

The Urgency of Climate Change

By **Sanford Lakoff**

Professor Emeritus of Political Science

As if a deadly pandemic were not enough to cause illness and death, other recent disasters make clear that global warming is not just a portent of a potential far-off apocalypse but a clear and present danger. The 80-plus wildfires in the Pacific North-West; extreme heat in parts of the country even in Scandinavia and northern Siberia; floods in western and southern Europe, in historic Charleston, South Carolina, and in subways in Shengzhou, China, London, and New York; and the flight of climate refugees from Africa and central America, are among the most obvious evidence. These episodes should finally persuade skeptics (like the editors of the Wall Street Journal) to stop disparaging scientific findings about climate change, as they did earlier warnings that melting sea ice and glaciers in the polar regions would inundate islands and coastal regions and that rising ocean temperatures were threatening the survival of whole species of sea animals.

As many commentators have noted, the earliest modern alarm about this impending crisis was sounded here by **Roger Revelle**, UCSD's founding father, while he was still Director of SIO. Roger liked to say that he was no specialist in anything but knew a little about a



Sanford Lakoff

lot. In an article in 1957 with **Hans Suess** he revived the speculations of the 19th century Swedish physical chemist **Svante Arrhenius** that emission of CO₂ and other gases due to the industrial revolution would result in rising temperatures. To get actual data Revelle had his colleague **Dave Keeling** set up a monitoring station on Mauna Loa in Hawaii to record the percentage of these emissions in the atmosphere. (The resulting 'Keeling Curve' is now carved into a wall of the National Academy of Sciences in Washington.) But it was only in the early 1980s, when (with emeritus physicist **Charles Kennel** playing a key role) NASA launched satellites to record changes in global temperatures that a correlation was definitively established linking the emissions to rises in atmospheric temperatures. Since then, the UN-sponsored Intergovernmental Panel on Climate Change

(IPCC) has issued regular reports based on accumulating research confirming the correlation. As a result, international conferences have sought to set agreements aimed at reducing emissions, the latest scheduled for Glasgow in October.

Al Gore, who first learned about the issue in a course taught by Revelle at Harvard, later wrote *Earth in the Balance*, calling for environmental stewardship, and has engaged in subsequent efforts to raise public awareness that won him the Nobel Peace Prize in 2007.

UCSD scholars have continued Revelle's pioneering work -- including **Richard Somerville** (*The Forgiving Air*) and **Veerabhadran Ramanathan** at SIO, **David Victor** of the School of Global Policy and Strategy (co-author, *Making Climate Policy Work* and co-director of the campus-wide Deep Decarbonization

cont. on page 2 →

◆◆◆ Inside ◆◆◆

The Urgency of Climate Change 1	
Remembering John Mendelson Oncologist at UCSD and MD Anderson	4
Emeriti Association Book Club	6
Anecdote	7
Mark your calendar	8

Sanford, cont. from page one.

Initiative), and **Naomi Oreskes** (then in Sociology, now at Harvard, co-author, *Merchants of Doubt*). Under Dean **Carol Padden**'s leadership, the Division of Social Sciences is now opening a Climate Action Lab aimed at engaging students and the local community. The Anthropology Department is offering a new major in Climate Change and Human Solutions. UCSD administrators have also done an exemplary job in designing and adopting alternatives to the use of fossil fuels on campus.

Precious time was lost under President **Trump**, who blithely

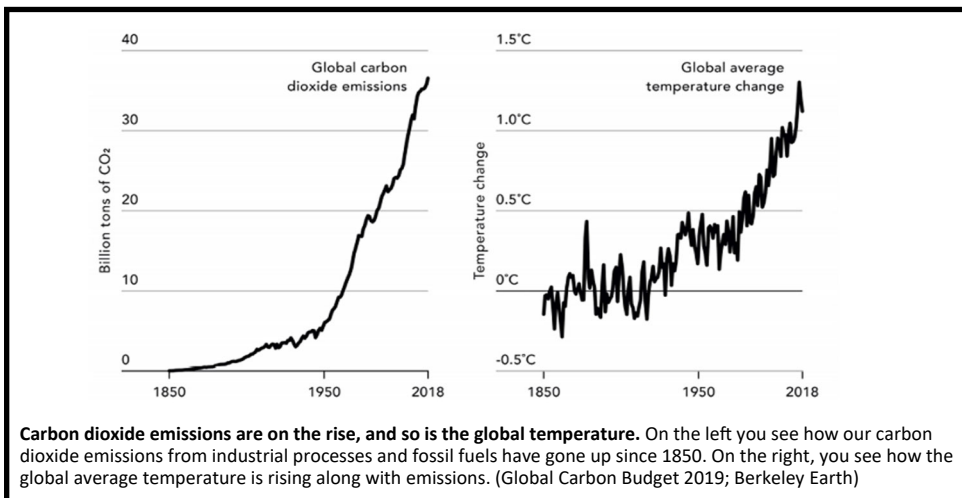
startups have begun to address various solutions aimed at adaptation and mitigation.

