September 2016
Volume XVI, No. 1

By Henry Powell
Professor Emeritus of Pathology

One of the pleasures of attending the annual meeting of my professional specialty is the chance to get together with former trainees. Several years ago, when I went to the neuropathology meetings, Ron Hamilton, who trained here, told me he was going to be a character in a movie and wondered who would get to play him. The movie, called “Concussion,” was screened in 2015. It came about because Hamilton, a professor at the University of Pittsburgh, had been instrumental, in collaboration with a mentee, in calling attention to the brain injuries sustained by Mike Webster, a center for the NFL’s Pittsburgh Steelers. Known as “Iron Mike,” Webster’s outstanding playing career had earned him induction into the Football Hall of Fame, but his life ended at the age of 50 under grim and miserable circumstances. He was one of seven former players known to have committed suicide as an indirect result of brain trauma. (Another was the Chargers’ Junior Seau.)

What I learned took me back to the earliest years of my training, and concerns the study of brain trauma as a public health measure. The gist of the story is that medical specialists have known for some time that two very popular sports, boxing and football, link the human desire for entertainment to severe injury and lifelong trauma — something that the athletes themselves, their professional associations, and the general public have been very reluctant to acknowledge.

Peter Lampert’s Pioneering Role

I first heard about the neuropathology of brain trauma from the late Peter Lampert (1929-1986), the first neuropathologist to be recruited to UCSD and the head of both neuropathology and the Department of Pathology here. For those fortunate enough to be trained by him, he was a great mentor. Although he researched interests focused on viral brain infection as well as on the pathology of multiple sclerosis, Lampert was keenly interested in how the brain reacted to every kind of injury. A brilliant experimental pathologist, he sought to demonstrate with electron microscopic images the impact on individual cells of different kinds of injury. Trauma was especially concerning because there is no path to recovery for injured tissues. The pathologist’s job was therefore to identify the structural injuries in damaged brains and educate our colleagues and the broader public about the risks.

Lampert had worked at the Armed Forces Institute for Pathology along with a colleague, John Hardman, during a time when boxing was always in the news and when the medical profession believed that its risks should be publicized. Public concern about boxing was especially keen in the UK, where anti-boxing advocates such as the extraordinary Baroness Edith Summerskill (both an MD

Mark your Calendar!

Robin Knight, Professor, Pediatrics
“How our Microbes Make us Who We Are”
Wednesday, October 19, 3:30 – 5:00 PM
Ida & Cecil Greene Faculty Club

Joel King, Campus Architect,
“Vision of the Future”, Wednesday, November 9, 3:30 - 5 PM
Ida & Cecil Greene Faculty Club

Emeriti & Retirement Associations
Festive Holiday Party ($10 per member)
Saturday, December 4, 1 - 4 PM
Ida & Cecil Greene Faculty Club

UCSD Emeriti Association
and an MPI) called on her fellow lawmakers to regulate this highly popular sport. Its only purpose, they pointed out, was to inflict insufficient injury so as to incapacitate an opponent. Boxing had been known as "the Noble Sport." She wrote a book in 1956 called The Ignoble Sport in which she pointed out that the focus of that injury was the brain itself. In 1984 the Council of the American Medical Association published a report on brain damage to boxers and the Journal of the AMA invited Lam bert and Hardman to comment on it. While their comments described both hemorrhagic injuries and damage to nerve cells associated with "dementia pugilistica," they took pains to emphasize mechanisms of injury, in particular the effects of repetitive subconcussive blows as opposed to knockouts.

Dementia pugilistica had first come to public notice in 1928 when Harrison Martland, a pioneer in forensic pathology, opened up the field of chronic traumatic encephalopathy in an article in the Journal of the American Medical Association (JAMA). He also coined the term "punch drunk." Fortunately, Martland was a medical examiner who had been well tested by the culture of cross examination because he was subjected to a torrent of abuse by outraged boxing advocates. Martland forecast that neuropathologists connected to psychiatric hospitals would eventually document brain injury, as opportunities arose to examine the brains of punch drunk fighters. A British neuropathologist, J.A.N. Correllas, did just that and in 1973 published an account of the "aftermath of boxing," in which the brains of fifteen retired boxers whose days ended at the Ranwell Hospital in Southeast England were dissected postmortem. He described how the septum pellucidum, a neural tissue membrane that divides the two brain hemispheres, is split apart and the fluid filled spaces called ventricles become larger due to tissue loss from the surrounding brain. Along with this macroscopic injury, hemorrhages are common, the large ones being sometimes lethal. More insidiously microscopic hemorrhages damage local areas throughout the traumatized brain. Nerve cells undergo acute and chronic injuries, some of which reminded microscopists of the "tangles and plaques" microscopically visible in the brains of patients afflicted with Alzheimer's disease. But an important difference between boxers' and Alzheimer's patients' brains is the localization of the injuries. Alzheimer's patients' brain tissue is split apart and hemorrhages are common, whereas the boxers' injuries affect different areas of the brain, including the cerebrum, an organ closely identified with balance and coordination.

