

## The Next Decade for Higher Education



by Daniel Yankelovich

What will higher education look like ten years from now if it is highly responsive to the demands of society?

Five trends, if they encounter little friction or resistance, will radically transform higher education in the coming years. Those five, converging with one another, are certainly not the only forces pressuring colleges. But unlike some of the others – such as the impact of technology on teaching and research – they are not yet receiving ample attention. And, taken together, they pose an enormous challenge that, if neglected, will mean serious trouble for higher education and the United States. Conversely, the more effectively colleges respond to such trends, the better off they and our nation will be.

**Trend 1: Changing life cycles as our nation's population ages.** The demographic facts are familiar, but quite dramatic: While life expectancy in the United States in 1900 was a mere 47

years, people in the 21st century are expected to live to be almost 90 – a whopping extra 40 years of life. Hardly any facet of our existence will be unaffected by that sweeping change. To understand its impact on higher education, we must look at what living longer portends for different stages of the life cycle. When life expectancy was short, children moved to adult responsibilities without prolonged adolescence. In the 1950s it was expected that marriage, child raising, and jobs and careers would take place quickly after age 21, and that retirement and old age would occur by age 65.

Today, with so many more years of life to juggle, we are prolonging the younger life stages and adding new ones at the older end. Of particular relevance to colleges is the stage between the ages of 18 and 30. The old pattern of attending college from 18 to 22 and then going directly to a job, career, marriage, child rearing, and “settling down” is evaporating before our eyes. Students are stretching out their higher education. Three quarters of today's college students are nontraditional in some way – they delay enrollment after high school, attend college part time, or

are considered financially independent. Many are already working, and more than a quarter are parents.

We are rapidly moving away from the rigid sequencing and separation of schooling and jobs toward a new pattern in which higher education spreads out over about a 12-year period and is more closely integrated with work. This is not just prolonged adolescence. It is in many ways a new phase of life, in which young people experiment with relationships and career choices to find the best fit with their practical needs and with their self-expressive goals. They are not ready to settle down until their 30s, to the bewilderment of many parents.

It is difficult for young people to make sound career-life choices without testing them in the “real world” of practical experience. The long-established practice of sequencing education first and work later forces young people to make fateful life choices before they are equipped to do so, or worse, to postpone making them until it is too late. Employers and colleges are not designed to accommodate the longer life stage between adolescence and settling down, especially in light of the ever-changing character of today's knowledge economy. Preparation for work is now divided between “education,” the task assigned to schools and colleges, and “training,” the task assigned to the workplace or to professional trainers. Yet that distinction is often artificial and inefficient. A great deal of training goes on in education, but it is poorly done because it is divorced from the workplace, and a

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great deal of education goes into training that is also poorly done because it is divorced from colleges. If higher education were totally responsive to the demands of the larger society, in ten years we would see many more efforts to integrate higher education, training, and work.

A second life stage that higher education should also deal with, and one that can potentially help solve some of its fiscal and faculty problems, is that of people from ages 55 to 75. That stage was previously split between work and retirement. Yet today many Americans are stopping work earlier in life and changing the definition of retirement. Retirement – and especially early retirement – no longer means total withdrawal from work but rather an opportunity to find forms of fulfillment that one's job did not provide. Older adults are looking for personal fulfillment and the chance to "give something back." They look beyond their jobs while still in reasonably good health, with mortgages paid off and empty nests in view. As they seek to build bridges to new life opportunities, many turn to higher education. For some older Americans, it is nostalgia for their college years that attracts them. For others, it is the chance to overcome a perceived deficit in their education. People who concentrated on one field – say, engineering or premed – want to make up for what they missed.

College development offices are well aware of that unsatisfied appetite and point to a variety of "extension" programs, designed in part to win the financial support of their larger communities. But by and large, the two parties – the retirees or early retirees and the higher-education institutions – have not yet connected in ways that meet the needs of either side. For example, the typical undergraduate curriculum is a poor fit for older Americans, and the graduate curriculum is an even poorer one. So are the organization and timing of courses, the credit system, and virtually every aspect of higher education that is now geared to young people at the start of their work lives rather than those nearing the end. To expand

its outreach, higher education will want to strengthen existing programs for the growing numbers of adults who wish to add new areas of competence. Colleges have a strong economic incentive to be more creative over the next decade in matching the needs of older adults with more-suitable materials and more-convenient timetables. If they don't seize the opportunity, they risk losing a significant new source of revenues.