Now **Bill Gates** -- co-founder of Microsoft and a leading sponsor of initiatives to improve health care and provide energy in developing areas, has made a valuable contribution to public understanding in his new book, *How to Avoid A Climate Disaster: the Solutions We Have and the Breakthroughs We Need*. Gates admits that he thinks like an engineer rather than like a political scientist, and accordingly, has nothing to say about how to combat the rejection of science so widespread in the U.S. or such forces as super-PACs heavily funded by fossil-fuel compa-

nologically. Here is my very condensed takeaway:

As of now, 51 billion tons of greenhouse gases are released every year. Atmospheric concentrations have increased substantially since the beginning of the industrial era, rising from an annual average of 280 ppm in the late 1700s to 410 ppm in 2019. **What the world must do is to get as near to net zero as possible.** It will not be easy but it is possible. Paying "green premiums" initially will be necessary. To start with, we need to deploy the tools we already have, like solar and wind energy. But that won't be enough. We also need to invent new solutions, including "direct air capture" technologies that will remove emissions from the atmosphere. (Gates has contributed to a program called Breakthrough Energy, which funds projects that could each reduce at least 500 million tons of emissions or a year or about one percent of total emissions.) "Geoengineering" could also produce ways of reflecting sunlight before it reaches the earth.

By substituting for fossil fuels in creating electricity, 27% of the 51 billion tons could be eliminated. Noting that France gets 70% of its electricity from nuclear power, Gates argues that advanced (i.e., safer) nuclear power, fission and eventually fusion, are feasible and will be needed. "It's hard to foresee a future where we decarbonize our power grid without using more nuclear power." Otherwise, remaining coal and natural gas-fired plants could be fitted with devices and pipelines that capture the carbon dioxide they produce and sequester it underground; battery technology might be improved to allow greater storage of intermittent solar and wind power; in the U.S. "crisscrossing the country with thousands of miles of special long-distance power lines carrying what's called high-voltage current." (The power-line



dismissed anthropogenic climate change as a hoax and withdrew the U.S. from the 2015 Paris Accord in which almost every nation in the world pledged to lower emissions close to pre-industrial levels. The Biden administration has rejoined the Accord and reset the issue as an imperative. Major changes are being made in the private sector, notably in the auto industry where major producers have announced commitments to phase out the internal combustion engine in favor of electric power relying on lithium-ion batteries or by using hydrogen to power large trucks. Companies like Walmart have installed solar powered systems above their parking lots. A host of existing high-tech companies and

nies, along with short-sighted populism, anarchistic versions of liberalism and pluralism, and beggar-thy-neighbor nationalism, all preventing adoption of effective and coordinated policies. But he does show how the problems can be addressed tech-

What the world must do is to get as near to net zero as possible. It will not be easy but it is possible. Paying "green premiums" initially will be necessary. To start with, we need to deploy the tools we already have, like solar and wind energy. But that won't be enough. We also need to invent new solutions ...

cont. on page 3 →

technology already exists-- the biggest such line runs from Washington state to California. Putting up power lines is problematic, given the fire danger in California, and putting the wires underground is also problematic because underground there is no place for heat to dissipate and the wires would burn. " We will also need to promote more load or demand shifting as utilities already do so consumers use energy when it is cheaper because fewer people are using it. Ditto for pumped storage of reservoir water at higher elevations released at night for lighting.

