

BERKELEY EMERITI TIMES

Volume 23, Number 2, November 2013

EMERITI LUNCH DECEMBER 7TH – WITH OUR EMERITUS OF THE YEAR



John Prausnitz

The Challenge of Postmodernism to Undergraduate Education

We are honored that the speaker at our December 7th Emeriti Lunch will be our Emeritus of the Year, John Prausnitz of the Chemical Engineering Department. Prausnitz came to Berkeley in 1955 after completing his doctorate at Princeton, and Emeritus of the Year is only the latest of a string of honors bestowed upon him, including membership in the National Academy of Sciences, the National Academy of Engineering, and the American Academy of Arts and Sciences – plus honorary doctorates from several European and American universities. In 2003 he was awarded the National Medal of Science, the nation's highest scientific honor.

Prausnitz has directed much of his basic research over the years to the application of thermodynamic principles, experimental methods, and computer programs to the separation of raw, natural materials into their components. An example is the separation of raw petroleum into products like gasoline, kerosene,

and heating oil, as well as the pure substances used to produce petrochemicals and polymers.

Here at Berkeley Prausnitz has mentored over 80 Ph.D. students through their graduate programs, along with watching over the work and careers of other graduate students. Through all this time he has not lost sight of the importance of undergraduate education, and his current writing has been dedicated to the special interest in this field he will be talking to us about in December.

Often referred to as a true Renaissance man, he is regarded as a paragon among the rare people who can bridge disciplines and professions, chemistry and chemical engineering. But this kind of bridging extends beyond the sciences. He has wide interests in history, art, theology, and literature—interests that go beyond dilettantism and have led him to deep study.

While still holding his position as a Faculty Senior Scientist, Lawrence Berkeley National Laboratory, he is also working at the Center for Studies in Higher Education on the Berkeley campus. There he is immersed in work on the integration of the humanities and social sciences into the training of engineers and scientists. Engineers serve society, and should understand the society they aim to serve. Can part of this aim be achieved in the course of their training here at Cal? And in a way that involves more than a haphazard addition of a few required courses to the curriculum? We await with interest the opportunity at our next Emeriti Lunch to hear more about the ways that Prausnitz envisions meeting the challenge of postmodernism in undergraduate education.

(Written by Phyllis Brooks Schafer)

SEPTEMBER LUNCH WITH JOHN SWARTZBERG

With the exception of the 1919 influenza epidemic, the twentieth century saw a continual decline in the death rate in the US until 1985, when the incidence of HIV/AIDS led to a small increase. During that century, the medical world developed an increasing number of

methods of monitoring patients. On September 21, John Swartzberg spoke to the Emeriti Association about forthcoming developments in medicine that will lead to further shifts in the practice of medicine.

One new development is the transition from population-specific to patient-specific medicine. Population specific medicine has relied on the power of epidemiology, which reached its heyday in the 1970s when it proved that smoking led to cancer and heart attacks. Hypertension and high cholesterol are still treated based on the aggregate, with the hope that by treating all, a large number of patients will benefit. In time, however, it will be possible to determine, for example, who will benefit from taking statins and who will not. Medicine is beginning to identify biological markers on cells that inform treatment for certain cancers. Soon, doctors hope to be able to interfere with genes to address the root causes of cancer. Although cancer has historically been classified by its location in the body, recent discoveries have shown genetic similarities between colon and certain gynecological cancers, and between breast and certain skin cancers. In time, treatment will focus on the genetic abnormalities behind the cancer rather than its location. Within the next 5-10 years, medicine will be able to identify markers for Alzheimer's before the onset of symptoms, but treatments are still needed to make this information meaningful to the individual.