Potentially, the existence of millions of well-heeled and eager older Americans who hunger for the illumination that they believe higher education holds for them is like manna from heaven – if faculty members learn how to respond to those desires properly. One can envision that,



by 2015, historians, sociologists, philosophers, and literature professors could be gaining immense personal gratification, as well as remuneration, by dividing their time between teaching young people and engaging in dialogue with older students who bring their own rich life experience to bear.

**Trend 2: America's growing vulnerability in science and technology.** To an extraordinary degree, our nation's fate depends on maintaining our world leadership in science and technology. Our superpower status is tied to it. Productivity gains that our economy needs to improve our standard of living and competitiveness depend on it. The appeal of our colleges to the rest of the world flows largely from it. Yet, for a variety of reasons, young people in the Western industrialized nations, especially in the United States, are not flocking to study science and technology like their counterparts in other countries.

In Japan, 66 percent of undergraduates receive their degrees in science and engineering, and in China, 59 percent receive such degrees. That compares with only 32 percent in the United States. Higher education must work to overcome obstacles that now discourage students from pursuing science and technology careers.

Many of those obstacles are cultural and include outdated curricula, a lack of qualified teachers, the difficulty of the subject matter, and, in particular, negative stereotypes instead of a genuine familiarity with the work of science and scientists. An American study found that schoolchildren stereotyped scientists as socially inept, eccentric, and mad.

Higher education by itself cannot, of course, overcome such cultural stereotypes. Government policy, popular culture, and news-media coverage of science all need to work toward that purpose. Yet colleges are strategically positioned to influence student career choices at the very moment that students make those choices and are most open to new possibilities. Current higher-education practices, however, may actually be counterproductive in attracting students to science and technology. Many college courses are designed to winnow people out, not to draw them in. Science prides itself on being a meritocracy that attracts the best and only the best, where "best" is often defined in terms of mathematical ability. It may be true that mathematical ability shows up early and can be readily measured, but higher math is a smaller component of success in science and technology than is generally assumed. In addition, colleges often make undergraduate courses too tough for students whose high-school experience leaves them poorly prepared for rigorous work in science and technology. There are also financial constraints, as it costs colleges more to educate science and technology students than those in other fields.

That screening-out process is the opposite of what the nation needs. A vast and growing literature on what can and should be done recommends such efforts as improving the quality of math and science teaching in the K-12 years, revising

the science curriculum to put more emphasis on general concepts and less on detailed factual information, easing the transition from high-school to college courses in science and technology, and setting standards for scientific knowledge at every academic level. In addition, higher education can make science and technology far more appealing to students. The history of science is a story of curiosity, challenge, discovery, entrepreneurship, recognition, fame, fortune, and collegiality. At their peak, the institutes and laboratories that coalesced around charismatic figures like Niels Bohr, Enrico Fermi, Ernest Lawrence, and Robert Oppenheimer lent drama, ferment, creativity and self-expression to the pursuit of science. Colleges must become far more proficient at framing the appeal of science and technology to their students if our nation is to remain a world leader.

**Trend 3: The need to understand other cultures and languages.** The half-century following the end of World War II lulled our nation into complacency about our ability to deal with other countries and cultures. Recent events, however, have driven home how important it is that we learn to see the world from the perspective of others, not just from a distinctively American vantage point. China and India are becoming economic powerhouses to whom we are financially indebted. In no small measure our difficulty in battling the insurgency in Iraq is because we don't speak the language. We make one cultural mistake after another. Even Western Europe has turned from reliable friend and supporter to mistrustful ally.

Most important, we find ourselves in the early stage of an ideological struggle with radical Islam. Even though they are a small minority of the 1.3 billion Muslims in the world, Islamic fundamentalists have gained popularity among Muslims by making us a scapegoat – and we do not understand Islamic culture well enough to prevent it. With each passing year it grows more obvious that colleges must prepare Americans to deal more competently with people from other parts of the globe. It's not that educated Americans must become cultural experts. That is

neither practical nor desirable. Instead, our whole culture must become less ethnocentric, less patronizing, less ignorant of others, less Manichean in judging other cultures, and more at home with the rest of the world. Higher education can do a lot to meet that important challenge. Ironically, at the moment when area studies are most badly needed, the internal pull within higher education toward specialization and separatism exercises the most influence. Some argue that globalization reduces the importance of regional and local differences and that the English language has gained unchallengeable ascendancy. But there is no evidence that globalization is having such effects. The world remains fractionalized, even polarized. Ethnic, racial, national, and religious divisions may be growing even more important, not less. If colleges are responsive, we will see many more area-study courses.