Manufacturing is an area where key improvements can be made. 31percent of emissions could be eliminated by altering the way concrete, cement, plastics, and glass are produced. (One approach is to take recycled carbon dioxide and inject it back into the cement before it's used at a construction site.)

Improved farming is another focus. Cows emit methane with the same warming effects as 2 billion tons of CO₂, or 4 percent of all emissions. We could rely more on meat from animal cells or cut back

meat consumption, crossbreed African cows with U.S. cows that emit less methane; cut food waste; and redesign fertilizers. Deforestation must be stopped, but planting enough trees to make a difference would take too much land and maintenance to have a major impact.

Transportation contributes 16% of global emissions. In the U.S. passenger vehicles account for nearly half of transportation emissions, our largest source of greenhouse gases. Making cars that will all run on electricity (produced by non-fossil fuels) will help greatly though it will take time to have an effect. (Shenzhen, China has electrified its entire fleet of 12,000 buses and two-thirds of its taxis. (Gates takes no account of recently reported experiments outfitting large cargo vessels with modernized sails, another possibility.)

Heating and air conditioning account for 7% of the 51 billion tons. By improving efficiency and using heat pumps -- the principle already used in refrigerators -- and decarbonizing the grid, we could save most of that.

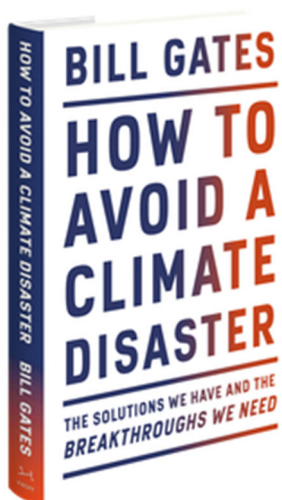
Finally, Gates calls attention to the need to rely on governments at all levels to invest in research and use regulatory power to encourage steps in the right direction such as a carbon tax, coupled with border adjustments for countries that are not doing their fair share. In effect, he expresses a common-sense view of the need for government that is sharply at odds with the hostile attitude popularized by President **Reagan** that government is the enemy of liberty and that prosperity depends on relieving pri-

vate enterprise of the shackles of bureaucracy:

National leaders around the world will need to articulate a vision for how the global economy will make the transition to zero carbon. That vision can, in turn, guide the actions of people and businesses around the world. Government officials can write rules regarding how much carbon power plants, cars, and factories are allowed to emit. They can adopt regulations that shape financial markets and clarify the risks of climate change to the private and public sectors. They can be the main investors in scientific research, as they are now, and write the rules that determine how quickly new products can get to market. And they can help fix some problems that the market isn't set up to deal with -- including the hidden costs that carbon-emitting products impose on the environment and on humans.

Many of these decisions are made at the national level, but state and local governments have a big role too. In many countries, subnational governments regulate electricity markets and set standards for energy use in buildings. They plan massive construction projects -- dams, transit systems, bridges, and roads -- and choose where these projects will be built and with what materials. They buy police cars and fire engines, school lunches, and light bulbs. At each step someone will have to decide whether to go with the green alternatives. (183)

Wise words that Roger would approve!



Remembering John Mendelsohn Oncologist at UCSD and M.D. Anderson

Part II of an edited version of a double obituary for two colleagues, Waun Ki Hong, MD, and John Mendelsohn, which originally appeared in *Cancer Cell* (February 11, 2019, 35)

By **Scott Lippman, MD, Director**, Moores Cancer Center, and **Razelle Kurzrock**, Director, Center for Personalized Therapy, Moores Cancer Center

John Mendelsohn, born in Cincinnati, earned his bachelor's degree in biochemical sciences from Harvard College, where he was the first undergraduate student to work in the laboratory of a new assistant professor named **James Watson**, PhD, of Double Helix fame. Awarded a Fulbright scholarship, John attended Harvard Medical School, graduating in 1963. He served a residency in internal medicine at Peter Brent Brigham Hospital in Boston, where a chance meeting with then NIH chief of cardiology, **Eugene Braunwald**, MD, proved a pivotal moment because it led to John playing a role in the early years of UCSD's School of Medicine.

