Chronicles

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To make up for the relative neglect of our Medical School by **Chronicles**, *as noted below by Emerita* ***Helen Ranney***, *this month we are featuring a long article by* ***John Ross***. *The article fits into both of the historical series that have been running in* **Chronicles** *for the past three years: it is both a personal report of the beginnings of an important part of the UCSD Medical School and a review of the developments in Dr. Ross's own field. And, it continues our series of articles devoted to medical subjects of particular relevance to us emeriti. I am therefore especially grateful to Helen Ranney for inducing Dr. Ross to offer his article and for writing the following detailed introduction to its author. —ed.*

Dr. John Ross, Jr., a world leader in cardiovascular research, was the first head of the Cardiology Division of the UCSD Department of Medicine, a position that he held from 1968 to 1991. Between the late fifties and 1968, Dr. Ross and Dr. Eugene Braunwald had developed at the National Heart Institute a cardiac research program remarkable for its very high quality and for its first rate researchers. In 1968 a significant part of that renowned NIH program moved with Drs. Ross and Braunwald to create a center of excellence in cardiology at the new medical school in San Diego. In his key successive roles in Cardiology as Division Head, as Co-Director of Scientific Affairs, and as Research Professor, Dr. Ross developed outstanding research programs in myocardial infarction, coronary artery circulation and disease, valvular heart disease, and cardiac hypertrophy. Recently he has turned his attention to molecular and genetic mechanisms of heart disease.

As evidence of Dr. Ross' reputation in research in cardiology – his CV/bibliography includes 542 publications. He has held 29 Visiting Professorships and 69 Lectureships in the U.S., Japan, and Europe. In addition to an endowed chair at UCSD, Dr. Ross has received numerous awards and prizes.

Most of the written histories of UCSD give scant attention to the development of academic programs at the medical school. This article by Dr. Ross is a personal history of research in cardiology at UCSD by its most distinguished leader. *—Dr. Helen Ranney*

Research in Cardiology at UCSD During the Last Quarter Century

—by Dr. John Ross, Jr.

Arriving at UCSD in May 1968, a few months before the first class of medical students, I found there was much to be done, both at the recently converted University Hospital in Hillcrest, as well as on the campus where the cardiovascular section of a first year course in organ physiology had to be organized by September. The first chair of the Department of Medicine, **Eugene Braunwald**, had recruited me to head the cardiology division, along with other investigators from the Cardiology Branch of the NIH at the then National Heart Institute in Bethesda. The group included **Jim Covell**, **Bill Friedman** (in pediatric cardiology), **Peter Pool**, and **Burton Sobel**, together with recruits from other disciplines at the NIH, **Dan Steinberg** and **Jay Seegmuller**. From the very beginning, we sought to create a significant cardiovascular research and training mission, both at the Hospital and on campus. My experiences in the trajectory of our cardiovascular research program at UCSD over the years will be the primary focus of this brief contribution.

Renovations in the University Hospital delayed our arrival in La Jolla for one year. (Incidentally, in 1967 after deciding to join UCSD, I looked at a desirable house on three acres in Rancho Santa Fé for $57,000, but decided it was too far way from the campus and hospital.) During that one year delay, we applied for and were awarded a sizeable grant from the NIH to become one of several Myocardial Infarction Research Units (MIRU's) placed around the country. A myocardial infarction (death of a region of heart muscle) is the most common killer of older Americans,

caused by thrombosis (blood clot) at the site of an atherosclerotic lesion in a coronary artery. This was a new research direction for the NIH (and for us). My research while at the NIH had involved experiments on the mechanics of heart function in the normal and failing heart, and the development of a new method to measure events in the left side of the heart in patients. To achieve this I found — working initially in animals and then in cadavers — that inserting a long needle with a curved tip through a tube (catheter) which had been passed with x-ray guidance through a leg vein into the receiving chamber (atrium) of the right side of the heart could be used to puncture the partition between the right and left receiving chambers of the heart for a procedure I called transseptal left heart catheterization. This approach then proved successful in patients and was widely used to characterize a variety of cardiac disorders, such as valvular heart disorders, and I have been gratified to see the method currently applied in several other applications, such as the non-surgical technique of opening a narrowed mitral valve by using a balloon.