The Key Findings

Hamilton's colleague at Pittsburgh, the forensic pathologist Benet Omalu, realized that Mike Webster's brain provided an opportunity to better understand the impact of chronic trauma on an athlete's brain after years of hard play and well documented instances of neuropathologic impairment. After he worked up the case material very carefully, Omalu took the slides to Hamilton and asked him to review them without any clinical or personal information about Webster. It is the custom in such circumstances for each pathologist to review the microscopic slides without any other information and then offer an opinion. Hamilton asked if the patient was a boxer. Omalu's wide smile confirmed that this was indeed an instance of chronic traumatic brain injury. They consulted Steve DeKosky, a nationally renowned Alzheimer's expert, and after a further year's work the case report was published. Throughout this process all the evidence expressed by the National Football League would welcome the information, but just as Martland had experienced in the case of boxing, critical information about a nation's lifeblood has not generated fierce controversy.

To protect themselves boxers wear padded gloves and football players wear shock-absorbing helmets. Boxers, exposed to a boxer's hands, but the cruel irony is that they thereby allow the fiet to deliver a more powerful blow, a blow that can devastate the brain. As Lampert and Hardman noted, that blow can have the force of a hun dred times that of gravity, or half a ton. Helmets protect the football player's skull, but what is not well appreciated is how remotely the brain inside the skull is bounced around and injured by being slammed against its bony container. What is not widely understood is that the brain is a gel-like organ, softer than a snail or a slug. When it is taken out of the skull, it is so soft that it cannot maintain its own shape, the shape that is maintained in vivo by intracranial cerebrospinal fluid that bathes the entire central nervous system.

The vulnerability of brain tissue is readily understood if you are a surgeon or a pathologist, but not so easily by athletic coaches or by sports organizations whose very practices subject organs and tissues to forces that lacerate the delicate nerve cells and their long, thread-like extensions called axons. The axons and their connections constitute the "wiring" of the central nervous system. But "wiring" a much used analogy, is a misleading term.
Dickson Professorships to Covell and Kennel

Two Edward A. Dickson Emeriti Professorships have been awarded this year, one to Ruth Covell, the other to Charles Kennel.

The awards come from a fund established through the estate of Mr. Dickson, who served on the Board of Regents of the University from 1913 to 1946, the longest tenure of any Regent. They endowed appointments for the designated academic year at each of the ten campuses of the University, in accordance with the stipulation of the 1955 gift document.

For the support and maintenance of special annual professorships in the University of California to which shall be appoint- ed by the President, with the approval of the Re-gents, persons of academic rank who have been re-tired after service in the University of California and who shall receive such awards in addition to their retirement or pension al-lowances. Awards shall be made upon such conditions of service, research or teaching as The Regents may require. Professorships so awarded shall be known as the Edward A. Dickson Emeriti Professor-ships.

Covell was cited for a wide range of activities since retirement. These include four years as a mentor in the Chancellor’s Scholars program, service on an intensive junior faculty development program, clinical work in family medicine, and activity in a host of community organizations, including the San Ysidro Health Centers, Project Concern Interna-tional, and the Epilepsy Founda-tion of San Diego. In 2012 she re-ceived the Distinguished Service Award of the University of Chicago Division of Medical and Biological Sciences, and in 2013 “Ruth Covell Day” was proclaimed by the City of San Diego in honor of her services to the community.

Kennel, since retiring as direc-tor of SIO, has remained in the forefront of studies of climate change and sustainability, along with colleagues here and elsewhere. He has written several major articles with UCSD colleagues on approaches to international collaboration to deal with the dan-gers from global warming. One of many of his projects has been the development of a highly successful "MOOC" (Mass Open Online Course) accessible on the internet on climate change. He also serves as Inaugural Visiting Fellow at the Center for Science and Policy at the University of Cambridge, where he lectures and works each spring, and coordinates the col-laborative Cambridge-UCSD Global Water Initiative. He has also chaired the National Academies Space Studies Board.

Dickson Award recipients

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because it suggests metallic tough-ness, durability and reparability. Indeed “wiring” is almost a mischie-vious analogue since it suggests a durable strength that these structures do not have. The brain is not a machine made of metal. If you step on your cell phone it may sur-vive. But if you step on a slug or a snail, the creature is smashed be-fore repair. The analogy holds for mammalian brain tissue too. And the brain is even more physically vulnerable and only partially pro-tected by the bony case in which it is packaged. The skull itself can damage the brain when rapid sub-concussive blows move the cere-bral and cerebellar hemispheres violently within the confines of the skull, lacerating axons, injuring blood vessels and shattering the delicate cellular fibers that make and maintain connections between brain regions and the peripheral nervous system, the system that in-ervates the rest of the body.