It was clear from the start that John was blessed with inherent leadership, drive, vision, and charisma. While completing a hematology-oncology fellowship at Washington University he received a call from Braunwald, who in 1968 had moved to UCSD as the founding Chair of the Department of Medicine. Wanting to build a strong presence in oncology, he thought of John. As a new school, UCSD rapidly garnered national attention for its bold strategy recruiting the most prominent leaders, who would attract the top junior faculty and create a culture of innovative



Dr. John Mendelsohn, deceased

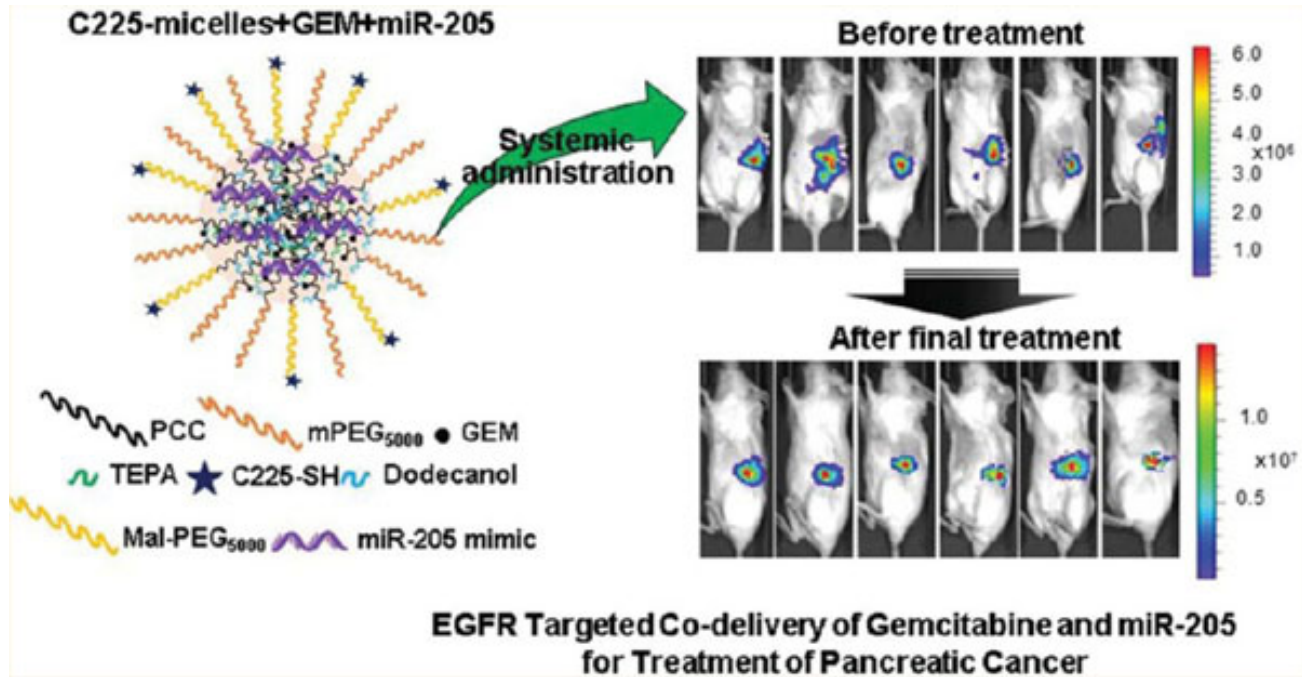
risk taking. As a board-certified hematologist studying lymphocytes in the lab, John jumped at the opportunity. Appointed in 1970 to lead a newly established Oncology Division and later becoming founding Director of the Gildred Cancer Center, he quipped to friends "Guess I'll have to learn oncology and take the Boards."

Enthusiastic and inclusive, John began to build a cancer program to match UCSD's already nationally regarded basic science and hemopoiesis programs. **Helen Ranney**, recruited to San Diego in 1973 as the first woman Chair of Medicine in the United States, was well known for her work in hemoglobin variance. It was a vibrant time, days of utter originality, forging ahead with more imagination than precedent. John collaborated with Salk Institute's **Ian Trowbridge, PhD**, learning how monoclonal antibodies could neutralize binding functions in lymphocytes, as well as with **Gordon Sato**, PhD, who determined that the requirement for serum in cell culture was

primarily controlled by growth factors.