The decision by the NIH to support research on acute myocardial infarction can be credited to the late **Robert Grant** of the NIH; in the late 1960's he surveyed possible research opportunities and noted that very little research was being done in this area. The MIRU that I headed beginning in 1968 encompassed clinical research on myocardial infarction, and was based in a new 2-bed unit (at the University Hospital) equipped with elaborate monitoring devices, overhead x-ray units, and a large adjacent computer facility. The MIRU program also supported basic laboratory research. Among the latter studies in the UCSD MIRU were those initiated by Gene Braunwald on the pharmacological reduction of myocardial infarct size. During that period, I became entranced with the possibility of salvaging ischemic myocardium by coronary artery reperfusion (reopening a blocked artery), and in 1972 my laboratory was able to demonstrate, in animals, that reduction of tissue damage in the main pumping chamber of the heart was possible by reperfusion after 3 hours of vessel occlusion, a period far longer than the 20 minutes of occlusion then considered to cause permanent damage. Subsequently, my laboratory also showed delayed partial recovery of heart function after reperfusion. I wrote an editorial at that time, expressing enthusiasm for potential clinical application of reperfusion, prematurely it appears. Not until 12 years later, in a groundbreaking large scale clinical trial in Italy using thrombolysis (infusing an enzyme, streptokinase, to dissolve the coronary thrombosis) was survival within 6 hours of the onset of symptoms demonstrated. In my view, it was the MIRU's with their laboratory and clinical research that stimulated the tremendous efflorescence of investigation on coronary heart disease, which continues to flourish to this day.

The year 1972 was eventful in several other ways.Gene Braunwald left UCSD to become Chair of Medicine at Harvard and the Peter Bent Brigham Hospital, **Helen Ranney** came to UCSD as the first woman to chair a major Department of Medicine in the United States, and I married the love of my life, **Lola Romanucci-Ross** (not the first marriage for either of us, but the first real marriage for both of us). In those days, it was a difficult road for women on the UCSD campus; I watched that situation gradually change over the years, and eventually Lola was able to publish 6 books on her research in cultural and medical anthropology (and to join the "step 6 professor's club").

The MIRU grant was followed by a series of 5-year Specialized Centers of Research (SCOR) grants from the National Heart, Lung, and Blood Institute to UCSD (which I directed).The concern was with ischemic heart disease (insufficient blood supply to the heart again caused by atherosclerosis of the coronary arteries), and we developed a large database of over 5,000 patients with acute myocardial infarction, documenting its natural history and complications in various subgroups (e.g., women, the elderly), as well as its pathophysiology and approaches to treatment. My laboratory research in those years was on regional cardiac muscle function in experimental myocardial infarction and ischemia during stress, the latter often characterized in patients by chest pain, or angina pectoris, during exercise. We defined the relations between myocardial perfusion (blood flow distribution) and function, both at rest and with exercise, and developed a pharmacologic stress to induce ischemia, a principle now widely used in diagnosing coronary artery disease. My laboratory also helped define the basis for what is now called the "acute coronary syndrome" (typically caused in patients by an unstable atherosclerotic plaque, with thrombosis causing partial rather than complete coronary occlusion). We showed in animals that 5 hours of partial coronary-artery narrowing to reduce blood flow to a region of the heart caused paralysis of the muscle in that region; when blood flow was then restored contraction remained impaired; but muscle function subsequently recovered completely within one week, without significant damage to the tissue. These phenomena are now frequently observed in patients with the acute coronary syndrome, in which opening of the coronary lesion with a balloon tipped catheter (angioplasty), often followed by placement of a stent to maintain potency of the artery, can result in complete recovery of the heart. The phases of research

through which we passed, experienced as well by other institutions, initially were concerned with evaluation of cardiac pressures within the heart and cardiac output (hemodynamics) in non-ischemic heart disease. This was followed by a period in which myocardial infarction and ischemia were the dominant themes,which in turn were followed by intensive research on heart failure.

Then came the molecular/genetic revolution, the origin of which is usually credited to **Watson** and **Crick**'s publication of a molecular model for the structure of deoxyribonucleic acid (DNA). However the critical preceding work of **Oswald Avery**, who reported that DNA (not a protein) was the "transforming factor" that determined bacterial inheritance, generally goes uncited. As an editor (*Circulation*, 1988 to 1993), I tried not to limit bibliographies to recent references only, but scientific reporting has become increasingly ahistorical, enhanced by the policy of many journals requiring short discussions and abbreviated bibliographies. Is not something lost when the evolution of ideas and the process of scientific discovery are not presented together with recent research advances?