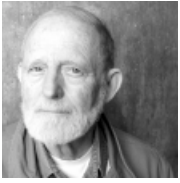
Another realm of medical advancement draws on our relationship to our microbiome. There are 10^{13} cells in the human body, and 10^{14} microorganisms living in and on us. There are 150 times as many genes in the bacteria in our gut than there are in the human genome. We are continuously interacting with our microbiome, and doctors are on the verge of learning how to shape this interaction to improve our health. The advent of vaccines along with cleaner water and food has changed our microbiome, sometimes in unanticipated adverse ways. The discovery that the bacterium *H. pylori* causes ulcers has led to a reduction in the incidence of ulcers, but also to an increase in esophageal cancer. The use of antibiotics has led to an increase in the incidence of antibiotic-induced *C. difficile* colitis; the organism destroys the flora in the colon and has become a serious problem in hospitals. Patients tend to suffer multiple relapses. Recent treatments have included the use of fecal transplants to reconstitute the cells lining our colon. New evidence also suggests that the incidence of obesity may be related to

a patient's microflora. Ongoing inflammation in the gut often precedes the onset of colon cancer, which poses the question of whether we can manipulate the microflora in order to reduce the incidence of this cancer.

Finally, Swartzberg anticipates the increased use of technology to reduce the amount of time patients spend in hospitals. Throughout history, hospitals have been dangerous sources of infection, and that remains the case today. About 5% of patients who enter a hospital contract an infection, and about 90,000 patients die from hospital-acquired infections in the US each year. The upsurge of drug-resistant organisms has heightened this problem. Ninety percent of seniors want to stay in their homes, and Swartzberg envisions a future in which this is made more feasible through the use of video conferencing and other technology that will allow doctors to monitor their patients' progress remotely. Pulse, temperature, respiration, and blood pressure could all be monitored through a continuous feed from the patient's home to the clinic; blood draws, electrocardiograms, and ultrasounds could also be performed at home. Medicines can be delivered by patches applied to the skin, and the patient can change the patch as instructed. Such developments would allow patients to leave the hospital sooner after any necessary visits.

In closing, Swartzberg reflected on the health disparities between the developed and developing world. In the former, 77% of deaths are caused by non-communicable diseases, and only 14% by communicable diseases; in the developing world, communicable diseases account for 55% of deaths, and only 37% are due to non-communicable diseases. Over time, he sees these two worlds merging into one, though the current increase in urbanization in the developing world has led to the growth of huge slums, where infectious diseases are rife. Still, from 1900 to 2010 in the U.S., the number of deaths per 100,000 people was cut in half, leaving Swartzberg with hope for the future of medicine and worldwide public health outcomes. (Written by Sarah Herr)

SHORT TAKES: Congratulations to Emerita Janet Yellen on her appointment as head of the Federal Reserve. Washington needs the kind of service that Janet has been able to give to Berkeley and to the Federal Reserve Bank of San Francisco.



INTERVIEW WITH JOE

McBRIDE – John Swartzberg and S. Davis

When Joe McBride was eight years old and living in Missouri, his parents took him on a trip to the Rocky Mountains. It was there that he fell in love with trees and ever since they have been a major part of his life. He studied forestry at the University of Montana and received both his M.S. (Forestry) and Ph.D. (Botany) at Berkeley. He holds a joint appointment in the Department of Landscape Architecture and Environmental Planning (College of Environmental Design) and in the College of Natural Resources. He has been on our faculty for 43 years.

Q - This year the Rim Fire around Yosemite burned over 300 square miles. Why have forest fires become so large and intense?

A - Management of our forests focused on production and economics during the first half of the 20th century. Fires were to be avoided at all costs. The goal was to extinguish a fire by 10:00 a.m. the next day. As a result, forests became denser as did the undergrowth, resulting in an abundance of fuel on the forest floor. More recently, the National Parks and Forest Services have moved away from this approach to strategies like controlled burning.

Q - Is there no way other than controlled burning to reduce this risk?

A - Controlled burning itself has its risks. In 2000 a large control fire near Los Alamos got out of control and destroyed 400 homes. To help reduce risk we now use a “mastication” machine that grinds fallen trunks, limbs, branches, and undergrowth into mulch that then decomposes quickly, reducing fuel on the ground.