**Trend 4: Increasing challenges to higher education's commitment to social mobility.** Our nation's core values of equality and freedom pull us in opposite directions. The more equal we become, the less freedom people have to break out of the pack. The freer people are to pursue their own path, the less equality there is. Every viable political culture struggles to find a way to reconcile and balance those two core social values. In our culture we accept large inequalities as long as genuine equality of opportunity prevails. That is why access to higher education is a passionate concern of our political life – it is the principal mechanism for making America's unwritten social compact work. A number of recent developments, however, threaten to undermine that strategy. One is the startling increase in the cost of higher education and the inability of financial aid to keep pace – which damages low-income students' access to college. Another obstacle is the continuing failure of our K-12 system to prepare students from low-income and minority backgrounds for the rigors of higher education.

The obstacles that poverty and race pose have persisted for a long time. But in the emerging world economy they as-

sume a new urgency. To an extent that would have been incomprehensible to earlier generations of American workers, the current practice of outsourcing jobs extends our domestic labor market to China, India, Mexico, Taiwan, and South Korea. Freer trade, modern communication technology, and the entrepreneurial vitality of those nations make it ever more difficult for unskilled American workers to earn middle-class incomes.

Thus while our society offers fewer and fewer well-paid unskilled jobs, it also places obstacles in the path of those seeking the skills to succeed in higher-level careers. That strikes at the heart of core American values. We cannot drift mindlessly toward creating an oppressed, insecure, anxiety-ridden, wage-stagnant American work force. When practical solutions are proposed, all eyes turn toward colleges – both two-year and four-year. The key issues are affordability and developing new competencies, and they are closely linked.

Colleges are unlikely to find ways to reduce their costs substantially. So where will the money come from to pay the tuitions of students from disadvantaged backgrounds?

Most parents, especially in the lowest sectors of the income scale, can't afford to pay more for higher education. Living from paycheck to paycheck, they have insufficient means to make the needed investments. Nor can local communities give much help; the demands on them are already too burdensome. And state support per student is moving down, down, down and unlikely to reverse direction. The federal government may be the ultimate resource, but higher education does best when it can draw upon multiple sources of support.

Yet two other possibilities are promising: the students themselves and their employers. As more and more students find part-time and full-time work, they may be able to use their own earnings or call on their employers for financial support to help them develop the skills they need for their jobs. Employers are sympathetic to higher education, especially for

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their own employees. By 2015 new contractual arrangements may emerge that encourage employers to pay for employees to gain new competencies through higher education. Such arrangements might, for example, also require employees to agree to reimburse their employers for financial assistance if they do not stay at the job for a reasonable period of time. As such an integration of work and higher education unfolds, we are also likely to see better integration of high schools and colleges. Better integration will help deal with a wide range of problems such as remediation, poor student motivation, and the steeply rising costs of higher education. In all likelihood, individual state governments will take the lead in experiments designed to reinvent the relationship, with support from the federal government in the form of seed money and flexibility in applying regulations.

**Trend 5: Public support for other ways of knowing.** However frustrating for science-minded Americans the popularity of the intelligent-design concept may be, it signals a trend that colleges must heed. The issue is not really the scientific status of evolution – whether natural selection is a theory or proven fact. That form of framing reflects a widespread semantic misunderstanding between scientists and the public relating to the word “theory.” For average Americans, “theory” means “unproven.” When they hear scientists refer to evolution as a theory, they falsely assume that it means that scientists themselves acknowledge that little hard evidence exists for its validity.

The issue is far broader than semantics, evolution, or even scientific knowledge. It concerns the nature of truth – how we arrive at it, and how we recognize it. In higher education, the organization of knowledge and pursuit of truth has grown increasingly specialized and systematic. The advantages are self-evident in the explosion of knowledge and the spectacular success of the scientific enterprise. And yet doubt creeps in. The logic of the Enlightenment that informed the founding of our nation assumed that

as science gained ground, other ways of knowing and finding truth – particularly religious belief – would lose ground. But in our American culture, that has not happened. While higher education has grown more scientific in its quest for knowledge, the American people at large have grown more religious, more fretful about moral “truths,” and more polarized in their struggle to find political and existential truth.