When Lampert and Hardman wrote about boxing they empha-sized the vulnerability of the move-able head and made clear that cause the soft brain to glide and swirl within the skull, tearing blood vessels and the axons that are the very lines of communication within a cognitive organ. They empha-sized that it was not just knock-out blows but rather the summa-tion of minor damage over succes-sive bouts that contributes to long- term injury and the cognitive and mor-tal changes that result in ring of speech and chronic impair-ment of balance. The lessons learned from boxing passed on to new generations of neuro-psychologists, including Hamilton.

When he shared his view of the inju ries that had devastated Web-ster’s brain with Omalu, they both realized that they had some very im-portant information to share with both the profession and the broad-er public.

They also had some new tools that were not available to Lampert and Hardman. Paying for the ma-terials out of his own pocket, Oma-lu stained slices of Webster’s brain with an antibody to tau, a major structural protein found in nerve cells and glia, the supporting cells surrounding neurons. But in in-jured brains tau accumulates in a phosphorylated form, phosphorylation being nature’s way of tag-ging a defective protein for removal. While that damaged protein piles up inside the organ, key brain functions including cognition are impaired and whether this hap-ens in the brain of a patient with Alzheimer’s disease, or a punch drunk boxer, or a football player, its effects are very harmful.

The story of the medical re-search is told in League of Denial: the NFL, Concussions, and the Battle for Truth, a fine book by Mark Fainaru-Wada and Steve Fainaru published in 2011. The movie “Concussion” and a PBS Frontline documentary are based on the book. The message of the research was at first resisted by the National Football League brass, much as tobacco company execu-tives denied the health dangers of smoking. But players began to lis-ten and more and more wrench-ingly read accounts of impaired players have been re-counted. Many are willing their brains to ‘brain banks’ where skilled neuro-scientists can determine if they show signs of Chronic Traumatic Encephalopathy. Players have be-come so attuned to the need for postmortem neuropathologic eval-uation in accredited centers that in at least one instance a player about to take his own life shot himself in the heart so as to ensure that the brain is not damaged by a bullet. In 2015 the courts approved a settle-ment reached by the NFL with the players association that will pay as much as $5 million per retired player to compensate claims for injuries due to repeated head trauma. The League has also issued in-structions to teams to take players out of a game if they experience a concussion.

If the story has an underlying moral, it is the enduring value of the autopsy. I liken this investiga-tion to the last chapter in every pa-tient’s medical biography. I think that it should not be left unwritten, especially if the patient themselves request that after their death, their brain be studied. Such investiga-tions help to explain to others the neurological and psychological consequences of repetitive brain injury sustained when blows, falls, and bodily collisions subject the brain to repeated violent accelera-tion and deceleration as the soft frail human brain smashes up against the skull that contains it and is there to protect it, but can-not do so against every contingen-cy.

As a coda to this tale, I am hap-py to note that Dr. Ann McKee, one of the leading students of brain trauma among professional ath-letes, has agreed to deliver the thir-teenth annual Peter W. Lampert Mem-orial Lecture at UCSD in 2017. She will report on the present sta-tus of research into chronic trau-matic encephalopathy. We look for-ward to hearing of the progress in the field of investigation to which our late distinguished UCSD col-league contributed so importantly by his research.

This is surely one of those landmark efforts that make ours such a pio-neer among research universities.
By Wayne A. Cornelius
Theodore Distinguished Professor of Political Science Emeritus and Daniel Tichenor
Philip W. Knight Professor of Political Science, University of Oregon

Immigration – its levels, source countries, perceived negative consequences, and cynicism about government – has taken center stage in the heart of this year’s U.S. presidential campaign, motivating many of the 13.3 million voters who backed Donald Trump in GOP primaries. Videos of Trump rallies posted by New York Times reporters show his supporters chanting “Build a wall! Kill them all!” And according to both supporters and opponents of Trump’s exit from the European Union, immigration was also at the core of the “Leave” vote. Even Britons living in places that have benefited handsomely from EU subsidies and investments could not bring themselves to support staying in the union, because of concern over immigration. Why are anti-immigrant voters resonating so powerfully in pivotal elections on both sides of the Atlantic? In the U.S., why are calls for building a wall on the border with Mexico and deporting millions of undocumented immigrants already here so attractive to so many voters, even as the actual flow of undocumented immigrants from Mexico has dropped to the lowest level since 1971?