Q - What are the problems associated with forest fires, other than the obvious immediate threats to people and property?

A - Forest fires destroy wildlife habitat, kill wild animals, and degrade the aesthetics of forest-covered landscapes. The capacity of forests to contribute to

reduction of air pollution and the production of clean water is also diminished by fire. Forest cover reduces flood risks through the interception of rainfall by trees. For example, the oak woodlands in the Berkeley hills intercept about 30 % of the annual precipitation and this reduces runoff during storms.

Q - We have suffered through some major fires here in Berkeley and Oakland. Are there policies in place to limit further encroachment of habitation into forest areas?

A - In 1922 the north Berkeley hills fire burned over 600 homes. In 1991 the south Berkeley and Oakland fire destroyed over 3000 homes. However, it is difficult to change habitation patterns once they take hold. Cities and county governments have in many cases failed to control new development in high fire hazard areas. Public policy as a mechanism is not working very well, but the marketplace listens and responds. Now some insurance companies, for example, will not cover houses in fire-prone areas, much like their restrictions for those in flood plains.

Q - What are some of the benefits of trees in urban areas and are there movements for more urban trees?

A - Trees in urban areas reduce temperatures, reduce storm water runoff, remove pollutants from the air, provide wildlife habitat, and increase property values, not to mention the aesthetic pleasure we derive from seeing and experiencing trees in our cities. Urban tree planting programs abound throughout the United States. There is an urban forest program in California that provides grants to cities for tree planting. Locally some communities are seeking to reduce environmental problems by incorporating more trees into the urban landscape. For example, a current program, called “Oakland Biofilter,” is under way to plant trees to filter particulate matter and improve air quality in west Oakland where trucks waiting to load or unload leave their diesel engines running, sometime for hours.

Q - You have recently spent time in the Ukraine near Chernobyl. What were you trying to learn?

A - One thing was the impact of the lack of landscape maintenance on an urban environment. In the case of Pripjat, the residential town for workers at the Chernobyl nuclear power station, landscape maintenance stopped after the explosion in 1986. The growth of trees has now obscured the presence of

buildings; the abandoned city is eerie and ghost-like. Without maintenance, trees have taken over lawn areas and are growing up through seams and cracks in streets, sidewalks, and parking lots. This has implications for our urban areas – as the cost of maintenance rises, some areas in our cities are being less well tended. The gender of the trees we plant turns out to matter in this cost control. Many tree species have both male and female individuals. In Pripjat streets were planted with female Lombardy poplar trees. They have copiously produced seeds that are germinating in former lawn areas and pavement cracks all over the city. Planting sterile clones or only male trees would clearly reduce the cost of maintaining urban landscapes in the future.

Q - Has this experience in the Ukraine changed your attitude about nuclear energy?

A - Yes. The fall out of radioactive ash onto the city of Pripjat caused an immediate hazard for the people. They were evacuated in the two days and people took little with them. Radioactive ash on the ground, on streets, and buildings is a long-term hazard. The city was permanently abandoned. Breaking windows in most buildings, vandals took most of the abandoned possessions and often destroyed household items they did not take. I now question the safety of nuclear facilities, particularly near urban areas. I realize that other types of energy production, such as coal, have negative environmental impacts, but this experience was poignant.

SHORT TAKES: Randy W. Schekman, professor of molecular and cell biology and speaker at our March lunch, has won the 2013 Nobel Prize in Physiology or Medicine for his role in revealing the machinery that regulates the transport and secretion of proteins in our cells.

PRESIDENT'S LETTER

Dear Colleagues,

As late fall moves in, we all look forward to a new year that we hope has much collaboration amongst ourselves during our varied retirement activities.