The public believes that science does not have, and cannot have, all the answers, and that other ways of knowing are also legitimate and important. Science concerns itself with aspects of reality that can be measured and are knowable though its methods. Prudently, it refrains – or at least, should refrain – from judging the truth of religious or spiritual beliefs. It has little to say about what makes life meaningful. In other words, science gains its power from its self-imposed limitations. Scientific progress deals with subjects that lend themselves to quantification, experimentation, and verification. That leaves out vast domains of knowledge and truth. Colleges have long recognized that there are ways of knowing other than science; humanities departments institutionalize that conviction. In recent years, however, the success of specialized knowledge has come partly at the expense of the humanities, and nonscientific ways of knowing have lost status and credibility.

The philosopher **Hannah Arendt** has argued that some categories of truth will not yield to scientific inquiry but must be pursued through dialogue. In dialogue issues are thrashed out from a variety of points of view that need not be deeply grounded in factual knowledge. But such methods of pursuing knowledge have little standing or legitimacy in higher education. And yet, for many of the emotion-laden moral, political, and religious controversies that pervade our cultural lives, a disciplined form of dialogic discourse is better suited to truth seeking than are the specialized methods of gathering knowledge that now dominate higher education. At the heart of this fifth trend is the public’s growing suspicion that the nation has lost its way and must

now rediscover the path of truth. For all its power and cogency, there is little that science and conventional academic knowledge can do to light this path.

We are living through a particularly difficult chapter of the ancient town-gown struggle. In higher education, the liberal arts, philosophy, and the humanities – the nonscientific ways of truth seeking – have been put on the defensive. While still valued as high culture, they have lost ground as ways of knowing and finding truth. But in our popular culture, it is science that is suspect, and its “probabilities” are less respected than among the cognoscenti.

Americans hunger for religious ways of truth seeking, especially with regard to moral values. By seeming to oppose or even ridicule that yearning, higher education pits itself against mainstream America. Unless it takes a less cocksure and more open-minded approach to the issue of multiple ways of knowing, higher education could easily become more embattled, more isolated, and more politicized.

As the home base of specialized knowledge, higher education may have to do a great deal more in coming decades to recognize, respect, codify, and clarify the strengths and limitations of nonscientific ways of knowing vis-à-vis scientific knowledge. In light of the nation’s hunger for nonscientific ways of truth seeking, it would not be surprising to see by 2015 the humanities revitalized, with an infusion of new energy and self-confidence.

Pressured by powerful trends such as those that I’ve discussed, higher education has entered a new era of ferment and change. But it is an era that also offers enhanced importance and opportunity for colleges and universities.



*Daniel Yankelovich, associate member of the Emeriti Association, heads several public policy and survey research organizations. This article is condensed from the original version, which appeared in The Chronicle of Higher Education (52,14, November 15, 2005). Yankelovich discussed these trends with key UC administrators at a retreat in March.*

## The Origins of Gallery 8

By Ruth Newmark

“At the time it seemed like a good idea. They were world travelers and loved fine handicrafts; the International Center needed funds for its scholarship program. If they all volunteered four hours a week, a mere nothing, they could swing it. The Center provided a small space, each of them came up with a hundred dollars, **Gordon** hammered up some reasonably sturdy shelves, and Gallery 8 had its Grand Opening on May 6, 1974.” So began **Audrey Spiro**’s brief recounting of the founding of Gallery 8 in the Friends of the International Center’s Newsletter (March 1992) on the occasion of the International Center’s twentieth anniversary.

Indeed, Audrey’s account of the formation of Gallery 8 is accurate enough, but I knew that when the editor of *Chronicles* asked me to tell UCSD’s emeriti about the history of Gallery 8, he wanted a more detailed story. I also suspected that as the author of a column called “Anecdote,” he would like to see me work in an anecdote or two. Thus, I began to rethink those days of our youth.

When a small group of mostly faculty wives started talking about opening a showcase of arts and crafts to help raise

funds for the new International Center on campus, we quickly discovered that our aesthetic values were similar. It also became evident that we would be able to ferret out interesting contemporary artists, and that we had access to people with collections of authentic traditional crafts. We were less sure that we wanted to be in business at all. When we saw a notice for a weekend workshop given by UCSD Extension on how to start a small business, we decided to put our ideas to a test. We all chipped in to cover the cost of the session, and by self-selection one of us, **Nancy Van Doren**, enrolled.