Cardiovascular research and cardiology came late to the molecular/genetic revolution, which was well established in a number of laboratories and clinical disciplines by the early 1980's.There were then very few, if any, organized research and training programs in cardiovascular molecular biology. My interest was aroused when a presentation was made to the National Heart, Lung, and Blood Institute (NHLBI) Advisory Council in the mid-1980's on the potential of molecular biology for cardiovascular research. Intrigued, I began a serious search for a scientist who could lead such a program and recruited **Kenneth Chien** to the Division of Cardiology. Ken arrived in La Jolla in 1988. In the ensuing years, my laboratory became involved in many collaborations with Chien's steadily expanding program, initially in physiological phenotyping, as in characterizing perhaps the first genetically engineered mouse model of dilated cardiomyopathy (a disorder characterized by heart failure due to disease of cardiac muscle), and more recently in developing molecular therapy for heart failure. My interest in gene therapy began with the realization that genetic forms of dilated cardiomyopathy in humans account for 25% to 30% of idiopathic cases. Subsequently, while we were working with a hereditary cardiomyopathy of the hamster, a mutation in the delta-sarcoglycan gene was reported to be responsible for this disorder (sarcoglycans are part of the dystrophin complex which connects the supporting tissue outside the muscle cell to the cell's interior). Restoration of normal sarcoglycan protein seemed an inviting target. As a "senior scientist," I was old enough to recall the use of total body hypothermia to markedly slow and protect the heart (along with other organs) during open-heart operations in adults. (I had gone from the NIH to Denver in the late 1950's to watch the cardiac surgeon **Henry Swan** successfully repair an atrial septal defect under hypothermia.) It occurred to me that this approach might allow us to control some of the variables that influence transvascular gene transfer by viral vectors. Beginning in 1999, studies in my laboratory found that immersion hypothermia allowed safe occlusion of both great vessels (the aorta and pulmonary artery), followed by injection of agents to stop the heart briefly and to increase vascular permeability into the occluded aorta to reach the coronary arteries just above the heart; then, adenoviral vectors were injected to carry either a marker gene or the delta-sarcoglycan gene into the heart muscle cells, and the occluders were released. The marker gene was expressed in a high percentage (70% to 75%) of cells in the left ventricle, and with the other viral vector efficient transduction of delta-sarcoglycan protein persisted for 3 weeks, with associated improvement of cardiac function and reduction of tissue damage (longer term studies are now underway). Later, working with **Masa Hoshijima** and Ken Chien in the cardiomyopathic hamster, we also successfully delivered another therapeutic gene (a mutant phosopholamban gene) which stimulates heart contraction using an adenoassociated virus, to achieve long-term expression resulting in improved cardiac function at 7 months (when the experiment was terminated). The opportunity to continue with laboratory research and to contribute to new directions has been enthralling for me, and I encourage other senior scientists to stay the course.

During nearly 50 years in research, I have witnessed the evolution of cardiovascular investigation from a narrow focus on physiology and rheology using circumscribed internal logic to an entirely new research dynamic. Globalization is generally thought of in political, economic, and cultural terms, but we have now also entered a period of globalization of the scientific imagination, in which research links are occurring among many disciplines, fueling constant innovation. Biological and medical research in all fields has become multilateral, often multinational, and includes exchanges not only of ideas but also of new technologies, DNA and proteins, genes, and a variety of databases that are greatly enhanced by the Internet. Within these 50 years, we find an astonishing expansion of basic and translational research, which should lead to solutions for many currently intractable disease mechanisms, as well as to highly specific molecular therapies.

Some of the statements I have made are from: J. Ross, Jr. "From Pump to Molecules," *Circulation Research* 92:480, 2003.

Passions Outside Academia

*The title of this new series was suggested by **George Feher** who begins the series appropriately with his own article. Judging from the enthusiastic response I have received so far to feelers to other Emeriti, the series will resonate with others willing to share the passions that complement their academic interests. —ed.*

Playing Poker*

—by George Feher

In fall 2002, just as I was getting ready to take off for Las Vegas to participate in a poker tournament, I received e-mail from **Laila Mosina**, the new editor of *EPR Newsletter*, asking me to write about poker for her new column "Another Passion." On the plane I mulled over the question of whether to accept such an assignment. I was reluctant because poker playing represents a rather private part of my life and, in addition, it is not a universally condoned activity. I postponed a decision. In one of Laila's e-mails she argued that my poker playing will reveal that I am "human" and not, I suppose, a research machine. Was this a poker ploy to make me write the article? Actually, there are similarities between research and poker. In research, one endeavors to wrest the secrets of Nature; in poker, the secrets of your fellow players. There are, of course, basic differences: deception and bluffing, which are essential ingredients in poker, play no part in research. Further entreaties from Laila made me finally accept the task.

Poker started for me in the early 1950's when I was a graduate student in physics at the University of California in Berkeley. During our long experimental runs at night, as we were waiting for our set-ups to cool down to cryogenic temperatures, my fellow graduate students **Clarence Kooi** and **Ray Hoskins** introduced me to the game of poker. I took to it mmediately and became quite adept at it, so much so, that after a while they refused to play for money with me. When I joined Bell Labs in 1954, I was delighted to find out that there was a monthly poker game going on, which was organized by **Bernd Matthias** of superconductivity fame. I played with the group until I left in 1960 to join the fledgling new campus of the University of California in La Jolla. Here, again with Bernd Matthias, we quickly established a group of poker players that meets to this day twice a month. In addition, I participate two or three times a year in poker tournaments in Las Vegas and Los Angeles, and we have also organized many poker games at scientific meetings. So it is fair to say that

Placing third in America's Cup National Poker Championship, Las Vegas, 1992.

poker has been running on a parallel track (albeit, side track, to be sure) with my ~50-yearlong scientific career and, who knows, it may even outrun it.