OPEN ENROLLMENT: Good health insurance has been on the minds of many of us for quite awhile, not the least of reasons being Open Enrollment and the changes

this year. Many of us are switching plans because we must; others are switching plans because we have different preferences now than before; others have no need to switch. Our Emeriti colleagues living out-of-state have dramatic changes to their available UC health insurance options. All of these concerns are under employer-provided insurance. Those who took Lump Sums on retirement are also deciding upon their options in and out of California under the Affordable Care Act. Your Emeriti Association is paying attention to the machinations involved in all the insurance changes, and we want to hear from you about your own experiences. Your input provides us more "muscle" when we raise concerns and more "impact" when we speak with administrators.

EMERITUS OF THE YEAR: On a brighter note, we hope many of you will join us December 7th at our lunch honoring our Emeritus of the Year, Professor John Prausnitz of Chemical Engineering. He will be speaking to us at the Faculty Club that Saturday, December 7th, on "The Challenge of Postmodernism to Undergraduate Education," and your reservation can be made with the form appended to this newsletter. Professor Prausnitz exemplifies much of the energy of retirees who contribute to Campus and Community life for many years after they officially "step down" to a new set of "steps up" to the next chapters in their careers.

A NEW CHANCELLOR FOR CAL: Our new Chancellor, Nicholas Dirks, was officially inaugurated on November 8th, after having been on the job since June. He hosted a reception for new retirees this fall. He noted how impressed and honored he was by the research, mentoring, and financial contributions of emeriti to the campus. He specifically remarked on the recent biobib report of \$250,000 million in research dollars that just a quarter of the emeriti had brought to the campus over the last three years. With Associate Vice-Provost Angelica Stacy of the Office for the Faculty, Chancellor Dirks referred to a beginning study of how UC Berkeley might become an even more retirement-friendly campus.

As your Emeriti Association President, I also attended a dinner with the Chancellor, along with a dozen other faculty members, where issues of Campus diversity were raised, including the diversity provided by levels of experience among the Emeriti. The Chancellor is a terrific listener, and he had insightful questions for all of us. We encourage you to be in touch with his office, or

to be in touch with us about issues you would like to raise with his office. Between your Emeriti Association and the Academic Senate Committee on University-Emeriti Relations, your concerns will be heard.

DEPARTMENT EMERITI ADVISORS: We have also started collaborating with the office of Associate Vice-Provost Angelica Stacy to create a group of department advisors on Emeriti Affairs. Department Chairs and the various Deans have each been asked to nominate an Emerita/us from their disciplines to report the current activities of Emeriti, to inform Department Chairs and the Deans about issues important to Emeriti, and to talk with each other about the various departmental policies on emeritus status. It is hoped that this advisory group will raise the visibility of Emeriti and help the Campus make retirement an even more positive transition for those whose careers have spanned many decades – not only in their disciplines but in the Campus culture. Remember that retirement is not the end of our careers but simply the next phase. That is how it is viewed by the Emeriti Association.

TRANSFORMING RETIREMENT PROJECT: We are also working with the UC Berkeley Retirement Center, its Policy Board and the Office for the Faculty on a project called Transforming Retirement. The underpinning of this project is research – research into how people plan and prepare for retirement, research into what resources are available during the transition into retirement and following retirement, research into the impact on one’s life following retirement from an academic career and how UC Berkeley could be a more retirement friendly campus. The goal of this project is to inform not only our Campus but also the Office of the President and institutions in other states about ways to make the retirement of faculty and staff a more positive transition that continues to make use of the expertise of those who have given so much of themselves to Cal. That engagement may be on or off Campus; the passing along of so much expertise is of high value to society. Even as this research goes on, our mentoring programs continue as do our meetings with our colleagues from other Campuses. We hope all good things for you as you continue the march to the end of 2013.

Caroline M. Kane, President

SHORT TAKES: On December 2nd, George Leitmann, currently Professor in the Graduate School and Professor Emeritus of Engineering Science, is being awarded the Legion of Honor, France’s highest tribute recognizing military and civil service on behalf of the French nation. The presentation by the Consul General of France will be held here on the Berkeley campus.