Nancy reported back to us that – surprise, surprise – she had learned that starting a business took a great deal of commitment – of time, money, and energy – and that she had been persuaded that this was not for her. She suggested that we too might reconsider; however, the remaining eight of us disregarded her admonishment and blithely (not to mention naively) went ahead. And so: **Susan Chamberlain, Merryl Cicourel, Helen Raitt, Paula Rotenberg, Barbara Saltman, Audrey Spiro, Jehanne Teilhet** and I founded Gallery 8 as a non-profit fund-raising appendage of the International Center.

With our minimal budget of \$800, we fixed up a small room in the International Center to resemble a gallery devoted to showing fine contemporary and traditional crafts. For a negligible sum, a carpenter in the Visual Arts Depart-

ment built us a flexible display system. We managed to obtain free jewelry cases, made do with a cigar-box for cash register, and with the assistance of anyone we could cajole into helping us (as the tallest husbands in the group, **Martin Chamberlain** and **Paul Saltman** were talked into washing windows), we prepared to



Barbara Saltman, Paula Rotenberg, and Audrey Spiro at the Gallery

open our doors to the public on May 6, 1974. We launched a publicity campaign both on and off campus, mailed out announcements to friends, and distributed artsy posters designed by **Becky Cohen**, which in a forceful manner showed our location – all you had to do was follow the heavy dark black lines outlining the main campus arteries until you found a starkly contrasting red dot indicating the location of Gallery 8.

In spite of the parking-space nightmare, shoppers came to see and purchase an extraordinary variety of objects from all over the world. When not helping customers, we were busy looking for new merchandise to replenish the emptying shelves. For this, the university’s WATS line proved convenient, allowing us, for instance, to make free phone calls to artists living in the general UCLA area.

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### Emeriti Website

The UCSD Emeriti Association maintains a website:

<http://emeriti.ucsd.edu>

Clicking the NEWS, PROGRAMS & MEETINGS button will allow you to view past issues of this newsletter. The website also provides the constitution and by-laws, lists of members, and minutes of meetings.

Webmaster: Marjorie Caserio  
mcaseerio@ucsd.edu

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Of the eight, six of us worked our regular weekly shifts, but from the beginning we had known that Helen Raitt would not do so. Yet, it had been Helen who had prodded us into action by telling us of her experience of gathering together a group of leather artisans here in San Diego, and convincing us that we too could run a successful enterprise. Because of her work in Tonga, Helen was able to steer us to people from whom we could obtain objects from Oceania that included fine tapa cloths and exotic coconut scrapers, which much to our amazement turned out to be a huge hit. The only non-faculty-wife in our group, Jehanne Teilhet, Assistant Professor of Art History in the Visual Arts Department, also was not free to work in the Gallery on a regular basis. However, she had contacts with collectors of ethnic art, especially from West Africa; knew about display; and was an invaluable asset when we embarked on an ambitious project of mounting special exhibits.

Since the Gallery's permanent display space was minuscule, we took over the Center's lounge for this purpose. International Center policy allowed us to use the lounge only on weekends, so that special exhibits were on view for only two days. Over the next three years, we presented many exciting weekend exhibits, featuring, among others, works from Indonesia, the Philippines, East and West Africa. Although we may have shown an occasional piece that had been produced for the tourist market, in general we were able to show traditional works made by artisans for domestic usage and consumption.

The fact that we knew people who had been in the Peace Corps served us well. The exhibit of East African art primarily came about because Susan Chamberlain had lived in Kenya and Tanzania while Martin ran the area's Peace Corps program. Susan had started several cottage industries there, and had remained in touch with a friend who was willing to show his vast collection of East African art through us. Moreover, he promised to bring with him a beautiful young

woman from Somalia who would model the clothes. To our disappointment, this was just the time that **Iman** broke into the high fashion world – she soon was to become one of the most recognized black supermodels – so we reluctantly had to make do without her.

Sometimes our eyes fell on our own continent, and I recall a dramatic exhibit of Inuit sculpture. Another time, we assembled an enormous assortment of American quilts, but even though the exhibit drew a huge crowd, to our embarrassment we sold none of them. A few years later, such pieces became highly sought after and fetched lofty prices.