I mentioned Bernd Matthias twice in the above paragraph. I have fond memories of Bernd, who unfortunately passed away over 20 years ago. Once in the 1960's Bernd, **Walter Kohn** (the developer of density function theory, DFT, for which he received the Nobel Prize in 1998), and I were flying from New York to Los Angeles. Walter was sitting between us and Bernd and I started to play poker over Walter's seat. As Walter became more and more irritated, we suggested that he change seats. Walter refused; after all we were given specific assigned seats by the airline. As this incident shows, poker does not only bring out the character of the players but also, occasionally, of the onlookers.

Why do I, and many other people, find poker so exiting? I find it difficult to analyze this question in detail, but what I can do is describe my feelings. When I take a seat at a poker table, there is a tingling sensation, a feeling of anticipation, the thrill of taking risks, of possible surprises. It's a lot like I felt in my youth, standing on the starting block in a swim-meet, except that in poker, once the game is going, the challenges are much more multidimensional than in swimming. It's more like skiing down a treacherous slope where the terrain needs to be constantly negotiated. The terrain at the poker table are the cards you are dealt and the players at your table; the negotiations are the tactics and strategies you devise as a result of the odds you calculate for your hand and your reading of the hands of the other players. And at the end of the hand, there is the exhilaration of having done well, of having done your very best, even if you didn't win. Ultimately, poker is a lot like the game of life: You are dealt a set of cards about which you have no say (e.g. inherited traits, talents, imposed external situations), and the aim is to strategize and optimize what you can do with your hand so that, in the end, you feel that you have played to the very best of your ability.

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Will we ever be able to design a computer that can effectively play poker? I don't think so. It seems to me impossible to program the reactions and psychology of the individual players, the very ingredients that make poker for me exciting. In contrast I find chess, whose cold logic can be programmed into a computer, to be interesting but leaving me cold.

From the above remarks you can gather that, contrary to common belief, poker is not a gambler's game (like roulette, craps, baccarat, etc.); nor is it truly a card game in the sense that the cards are not the most important part of it. It is foremost a game of psychology and keen observation of your opponents' reactions and body language. How strong is his hand? Is he bluffing or not? These are the important questions.

By body language I mean the so-called "tells," the little mannerisms – tics, twitches, fiddling with ones chips, cards, fingers, rings, etc. Since we are taught from childhood that deception is a bad thing, some players cover their mouths or lower their voice when they bluff. Secondly, you have to know, of course, the statistical odds of your own hand, properly weighted by the size of the pot. This part of the game is the easiest, especially for the analytically minded. But just knowing the odds will not make you a consistent winner.

What role does luck play in the outcome of the game? Luck, good or bad, is important only in the short run (which can take occasionally an excruciating long period of several hours). You can view periods of bad and good luck as positive and negative noise spikes which over long periods of time average to zero, analogous to the averaging of noisy traces of your EPR spectrum. This means that luck does not enter the picture if you have enough capital to withstand the negative peaks. In a tournament, however, you buy in with a finite amount of money that cannot be replenished during the game. Consequently, a long negative fluctuation can wipe you out; in fact, one often sees champions wiped out early in the tournament. Thus, luck plays a far greater role in tournaments than in regular games. By playing more conservatively, one can reduce the amplitudes of the peaks thereby reducing the probability of being wiped out. An additional difference between tournaments and non-tournament play is the mental stamina required to withstand the pressure over the many hours of a tournament.

Poker is probably the only card game that cannot be played without a stake, (i.e., money) since the obvious goal of the game is to get as much money from your opponents as possible. Thus, a "friendly" poker game is an oxymoron. However, a good poker player thinks of money in a rather abstract way. He does not equate it with money spent in everyday life. If you equate the size of a bet with the cost of your next vacation, you are doomed. This was brought home to me when I first started to play poker in Las Vegas. At a table where thousands of dollars passed hands, players returning from dinner griped that the price of a steak had gone up by two dollars. There clearly was a disconnect between the "real" money paid for the steak and the "funny" money used to play poker.

Let me now describe how poker tournaments are conducted. There are two to three big poker tournaments (world championships) played each year in Las Vegas in which players from all over the world participate. The most famous is the Annual World Series of Poker at Binion's Horseshoe Casino in Las Vegas. There are about a dozen different poker games played over roughly a two-week period. Some people play all games; I play only one, called "seven card stud HI LO split 8 or better." A typical entry fee ranges between $1,000 and $2,000 and the number of players varies between 100 and 300. As an example, let's say that 200 players enter, each paying $2,000, i.e. the total amount collected is $400,000. This amount (minus a negligible percentage for the house) will be distributed among the winning players. The winner receives roughly half of the pot (~$200,000), the runner-up approximately a quarter, and so on. Depending on the number of players, 8–24 will receive some money.

