice?’ Suppose someone wants more than the decent minimum treatment and is willing to pay for it – and it is not medically futile? My answer would be: ‘We should permit it. Won’t there be different levels of health care if we allow this? Yes. Isn’t this unethical?’ In my view, no. For the simple reason that if all citizens have at least sufficient health care, a decent minimum that enables them to participate in society, then inequalities can be ethically justified for those who wish to obtain more expensive and elaborate health care on their own, as long as their privilege does not deny others of their rights.

This, I propose, is an ethical way to achieve health care reform – a communitarian approach that is consistent with our American culture and capitalistic traditions. It supplies what is missing today in the endless debates promoting one or another economic gimmick to control health care costs.

This article is excerpted and modified from Schneiderman’s Embracing Our Mortality: Hard Choices in an Age of Medical Miracles (Oxford University Press, 2008).

The SAT and College Admissions

By Richard C. Atkinson and Saul Geiser
Reprinted from Forbes Magazine

It used to be that an acceptance letter from a good college was simply a pleasant prelude to the game of life. No more. In 21st-century America, getting into the best universities has become a ferociously competitive, high-stakes game. This year the University of California received 340,000 applications for 40,000 places. There are many more qualified students than selective schools can accommodate, and the hunt is on for the best students at public and private institutions alike.

But who are the best students? American colleges and universities have long answered this question by looking at applicants’ high-school grades in academic subjects and their scores on standardized college-entrance tests.

These tests come in two varieties: achievement and general reasoning. Achievement tests measure what students have learned in high-school courses, such as history, math and foreign languages. General-reasoning tests seek to assess students’ academic potential by measuring their skills in solving reading and math problems largely, by design, independent of high-school curricula.

Since 1926, the dominant general-reasoning test in the U.S. has been the SAT, sponsored by the College Board.

The SAT has a long pedigree in American higher education. Yet the problem with general-reasoning tests like the SAT is their premise: that something as complex as intellectual promise can be captured in a single test and reflected in a single score. It is tempting for admissions officers – and parents, legislators, policymakers, and the media – to read more into SAT scores than the numbers can bear.

Although measurement experts know that tests are only intended as approximations, the fact that scores frequently come with fancy charts and tables can create an exaggerated sense of precision.

For quite some time, an over-reliance on these scores has skewed the outcome of

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the admissions game. The more competitive admissions become, the more small differences in SAT scores affect a student's chances. As a result, deserving students, including low-income and minority applicants, are crowded out of the game. These concerns led the University of California to consider eliminating the SAT entirely as a requirement for admission in 2001.

The College Board responded with a revised SAT, introduced in March 2003. The new SAT is a dramatic improvement over the old. The mathematics section is more demanding, but also more fair; while the old SAT featured questions that were known for their trickery but required only a beginning knowledge of algebra, the new math section is more straightforward and covers higher-level math.

Instead of deconstructing esoteric verbal analogies, students must now perform a task they will actually face in college: writing an essay under a deadline. These changes have already galvanized high schools and students to put more effort and attention into writing and college-preparatory math. The new SAT, in other words, has gone a long way toward becoming an achievement test.

But has it gone far enough? The College Board’s own recent assessment concludes that the new SAT is not substantially better than the version it replaced in its ability to predict student performance in the first year of college. Although the essay adds significant value to the new SAT, it appears in its ability to predict critical-reading performance. The new SAT brings national attention to the topic and led to a revision of the test by the College Board. Saul Geiser is former director of admissions research at the University of California’s Office of the President and has sought valiantly to overcome this difficulty through national curriculum surveys, but the ACT does not measure student achievement to the same depth as do discipline-specific tests like the SAT Subject Tests or AP exams. It may be that no single examination, however well designed, will be satisfactory in a country that lacks a national curriculum and has a long tradition of local control.

In the unrelentingly competitive world that college admissions has become, we owe students the chance to be judged on criteria as fair and rigorous as we can make them. The current ferment of research on standardized testing, including several major studies now underway, suggests that we may be on the verge of opening a productive new chapter in the long national conversation on what academic merit is and how it should be measured. One thing is clear: There is still a lot more to say.