I don't mean to give the impression that Gallery 8's focus was solely on folk or ethnic art. Far from it: our first show highlighted the disparate work of three contemporary American glass artists. We also put together exhibits featuring such masters of 20th century ceramics as **Harrison Macintosh**, **Laura Andreson**, **Vivika** and **Otto Heino**, as well as innovative pieces by up and coming younger artists representative of the burgeoning studio art movement. We often mixed contemporary and traditional crafts, especially when it came to jewelry, our best seller. Already during our Indonesian exhibit, we hung traditional batiks made by unknown craftsmen next to framed contemporary pieces conceived by named artists. We cheerfully lumped together whatever met our aesthetic standards, and avoided philosophical debates about differences between arts and crafts.

Conscious that Gallery 8 was part of an educational institution, we augmented each exhibit by a lecture, workshop, dance or music performance; we also paired it with an appropriate dinner prepared by volunteers from the Friends of the International Center. Putting on a show that couldn't be mounted until Friday and had to be taken down before Sunday evening required a great deal of coordination, but we were fortunate to get help from several people who were as eager to see us succeed as we were. Three names in particular come to mind. **Debbie Zvaifler** and **Joan Jacobs**, who had served as interior designers for the

International Center, were always ready to lend a hand, as was **Flossie Cohen**, a talented ceramist and perhaps Gallery 8's best customer. To provide security, we hired a student to sleep at the Center on Friday and Saturday nights.

Our energy seemed to know no bounds. In addition to these large-scale exhibits, of which I have mentioned only a few, we staged one-day events. There was a bead sale, an artists' swap meet, a quilt workshop, and most ambitious of all, an African Heritage show complete with fashion models and live music.

Over the years, the Gallery attracted a loyal clientele, a few turning into serious collectors. **Norman Anderson** (an early member of our Department of Psychology), for one, built a major collection of contemporary wooden bowls. The willingness of eminent craftsmen – above all **Paul Soldner** in clay, **Arline Fisch** in jewelry, and **Bob Stocksdale** in wood – to consign their work to an untried gallery was an important factor in our success.

But in the long run there was no way to overcome the lack of parking space that so frustrated our customers. Moreover, as the university grew, the Center's staff grew and required ever more office space. These were the two primary reasons why Gallery 8 closed its doors in June 1977, but not before presenting the Friends of the International Center a final check of \$10,000.

As a postscript, I should add that after a brief hiatus, several of us got together again to open a commercial craft gallery, on upper Girard in downtown La Jolla. The gallery is now one of the older establishments in the village, and proud of its roots.



## When Penguins Pooh

### The 2005 Ig Nobel Prize Winners

The 2005 Ig Nobel Prizes were awarded October 6, at the 15th First Annual (sic) Ig Nobel Prize Ceremony, at Harvard's Sanders Theatre. You can watch archived video of the live webcast at [www.improb.com/ig/2005/webcast.html](http://www.improb.com/ig/2005/webcast.html).

**AGRICULTURAL HISTORY:** **James Watson** of Massey University, New Zealand, for his scholarly study, "The Significance of Mr. Richard Buckley's Exploding Trousers." REFERENCE: "The Significance of Mr. Richard Buckley's Exploding Trousers: Reflections on an Aspect of Technological Change in New Zealand Dairy-Farming between the World Wars," James Watson, *Agricultural History*, vol. 78, no. 3, Summer 2004, pp. 346-60.

**PHYSICS:** **John Mainstone** and the late **Thomas Parnell** of the University of Queensland, Australia, for patiently conducting an experiment that began in the year 1927 – in which a glob of congealed black tar has been slowly, slowly dripping through a funnel, at a rate of approximately one drop every nine years. REFERENCE: "The Pitch Drop Experiment," R. Edgeworth, B.J. Dalton and T. Parnell, *European Journal of Physics*, 1984, pp. 198-200.

**MEDICINE:** **Gregg A. Miller** of Oak Grove, Missouri, for inventing Neuticles – artificial replacement testicles for dogs, which are available in three sizes, and three degrees of firmness. REFERENCES: US Patent #5868140, and the book *Going Going NUTS*, by Gregg A. Miller (PublishAmerica, 2004), ISBN 1413753167.