The most exciting event of the Annual World Series of Poker in which the stake and number of participants are considerably higher than in the rest of the events, is a game called "no-limit hold 'em." The entry fee for this event is $10,000 and last year (2002) about 600 players participated. The winner was **Robert Varkonyi**, an M.I.T. graduate who walked away with $2,000,000. The best I ever placed in a tournament was third (see picture), good enough for them to try to interview me but I managed to escape. I imagined headlines in the *San Diego Union*: "U.C. Prof. Plays Poker in Las Vegas Shirking Teaching Duties." Incidentally, my poker winnings go into a research fund which, not being restricted by federal rules, has proved to be a great convenience over the years.

It is interesting how some personal traits show up in poker more crassly than in everyday life, giving insight into a person's actions and behavior patterns. Let me give you a couple of examples. On a few occasions, I played poker with **Edward Teller**, "the father of the H-bomb." His hawkish and far-right leanings had been difficult for me to understand. After having played poker with him, I believe that I have discovered the main driving force of his stand. It is fear. He is the most fearful (and poor) poker player that I have ever encountered. His fear of communism taking over the world was genuine and motivated his actions. Another interesting player was **John Bardeen**, the two-time Nobel Prize winner. No doubt, he knew the statistical probabilities cold, but was so self-contained that he had difficulties taking into account the psychology of the other players. He lost most of the time. Wouldn't it be great to understand the psyche of **Saddam Hussein**? I would love to play poker with him.

How about the professional poker players that I encountered in Las Vegas? One might imagine that they are an unemotional, calculating, logical bunch. Far from it. Many of them display bizarre characteristics that I had never expected, such as superstition. They believe in winning and losing

streaks, engendering their own self-fulfilling prophecy. Many also believe in the notion of a "hot seat" occupied by someone who had been winning for a while and clamor to occupy it when it is vacated, etc. Many of them squander their poker winnings by betting on the outcome of sporting events, elections, horse races. (I can't pass up this opportunity to give you my explanation of the origin of the phrase "horse sense": horses don't bet on the outcome of human affairs.) The wife of the grand old man of poker, **Johnny Moss**, once confided that she surreptitiously skimmed off 10% of his winnings and put it into a savings account to enable them to live out their life in comfort.

There is one disturbing incident that took place in Las Vegas a few years ago that keeps intruding periodically on my mind. It shows the tremendous absorption, concentration, and total neglect of the world outside the game. Although these traits contribute to the appeal and fascination with the game, on occasion they can transcend the limit of decency, as described below. One of the players at a poker game in which I participated collapsed and fell to the floor. It looked like a heart attack or a stroke. The dealer called the floor manager but continued to deal the hand. Nobody stirred (except me who left the table) and the game continued uninterrupted, except for the dealer's shouting: "Two free seats on Table 23." In the meantime, the poor man moaned and turned more and more ashen. It took about 20 minutes for the paramedics to arrive. By that time, the man had stopped breathing and appeared dead. I was appalled, wrote a short note about it and went with it to the *Las Vegas Sun*. It was never published, nor was the incident mentioned. When I complained about it to the locals, they just shrugged it off with the remark that to have it publicized would be bad for business. It is therefore no wonder that I never met players in Las Vegas with whom I could imagine becoming friends. They, on the other hand, probably consider me an oddball and cannot understand how I can return to the "humdrum" life of academia.

Even if a friendly poker game is a contradiction in terms, there's a big difference between the bimonthly home games I've been playing for the past ~50 years and the games in Las Vegas that I play a few times a year. The home games with my colleagues are congenial and comfortable and I enjoy them thoroughly. Las Vegas I enjoy twice: when I arrive and when I leave. The crass (albeit picturesque) characters one plays with, the unremitting tense concentration over a long stretch of time — sometimes 24 hours non-stop — and the lack of sleep add up to an experience that's exciting but draining; and after several days, exhaustion and a desire to flee set in.

So why, in view of these derogatory remarks about Las Vegas, do I continue to go there? Simply because it is the one place where there is the challenge to measure my skills against the best in the game. I can sit at a poker table with players, whose names I have heard for years: **Johnny Moss**, **Amarillo Slim**, **Doyle Bronson**, **Puggy Pearson**, **Jack Strauss** – the **Pauli**'s and **Fermi**'s of Poker. I also had the pleasure of playing with the actor **Telly Savalas** of "Kojak" fame who was preparing for a movie depicting the legendary game at Binion's Horseshoe in Las Vegas in 1949 between **Nick The Greek** and Johnny Moss. The game lasted five months and it is reputed that Nick the Greek lost two million dollars. Unfortunately, Savalas died before the film was finished.

I find that many of my academic colleagues consider my poker playing something between un-understandable and despicable. Do you? Well, that's the risk I took in writing this piece. On the other hand, if you think you will find poker exciting, or already do so, I would like to take this opportunity to invite you to join our game in La Jolla. We'll be happy to give you an introductory "free" lesson.