"Flying blind" in 1980, the UCSD/Salk team hypothesized they could make an antibody to prevent the growth factor-receptor connection, in this case epidermal growth factor receptor (EGFR), and thus block cancer cell proliferation. Unprecedented and therefore uncertain, their initial grant proposal to the National Cancer Institute was not recommended for funding. Yet they were able to find enough funds to complete the cell culture studies that supported their hypothesis, eventually securing the necessary NCI funding to expand their work. At the time, hybridoma-based technology was in its earliest stages of development, and it took 3 years to screen thousands of antibodies and identify C225, the basis for development of cetuximab (Erbix), now FDA approved for treating colorectal and head and neck cancers. It was the beginning of targeted tumor therapy.

As founding cancer center director, John drove the application process by submitting a 700-page core support grant that resulted in UCSD's designation as an NCI specialized cancer center, leading to the establishment of the Moores Cancer Center in 2001. Within the now-faded pages of that early proposal, one can glimpse John's remarkable vision, inquisitive spirit, and innovation as he brought together different groups and ideas, notably having the foresight to build an immunology cancer research "unit," that included fundamental studies of T cell receptor biology—an



unheard-of notion in the early 1980s. He also recruited **Ivor Royston MD**, later co-founder of Hybritech, thereby launching academia-industry partnerships and paving the way for San Diego to become one of the three largest biotech clusters in the United States.

Activation of what we now call Investigator Initiated Trials was much faster then—monoclonal CD5-specific antibody T101 moved from the research lab to the clinic in less than 3 years. John was legendary for engaging the broader community, forming the UCSD Cancer Foundation (preceding even the UCSD Foundation), building the Theodore Gilred Cancer Center in Hillcrest where doors opened in 1983. He also engaged the academic community, foreshadowing the creation of the San Diego NCI Cancer Centers Council (C3) “on the mesa.”

In 1985, John left San Diego to become Chair of the Department of Medicine at Memorial Sloan Kettering (MSK) in New York. In 1996 he became the third president of MD Anderson (MDA) in Houston, arriving at a most challenging time. A compelling report from prestigious consultants was pushing for an even more limited clinical enterprise. Re-

“Flying blind” in 1980, the UCSD/Salk team hypothesized they could make an antibody to prevent the growth factor-receptor connection, in this case epidermal growth factor receptor (EGFR), and thus block cancer cell proliferation. Unprecedented and therefore uncertain, their initial grant proposal to the National Cancer Institute was not recommended for funding. Yet they were able to find enough funds to complete the cell culture studies that supported their hypothesis, eventually securing the necessary NCI funding to expand their work.

search, they argued, was too expensive. John went around, pen and pad in hand, talking with rank-and-file faculty and institutional leaders. A few weeks later, he charted the institution’s course. He would not turn away from research, but rather invest heavily in it, expanding beyond anything that had been seen there

before. Research would be MDA’s *raison d’être*, and John was about to preside over the largest and most stunning growth in the institution’s history. He built a research-driven, patient-focused enterprise that proved wildly successful—doubling the number of employees and patients, tripling the facility space, quadrupling the annual revenue to more than \$3 billion, and increasing private philanthropy ten-fold, all the while expanding education programs. MDA is today considered by many to be the world’s top cancer center.

John gave generously of his time and expertise. He offered his much-sought advice freely, forever advocating for any effort that would advance the cause of cancer research and help save more lives. In the last decade of his life, John built globally on the possibilities of precision medicine. Ever prescient, he anticipated the importance of big-data technology for the future of his field and wanted to learn more. Our colleague, **Jill Mesirov**, then asso-

cont. on page 7 →



ciate director at the Broad Institute of MIT and Harvard, recalls a day when John, who was on sabbatical after retiring as MDA President, introduced himself and asked her to teach him everything he should know about computational genomics. With keen foresight, he had a way of asking the right questions, always catching on quickly, and appreciating the vast complexities and impact of this technology in making precision therapy an expanding reality. Next, he launched the Institute for Personalized Cancer Therapy at MDA and became the founding Chair of the Worldwide Innovative Networking (WIN) Consortium in Personalized Cancer Medicine. And if this wasn't enough to fill a life, John was an avid reader with broad interests, from music to science to political history. He was a patron of community arts, and Chair of the Houston Grand Opera.