RETIREMENT CENTER UPDATE

The fall issue of the Center’s newsletter provides a harvest of educational, fun, and retirement management programs. It can be found at <http://thecenter.berkeley.edu/centerpiece.shtml>. Here is a quick summary of some upcoming activities.

Passion and Purpose: Transforming Retirement II – The last excellent full day retiree conference was held in May 2012, with Robert Reich as the keynoter. The next retiree conference is set for next May 15. Jennifer Granholm, UC Berkeley Distinguished Practitioner of Law and Public Policy and Michigan’s governor from 2003 to 2011, will be the keynoter. Be there for a variety of workshop sessions on topics of interest to retirees.

Reno Snow Train Trip – Join the UC Retirees' Association (UCRAB), February 11 to 13, for a trip aboard the Reno Snow Train. Sit back, relax and watch the spectacular wintertime scenery. The trip includes the following: coach transportation with baggage handling from train to hotel room; two nights at the Eldorado Hotel Casino, including one buffet breakfast per person; lunch on the train to and from Reno; onboard entertainment, and “Winner’s Book” of coupons including discounts on meals, gaming, and shows. Cost: \$283.50/person quadruple occupancy; \$286.50/person triple occupancy; \$292.50/person double occupancy; \$343.50/person single occupancy

Registration packet, including payment, must be received at the Retirement Center by 4pm on Monday, December 16; no exceptions. Contact the Retirement Center at 510-642-5461 or ucbrc@berkeley.edu to request a registration packet.

Email Addresses – Give the Center your email address to be sure you are included in email alerts about developments, like open enrollment, that impact the lives of retirees. Call the Center at 510-642-5461 or email ucbrc@berkeley.edu.

Retiree ID Card – Your retiree ID card gives you access to many campus discounts, use of the campus libraries, and other services. The card is free. If you do not have one, call or email the Center, or drop by the office between 1 and 4pm any work day.

You are always welcome in our offices. We are conveniently located at 1925 Walnut St. in Berkeley.

As you read this, the holiday season is approaching. The Center hopes your preparation for the season is as enjoyable as possible. It can be a stressful time of year but also a time of many joys and sweet remembrances.



Patrick C. Cullinane, Director
UCB Retirement Center

SHORT TAKES: Emeriti Lunch Table, 2nd and 4th Thursdays monthly at noon in the northwest corner of The Great Room in The Faculty Club. All are welcome to join in our informal discussions!

UC BERKELEY EMERITI ASSOCIATION 2013-2014

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EMERITI TIMES: Published before each meeting of the UC Berkeley Emeriti Association to provide communication with members about meeting announcements and reviews, Board actions, pertinent campus news and policies, and to reach out to members unable to attend the meetings.

UC Berkeley Emeriti Association Luncheon

Saturday, December 7, 2013

Social Hour at 11:00 a.m. – Luncheon at noon – Speaker at 1:00 p.m.

The Faculty Club

John Prausnitz

Professor of Chemical Engineering

*The Challenge of
Postmodernism in
Undergraduate
Education*

To guarantee your luncheon choice, your reservation must be received three days prior to the event. All entrée options are \$18. Payment can be made by faxing this form to 510/540--6204 [indicate Faculty Club Account # _____ to charge], or by enclosing a check made payable to The Faculty Club and mailed with this form to the UCB Emeriti Association, The Faculty Club #6050, Berkeley, CA 94720--6050. For more information, call the Faculty Club at 510/540--5678 x2--224.

<i>Please fill in attendee(s):</i>	<i>Please indicate a preferred entree for each registrant:</i>
Member Name:	<input type="checkbox"/> Luncheon Salad <input type="checkbox"/> Regular Entrée <input type="checkbox"/> Pasta
Spouse/Partner/Guest Name:	<input type="checkbox"/> Luncheon Salad <input type="checkbox"/> Regular Entrée <input type="checkbox"/> Pasta
Guest Name:	<input type="checkbox"/> Luncheon Salad <input type="checkbox"/> Regular Entrée <input type="checkbox"/> Pasta