The home game with my grandson **Avi**, inspiring a new generation. La Jolla, June 2003. Clockwise: Avi, myself. **David Zipser** (Cognitive Science), **Denis Wilkerson**, **Larry Squire** (Psychology), and **Judd Halenza**. **David Wong** (Physics) and **Tom Dunseath** (Literature) also usually participate.

Mark Your Calendar!

Wednesday, March 24
3:30-5:00 PM
Garren Auditorium
Samuel L. Popkin
Professor of Political Science
"The 2004 Election"

Sam Popkin has been a consulting analyst in presidential campaigns, serving as consultant to the Clinton campaign on polling and strategy, to the CBS News election units from 1983 to 1990 on survey design and analysis, and more recently to the Gore campaign. He has also served as consultant to political parties in Canada and Europe and to the Departments of State and Defense. His current research focuses on presidential campaigns and on the relationship of public opinion to foreign policy.

Make another note that on Wednesday, April 14, **Maarten Chrispeels** will be speaking to us on "Organic Produce or Genetically Engineered Crops: Do We Need To Choose?" More on that in the next ***Chronicles***.

*Polymath **Ralph Lewin** has so many interests and abilities that it was not easy for him to decide on just one for this series on "Passions Outside Academia." For those who know his work with exotic algae at SIO or his many excursions into poetry, or the incredibly rich resource he found in Merde (published by Harvard University Press in 2003), it may not come as a shock to know that he is also an eminent proponent of what its idealistic supporters still hope to offer the world: an easily learnable and broadly useful language for world communication. —ed.*

Is Esperanto Reasonable?

—by Ralph A. Lewin

I have been asked to write about one of my passions. A passion, I conceive, is an emotional or unreasonable enthusiasm or affection for something or someone. Now I don't think I'm an unusually passionate person. So, if I have an enthusiasm for the international language Esperanto, it is for mainly reasonable, rational reasons. If I am dubbed — or call myself — an Esperantist, this means little more than, say, being a Germanist would indicate that I have a reasonable familiarity with the German language and can use it with a degree of facility, without necessarily being passionate about it.

How did I start? My father was an Esperantist (but that's another story). He used to attend the meetings of the London Esperanto Club on Friday evenings, and I was told that if I made some effort at learning the language he would take me along too. The alternative being, for a 12-year-old boy, having to go to bed at nine o'clock, I accepted the challenge. It wasn't difficult: it still isn't. Esperanto is completely phonetic in sound and print, has a minimum of grammar, and a large proportion of word roots that are cognate with other Indo-European (mostly Romance) languages. At times then I considered it a bit daft: why a lot of grown people, most of whom could talk perfectly normally in English, should strive to communicate for one evening a week in another language seemed irrational — even if it was partly for the benefit of the usual handful of foreigners. I attended talks in chemistry, politics, drama, or whatever was scheduled for that Friday evening, along with the tea and cookies

When the war ended, and the annual International Esperanto Congresses were resumed, my parents offered to take me along to Bern, provided of course that I use Esperanto there. How could I refuse? As our train trundled through Europe, our carriage picked up more Esperantists who, as is their wont, started up conversations with strangers in a tongue that, quite evidently, really worked. One of these was Prof. **Ivo Lapenna**, then the Jugoslav representative of the international war-crimes commission in The Hague. He was not only fluent in Esperanto; he was eloquent — and I was hooked!

At the congress, I attended all sorts of talks, plays, debates, contests, discussions — the usual things that one has at these annual conferences. Much of the time I tagged along with **Reto Roseti**, a Scots schoolteacher with a brilliant wit, complete fluency in Esperanto, and a charming wife whom he called by his invented diminutive, Njo. Even when I spoke with my parents, in accordance with my vow I did not use English. It was all good fun

In Cambridge I had no time for such things as Esperanto. I wasn't the brightest of students, and if I had dissipated my time with rowing or rugger, chess, music. drama, or anything except science I might have done more poorly than I did in the natural science tripos exams. But when I started at Yale, the stress was less, and I had time to teach Esperanto weekly to a group of Bahai adults for whom learning the international language was (and still is, I believe) a moral requirement.

I became a delegate of the Universal Esperanto Association. (The U.E.A. has at least one in almost every town in the world, someone willing to offer local information to whoever writes, phones, or e-mails enquiries. It's a good way to make contacts abroad, perhaps arranging travels and home visits, and usually effecting some financial savings.) When I flew to Esperanto or scientific meetings or congresses I usually took along one of my favorite works of literature, Milne's *House at Pooh Corner*, and a notebook into which, chapter by chapter, airport by airport, I slowly transcribed a translation.