Both John and **Waun Ki Hong** (see part one of twin obituary appearing in *Chronicles*) were alike as tireless workers and detailed administrators, in before dawn and the last to leave at night. They were resourceful, fearless, and resilient. They had a way of looking beyond the horizon, embracing change, anticipating what should come next. Their work was innovative and groundbreaking. They were inspirational and supportive, helping both of us refine and improve our science and advance our careers, as they did with so many others. Hong recruited Lippman to MDA where they worked closely on multiple research projects, and along with Mendelsohn provided mentorship and support as he succeeded them in various academic leadership positions at MDA and UCSD. Mendelsohn and **Razelle Kurzrock** were close collaborators, while Hong provided guidance and support as she became founding Chair of the Depart. of Investigation-

al Cancer Therapeutics at MDA. We honor them both for what they accomplished in their lives. Avant-garde scientists and practitioners, they shared their advice, passion, and vision with their colleagues and trainees, creating a legacy for generations to come.

Devoted husbands, John was married to Anne for 56 years and Ki to **Mi Hwa** for nearly 50 years. They were close friends themselves, but regular foes on the tennis court. During the months before John died of a glioblastoma—an end he knew was coming—Ki took it upon himself to write a tribute. Factual aspects were easily done but personal sentiments more difficult to articulate. Ki didn't finish, succumbing to unexpected kidney failure. John passed 5 days later. Through the tears, a bit of humor circulated among family and friends. Ki had let John know there were tennis courts in heaven.

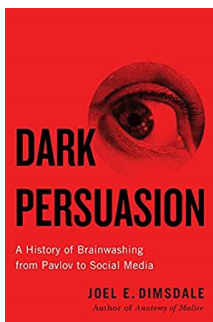
Emeriti Association Book Club

Until further notice, all Emeriti Association Book Club meetings will be held via Zoom. Please [RSVP](#) at least 24 hours prior to the event to receive the Zoom link via email. Event date and time: Fourth Monday of each month, 11:45 AM - 1:15 PM
Be sure to [RSVP online](#) to attend.

September 27, "Dark Persuasion: a History of Brainwashing from Pavlov to Social Media" by Joel Dimsdale; the author will participate.

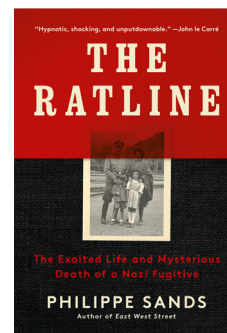
This gripping book traces the evolution of brainwashing from its beginnings in torture and religious conversion into the age of neuroscience and social media. When Pavlov introduced scientific approaches, his research was enthusiastically supported by Lenin and Stalin, setting the stage for major breakthroughs in tools for social, political, and religious control.

Dimsdale narrates how when World War II erupted, governments secretly raced to develop drugs for interrogation. Brainwashing returned to the spotlight during the Cold War in the hands of the North Koreans and Chinese. In response, a huge Manhattan Project of the Mind was established to study memory obliteration, indoctrination during sleep, and hallucinogens. Cults used the techniques as well. Nobel laureates, university academics, intelligence operatives, criminals, and clerics all populate this shattering and dark story—one that hasn't yet ended.



Oct. 25, "The Ratline, The Exalted Life and Mysterious Death of a Nazi Fugitive" by **Phillipe Sands**

Baron Otto von Wächter, Austrian lawyer, husband, father, high Nazi official, senior SS officer, former governor of Galicia during the war, creator and overseer of the Krakow ghetto, indicted after as a war criminal for the mass murder of more than 100,000 Poles, hunted by the Soviets, the Americans, the British, by Simon Wiesenthal, on the run for three years, from 1945 to 1948, Philippe Sands pieces together, in riveting detail, Wächter's extraordinary, shocking story. Given full access to the Wächter family archives--journals, diaries, tapes, and more--and with the assistance of the Wächters' son Horst, who believes his father to have been a "good man," Sands writes of Wächter's rise through the Nazi high command. An extraordinary discovery, told up-close through access to a trove of family correspondence between Wächter and his wife--part historical detective story, part love story, part family memoir, part Cold War espionage thriller.