Richard C. Atkinson is president emeritus of the University of California. His February 2001 address to the American Council on Education on standardized testing and the SAT brought national attention to the topic and led to a revision of the test by the College Board. Saul Geiser is former director of admissions research at the University of California’s Office of the President and currently a research associate at the Center for Studies in Higher Education at the UC Berkeley campus.
Anecdotage

By Sandy Lakoff

Keeping Up with the Times (part 2)

More items culled from the London Times:

Thigh-Slappers. In a quiz about quips from and to the bench, Gary Slapper recalls that John N. Conroy, a Canadian lawyer, was once rebuked by a testy judge who demanded of him, “Mr. Conroy, are you trying to show your contempt for this court?” Conroy immediately replied: No, I am trying to conceal it.” The quiz also noted that in 1531, a cook who put poison in the porridge of the Bishop of Rochester was publicly boiled to death at Smithfield in the same pot he had used for the porridge; and that in Miami a driver who grossly violated noise standards by playing the music of 50 Cent from open car windows was sentenced to listen to two versions of Verdi’s La Traviata. (For a repeat offense, he should be made to suffer through an opera by the repetitive minimalist Philip Glass!)

Fear of Flying. As if there weren’t enough to worry about, Griffon vultures, which used to feed on carrion, are re-enough to worry about, Griffon vultures, suffering through an opera by the repetitive director forced Spain to incinerate animals – seal penises, reindeer antlers, tiger bones, sea horses, and the like. Species preservation – yet another benefit of this wonder drug!

Jewish Wry
(Thanks to Barbara Kornfield:)

On the Jewish New Year, Rosh Hashanah, there is a ceremony called Tashlich. Jews traditionally go to the ocean or a stream or river to pray and throw bread crumbs into the water. Symbolically, the fish devour their sins. Occasionally, people ask what kind of breadcrumbs should be thrown. Here are suggestions for breads which may be most appropriate for specific sins and misbehaviors:

For ordinary sins.............. White Bread
For erotic sins..................French bread
For particularly dark sins...Pumpernickel
For complex sins................Multigrain
For twisted sins............... Pretzels
For tasteless sins............. Rice Cakes
For sins of indecision......... Waffles
For sins committed in haste...Matzoh
For sins of chutzpah .......... Fresh Bread

For substance abuse .......... Stoned Wheat
For use of heavy drugs........... Poppy Seed
For petty larceny ................. Stollen
For committing auto theft....... Caraway
For timidity/cowardice .......... Milk Toast
For ill-tempereredness......... Sourdough
For silliness, eccentricity ....... Nut Bread
For not giving full value ...... Shortbread
For jingoism, chauvinism ........ Yankee Doodles
For excessive irony ............ Rye Bread
For unnecessary chances ..... Hero Bread
For war-mongering ............ Kaiser Rolls
For dressing immodestly ........ Tarts
For causing injury to others ..... Tortes
For lechery and promiscuity ... Hot Buns
For promiscuity with gentiles .. Hot Cross Buns

For racist attitudes ............ Crackers
For sophisticated racism ... Ritz Crackers
For being holier than thou ..... Bagels
For abrasiveness ............... Grits
For dropping in without notice... Popovers
For overeating .................. Stuffing
For impetuousity.............. Quick Bread
For indecent photography..... Cheesecake
For raising voice too often ...... Challah
For pride and egotism .......... Puff Pastry
For scypchosis, butt-kissing .... Brownies
For being overly smothering .... Angel Food Cake
For laziness ..................... Any long loaf
For trashing the environment .. Dumplings
For telling bad jokes/puns .... Corn Bread

(Thanks to Edie Parti:)

Therabbishakes the hand of a wor-shipper after the Yom Kippur prayers are over, looks him in the eye and says, “Sam, I want to enlist you in the Army of God!” Sam replies, “Thank you, Rabbi, but I am already in God’s Army.” “Really?” the rabbi asks skeptically, “Then how come I only see you in synagogue at the High Holidays?” Sam leans over and whispers in the rabbi’s ear, in a confidential voice, “I’m in the Secret Service.”
Festive Holiday Party
Entertainment by the Pizzaro Brothers
Sunday, December 14, 2:30-5:00 pm
Reserve by December 1 ($15 per person)

Kurt Benirschke
Dickson Professor Emeritus of Pathology
Twinning
Wednesday, January 14, 4:00-5:30 pm

Christopher Wills
Professor of Biology
Adventures of an Evolutionary Biologist
Wednesday, February 11, 4:00-5:30 pm