After 11 years on the Eastern seaboard I was offered a job here in La Jolla and hardly hesitated before accepting it. Here I found **Frank Helmuth**, then President of the Esperanto League of North America, and here too I located **Ivy Kellerman Reed**. Way back in 1902, when few women went in for postgraduate studies, she had obtained a doctorate in some Greek dialect, and being also an excellent Esperantist, had been Secretary of the international congress held in Washington, D.C. in 1915. (Her translation of Shakespeare's *As You Like It* was presented there — six years before I was born!) I located her flat on Westbourne (before she moved to the

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Reminiscences: Early UCSD History

*This is the first of two articles by **Lea Rudee** on the history of engineering at UCSD in which he played a large part.*

The Beginning of the School of Engineering at UCSD: A Personal Perspective #1

—by M. Lea Rudee, Founding Dean

When I came to UCSD from Rice in 1974, there was no engineering, but two applied science departments: Applied Mechanics and Engineering Science (AMES), and Applied Physics and Information Science (APIS), my departmental affiliation. **Paul Saltman** was Vice-Chancellor of Academic Affairs and my immediate superior in my position as founding Provost of Fourth, later Warren, College. Paul emphasized that the overall plan for UCSD was to start pure science first, then applied science, and later to create engineering.

The early seventies were difficult times for schools of engineering and a report commissioned by the UC President recommended that UC stop all development of engineering at new campuses. UC Santa Cruz had hired the very distinguished **John Whinnery** from UC Berkeley to develop an engineering program as Dean of Engineering. In response to this report, Whinnery returned to Berkeley and development of engineering at UCSC was halted. However, UCSD continued the development of APIS and AMES, since they were considered applied science, not engineering.

Being the only member of the UCSD administration who had an engineering background, I was made UCSD's representative to the system-wide committee on engineering education, the UCEE. This group met two or three times a year and advised the President and Vice-President of the University on engineering matters. The President also had an Engineering Advisory Council (EAC) made up of leaders from the industrial sector. When **David Saxon** was President (1957-1983), he met regularly with both the UCEE and the EAC. The late seventies was a time of recovery for the University, and for engineering, after the tumult of the Viet Nam era. President Saxon both solicited advice from the UCEE and EAC, but also would get support in Sacramento from the EAC for University enhancement.

William McElroy was Chancellor at UCSD and was supportive of engineering advancement, especially when prompted by local high tech leaders who hoped for a very supportive academic institution in their neighborhood. He created a San Diego advisory committee similar to the EAC.

The two applied science departments did research of the caliber of UCB and UCLA in their areas of specialization, but they did not produce BS and MS engineers to provide a local source of employees. Their degrees had unconventional names, e.g., Applied Physics, and Engineering Mechanics. Their undergraduate enrollments were small. UCSD's student outreach and recruiting staff reported that high school students, and their high school advisors, were reluctant to choose UCSD since we did not have conventional degrees such as EE and

ME, and thus were not listed in the directories of schools that offered engineering. APIS did offer an undergraduate Computer Science degree and it was well attended. The first action to break this mold was the offering of an Electrical Engineering BS by APIS, soon accredited by the American Board for Engineering and Technology (ABET), the organization that accredits engineering programs. A short time later AMES added a senior faculty member who pulled together a program in Chemical Engineering that was also soon accredited. In this period APIS changed its name to Electrical Engineering and Computer Science (EECS).

Chancellor McElroy's term as Chancellor was drawing to a close but he made an additional contribution that has had a lasting impact on engineering at UCSD. Professor **Gil Hegemier** had shifted his research interest from aerospace structures to civil structures. There was no appropriate space at UCSD for the large scale tests he was conducting, and he arranged to use some space at the General Dynamics facility between Lindbergh Field and Interstate 5. This was not only inconveniently distant from the campus, but it was in a secure area so students needed a security clearance to partici-

pate in the tests. Hegemier and I went to McElroy and he responded by approaching the Charles Lee Powell foundation for $1 Million to fund the construction of a modest structural engineering facility.

Before the design and construction process for the structural engineering facility had begun in earnest, **Richard Atkinson** became Chancellor, and he appointed **John Miles**, a leader in fluid mechanics and a member of the AMES Department, to be Vice-Chancellor of Academic Affairs. Prior to joining UCSD, Atkinson had served as Director of the NSF, and before that he had been a faculty member at Stanford. From the combination of these two experiences, he was a strong advocate for engineering. Chancellor Atkinson believed that engineering needed to be a separate administrative unit and got Academic Senate and System-wide approval to establish a Division of Engineering that included both AMES and EECS. After a nationwide search, I was appointed Dean of Engineering and accordingly the first academic Dean on the general campus of UCSD. The combined faculty of the two departments totaled slightly more than 44 FTE, and were located almost entirely in Urey Hall (AMES) and in the AP&M Building (EECS).

Dr. **James Lemke**, then President of Spin Physics, a subsidiary of Eastman Kodak, approached me with the idea of creating a Center for Magnetic Recording Research (CMRR) at UCSD with considerable industrial support. Atkinson was very supportive and committed a million dollars toward a building and 4 FTE's to become endowed chairs if the fundraising was successful. Lemke approached IBM, and they invited other campuses, as well as UCSD, to submit proposals. Proposals were received from UCB, UCD and Stanford, as well as UCSD, but in the end we prevailed. Subsequently, Jim Lemke and I made many visits to the major companies in the magnetic recording field and got commitments from some ten companies for about $12,000,000 over 3 years to build a building, outfit it, and endow all 4 chairs. This was the first center of its kind at UCSD and was the first significant university base for the magnetic storage industry, which is comparable in size to the computer chip industry, which had many academic centers.