**LITERATURE:** The Internet entrepreneurs of Nigeria, for creating and then using e-mail to distribute a bold series of short stories, thus introducing millions of readers to a cast of rich characters – General **Sani Abacha**, Mrs. **Mariam Sanni Abacha**, Barrister **Jon A Mbeki Esq.**, and others – each of whom requires just a small amount of expense money so as to obtain access to the great wealth to which they are entitled and which they would like to share with the kind person who assists them.

**PEACE:** **Claire Rind** and **Peter Simmons** of Newcastle University, in the U.K., for electrically monitoring the activity of a brain cell in a locust while that locust was watching selected highlights from the movie "Star Wars." REFERENCE: "Orthopteran DCMD Neuron: A Reevaluation of Responses to Moving Objects. I. Selective Responses to Approaching Objects," F.C. Rind and P.J. Simmons, *Journal of Neurophysiology*, vol. 68, no. 5, November 1992, pp. 1654-66.

**ECONOMICS:** **Gauri Nanda** of the Massachusetts Institute of Technology, for inventing an alarm clock that runs away and hides, repeatedly, thus ensuring that people DO get out of bed, and thus theoretically adding many productive hours to the workday.

**CHEMISTRY:** **Edward Cussler** of the University of Minnesota and **Brian Gettelfinger** of the University of Minnesota and the University of Wisconsin, for conducting a careful experiment to settle the longstanding scientific question: can people swim faster in syrup or in water? REFERENCE: "Will Humans Swim Faster or Slower in Syrup?" *American Institute of Chemical Engineers Journal*, Brian Gettelfinger and E. L. Cussler, vol. 50, no. 11, October 2004, pp. 2646-7.

**BIOLOGY:** **Benjamin Smith** of the University of Adelaide, Australia and the University of Toronto, Canada and the Firmenich perfume company, Geneva, Switzerland, and ChemComm Enterprises, Archamps, France; **Craig Williams** of James Cook University and the University of South Australia; **Michael Tyler** of the University of Adelaide; Brian Williams of the University of Adelaide; and **Yoji Hayasaka** of the Australian Wine Research Institute; for painstakingly smelling and cataloging the peculiar odors produced by 131 different species of frogs when the frogs were feeling stressed. REFERENCE: "A Survey of Frog Odorous Secretions, Their Possible Functions and Phylogenetic Significance," Benjamin P.C. Smith, Craig R. Williams, Michael J. Tyler, and Brian D. Williams, *Applied Herpetology*, vol. 2, no. 1-2, February 1, 2004, pp. 47-82. REFERENCE: "Chemical and Olfactory Characterization of Odorous Compounds and Their Precursors in the Parotoid Gland Secretion of the Green Tree Frog, *Litoria caerulea*," Benjamin P.C. Smith, Michael J. Tyler, Brian D. Williams, and Yoji Hayasaka, *Journal of Chemical Ecology*, vol. 29, no. 9, September 2003.

**NUTRITION:** Dr. Yoshiro Nakamats of Tokyo, Japan, for photographing and retrospectively analyzing every meal he has consumed during a period of 34 years (and counting).

**FLUID DYNAMICS:** **Victor Benno Meyer-Rochow** of International University Bremen, Germany and the University of Oulu, Finland; and **Jozsef Gal** of Loránd Eötvös University, Hungary, for using basic principles of physics to calculate the pressure that builds up inside a penguin, as detailed in their report "Pressures Produced When Penguins Pooh – Calculations on Avian Defaecation." PUBLISHED IN: *Polar Biology*, vol. 27, 2003, pp. 56-8.



UCSD Emeriti Association  
214 University Center, UCSD  
9500 Gilman Drive  
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Chronicles  
April 2006

**Mark Your Calendar!**

Wednesday, May 24

Emeriti Association Annual Business Luncheon

Luncheon 11:30 a.m.  
Business Meeting 12:15 p.m.



Featuring a talk by **Wayne Kennedy**,  
UC Senior Vice President Emeritus

**“The UC System – Past, Present, and Future (?)”**

Send enclosed reservation form with check for \$15 payable  
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Chronicles

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— Executive Council —

**Helen Anderson, Mel Green, Robert Hamburger,**  
**Donald Helinski, Sally Ledden, Helen Ranney**  
**Faustina Solis, Avrum Stroll**

*Please report all address changes to our administrative officer in the  
Academic Senate: Suzanne Atchley: satchley@ucsd.edu  
(858) 534-3641, mail code 0002*