Anecdotalage

By Sandy Lakoff

What to name a book on the Chinese leader? My suggestion: *Xi Who Must Be Obeyed*.

More thoughts for Groan-Ups (thanks to a Distinguished Professor Anonymus):

How does an attorney sleep?
First he lies on one side, then he lies on the other side.

I have a few jokes about unemployed people, but none of them work.

How do you make holy water?
You boil the hell out of it.

Will glass coffins be a success?
Remains to be seen.

What's the difference between a hippo and a Zippo?
One is really heavy and the other is a little lighter.

Hear about the new restaurant called Karma?
There's no menu - you get what you deserve.

I went to buy some camouflage trousers yesterday but couldn't find any.

What do you call a bee that can't make up its mind?
A maybe.

I tried to sue the airline for losing my luggage.
I lost my case.

When everything is coming your way, you're in the wrong lane.

She had a photographic memory but never developed it.

Is it ignorance or apathy that's destroying the world today?
I don't know and don't really care.

I wasn't originally going to get a brain transplant, but then I changed my mind.

Which country's capital has the fastest-growing population?
Ireland. Every day it's Dublin.

My ex-wife still misses me.
But her aim is starting to improve.



The guy who invented the door knocker got a no-bell prize.

I saw an ad for burial plots, and I thought:
"That's the last thing I need!"

Need an ark? I Noah guy.

I used to think I was indecisive; now I'm not so sure.

Sleeping comes so naturally to me, I could do it with my eyes closed.

What did the grape say when it got stepped on?
Nothing - but it let out a little whine.

What do you call a super articulate dinosaur?
A Thesaurus.

If Batman and Robin got run over by a steam roller, who would they be?
Flat man & Ribbon?



Two windmills are standing in a wind farm.
One asks,
"What's your favorite kind of music?"

The other says,
"I'm a big metal fan."

The **UC San Diego campus** is operating with new **safety protocols**, which have been established in alignment with county and state guidelines to help protect the wellbeing of our campus community.

1 **Please refrain from entering campus grounds or buildings unless you have a university or business-related need requiring you to do so.** Nonessential visitors will have limited access to the campus. We are implementing measures to significantly reduce density on campus to provide a safer learning environment for our students. We thank you for understanding.

2 **Do not come to campus if:**

- You are experiencing or have had COVID-19 symptoms within the past 14 days. [See associated symptoms on the CDC website.](#)
- **If you believe you may have been in recent contact with someone who tested positive for COVID-19.**

For more information about safety protocols related to visiting campus, please see:
<https://returntolearn.ucsd.edu/info-for/visitors/index.html>

Chronicles

Newsletter of the UCSD Emeriti Association



Sanford Lakoff Editor
Suzan Cioffi Managing Editor

————— Officers —————

Steven Adler President
Allen McCutchan Vice President
Kim Signoret-Paar Secretary/Treasurer
Irving (Jake) Jacoby Past President

————— Executive Committee —————

Members at Large: John Goodkind, Richard Madsen, Roger Spragg, Gail Lew, Jean-Bernard Minster, Joe Watson, **Ex-Officio members:** Sandy Lakoff, Editor, Chronicles; Ann Craig, Chair, Emeriti Mentor Program; Jack Fisher, Historian; Suzan Cioffi, Director, UCSD Retirement Resource Center; Gail Lew, Liaison, UCSD Retirement Association; Kim Signoret-Paar, Liaison, OCEANIDS; Henry Powell, Chair, CUCEA; Phyllis Mirsky, Secretary, CUCEA

*Forward queries, changes in mailing/email address to:
Suzan Cioffi, Director, UCSD Retirement Resource Center,
UCSD, 9500 Gilman Drive, #0020, La Jolla, CA 92093-0020.*



Mark your calendar for Fall 2021 events!

Fall Emeriti Association Meetings

RSVP [here](#) to receive the Zoom event link



Wednesday, September 15, 2021
2:45—4:00 PM, via Zoom

“Fiction, Lies and the Authority of Law”
presented by **Steven D. Smith, Esquire**



Wednesday, October 13, 2021
3:45 PM—5:00 PM
via Zoom

“The Importance of Ritual in Elephant Society
and Striking Parallels to Humans”
presented by **Caitlin E. O'Connell-Rodwell**