The CMRR building and Powell structural engineering building were joined into one design-build project. During the design phase, Hegemier was approached by leading structural engineers to expand the lab with federal support to make it the U.S. base for a joint U.S.-Japan earthquake engineering project. Chancellor Atkinson was very supportive. He committed UCSD matching funds and used his good offices at the NSF to champion the project. This enlarged facility is now the Charles Lee Powell Structural Systems Laboratory and the world leader in its form of seismic safety research and testing.

With this addition, the structures lab design and construction had lagged behind CMRR's, even though they remained part of the same overall design-build contract. **Freider Seible** joined the faculty and was deeply involved in the design of the Powell Lab. He also noticed a design flaw in the structural system of CMRR, and a rapid redesign took place.

These two buildings were the first built at UCSD for many years, save for some housing projects, and were planned for a previously unused section of the campus east of the Central (now Geisel) Library. A land use plan called the Miramar Academic Complex was commissioned to design what is now Warren Mall and the building sites along it. When CMRR was completed, its front door opened into a eucalyptus grove and its loading dock faced the only road. Only those who had confidence in the future could defend against the claim that CMRR's orientation was wrong by 180°.

[To be continued in a coming issue of **Chronicles***]*

*[**Lewin**, Esperanto]*

old-persons' home on Eads), and over tea and homemade cakes on Thursday nights, with her many years of editorial experience (in the Department of Agriculture, I think) and her clear linguistic expertise we cleaned up my *Pooh* translation until it was eventually fit to be published by Dutton and Company. My friend and co-translator died many years ago, but my editorial training still stands me in good stead.

Now, I still go to the international congresses whenever they happen to be in a country that I have a yen to visit. Lanna and I attended the one in Warsaw (5,964 participants) and a number of other interesting ones in Vienna, Helsinki, Beijing, Tokyo, etc.; but not the smallest (less than a thousand, in Vancouver and Reykjavik). In some I gave university-level talks, on algal pigments, flagellar movement, flexibacteria, or on whatever else I happened to be researching at the time. I am even an academician, a proud fellow of the Akademio Internacia de Sciencoj in — of all places — San Marino, where I once gave a short course on algae. I compiled a glossary of technical terms in microbial genetics, which was published in Beijing, and more recently as a biologist I have collaborated in the revision of the huge *Plena Vortaro* (which claims to be a "full vocabulary" — but of course it isn't). There are four of us E-ists on the UCSD faculty now, though only one is in the Department of Linguistics. When enough UCSD students sign up for it, I give a seminar course on international language problems: why and how **Ludwig Zamenhof** in Bialystok created the "hopeful" language, Esperanto, back in the 1880's, and how its popularity grew over the next century or so, and even why it has never reached the international success that he had hoped for it.

So is all this evidence of "passion"? Or could you regard it as in some ways reasonable?

UCSD Emeriti Association
214 University Center, UCSD
La Jolla, California 92093-0002

March 2004

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Editor's Lament

I note with sadness the passing of the people listed in the adjacent column, each of whom was particularly important in one way or another to those who knew them and to the history of this university. To choose only one, **Kathleen Douthitt** was the first person my family and I met when we arrived at UCSD. During the early years, she and I were involved in many battles, she as the person who knew best the University's rules and how to change or get around them, I as an impatient participant in building a university different from (and better than, I naively thought) any other in the world. It was only later that I came to know her as a wonderful friend, first as a poker-playing buddy at a campus retreat, later as a tireless president of the Friends of the International Center. She was so powerful in the early days and so warm and cheerful in her declining years. I will miss her.

—Leonard Newmark

NECROLOGY

Below are the names of Regular and Associate Members of the UCSD Emeriti Association whose deaths have come to my attention since my last summary. I would be grateful to receive comparable information about those I have missed, now and in the future, and will try to update the list as space permits. —ed. ldnewmark@ucsd.edu

Last Name	First Name	Date of Death
Douthitt	Kathleen	Jan.10, 2004
Fejer	Jules A.	2002
Fussell	Edwin S.	2002
Galbraith	John	June 10, 2003
Jagger	Paul	Feb. 4, 2004
Kamen	Martin D.	2002
Ledden	Patrick J.	Oct. 28, 2003
Lein	Allen	2003
Levy	Robert I.	2003
Penner	Beverly P.	Dec. 29, 2003
Rosenbluth	Marshall	Sept. 29, 2003
Spiess	Sally	Sept. 29, 2002
Teilhet-Fisk	Jehanne	2002
Vendler	Zeno	Jan. 13, 2004