American history is replete with episodes of nativist agitation, dating back to the 19th century. Such movements have emerged at times when working-class people have felt most economically insecure and new immigrants could serve as convenient scapegoats. Amid drastic wage decline and record unemployment in 1870s California, a modest influx of Chinese immigrants, recruited as cheap contract labor, became the focus of white worker outrage. The root causes of their distress actually lay in unproductive mines, the completion of the transcontinental railroad, and a flood of new European immigrants to the Pacific Coast.

Indeed, Chinese immigration was miniscule compared with inflows from Europe (just 4 percent of all immigration at its zenith). Nevertheless, California politicians, led by Dennis Kearney of the Workingmen’s Party, quickly learned that anti-Chinese speeches and policies translated into votes. Large bipartisan majorities in Congress soon passed the infamous Chinese Exclusion Act of 1882, suspending all Chinese admissions for ten years. Similar dynamics played out during the Great Depression, with nativist lawmakers blaming 16.5 million foreign-born for the nation’s economic suffering, a rationale used to deny asylum for European Jews during World War II.

Recent anti-immigrant movements have also been whipped up by entrepreneurial politicians using xenophobia to tap into an underlying current of economic insecurity. A prime example is the early 1990s Proposition 187 movement in California, which Pete Wilson latched onto and rode to reelection as Governor. Wilson cast immigrants as “takers” rather than contributors to the state’s economy, whose growing presence had caused a fiscal crisis. His Democratic opponent, Kathleen Brown, never convincingly rebutted Wilson’s claims, which were not grounded in evidence. This year’s success of angry populist movements on both sides of the Atlantic can also be read as a tale of effective political entrepreneurship. The right has convincingly evidenced that a backlash against immigration has been building in the American electorate since the 1980s, especially among white middle-class and professionals, suspending all Chinese admissions for many years. This trend was recently driven, in part, by overwhelmingly negative framing of immigration in the mass media. USC political scientists Marisa Abrajano and Zoltan Hajnal found that there are four times as many negative stories on immigration as there are positive ones, even in mainstream, liberal media like The New York Times. Nevertheless, it is unlikely that immigration would be center-stage in the 2016 presidential election. International labor mobility, like other dimensions of globalization, produce winners and losers. It can negatively impact the wages of the lowest-income earners while raising the incomes of higher earners. But in both cases the effects are very small.

Moreover, it is not at all clear that native-born workers would be helped appreciably by adopting more restrictive immigration policies. We know from extensive research that direct immigrant-to-native competition does not cause large-scale de-industrialization in the U.S., in the same industries, in the same regions, is rare due to segmentation of the labor market over several generations. Very few native-born workers apply for jobs in immigrant-dominated firms. We also know that wage stagnation is driven more by the decline of unionization, outsourcing, and technological change than by immigration. Some people who support anti-immigrant candidates and movements undoubtedly view themselves as victims of “uncontrolled” immigration. But only a minority of such voters are low-skilled workers who personally experienced unemploy- ment or depressed wages from immigration. Many more seem to be responding to nativist appeals by entrepreneurial politicians, whose messages are amplified by both the mass media and social media. The rhetoric demotes immigrants by depicting all of them as burdens on the economy as well as threats to national security and cultural cohesion, while ignoring the benefits of their presence to consumers, employers, and national economic performance.

The kind of immigration debates now raging on both sides of the Atlantic reflect attention from policies that might actually improve the lives of those who see themselves as victims of immigration. For example, Britain lacks an effective national program to train native-born workers for construction jobs. Thus, Polish workers arrive better-trained for such jobs, and – not surprisingly – employers prefer to hire them. In the U.S., stagnant wages and income inequality could be addressed much more efficiently through investments in education, job training, child care, housing, and minimum wage enforcement than with an immigration crackdown. The U.S. and Britain have failed to provide enough targeted assistance to workers and communities negatively impacted by globalized production.

Can such policy nuances be communicated effectively in the heat of a national political campaign? The Brexit campaign suggests how difficult it is. “Leave” voters had multiple grievances against the EU, including excessive regulation, and British immigrants. The “Leave” campaign drowned them out with the simple message that immigration was “out of control” and causing profound problems. This year’s success of angry populist movements on both sides of the Atlantic can also be read as a tale of effective political entrepreneurship. The right has convincingly evidenced that a backlash against immigration has been building in the American electorate since the 1980s, especially among white middle-class and professionals, suspending all Chinese admissions for many years. This trend was recently driven, in part, by overwhelmingly negative framing of immigration in the mass media. USC political scientists Marisa Abrajano and Zoltan Hajnal found that there are four times as many negative stories on immigration as there are positive ones, even in
Immigrant-Bashing on Both Sides of the Atlantic: Insecure Workers and Scapegoat Politics

By Wayne A. Cornelius
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and Daniel Tichenor
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Indeed, Chinese immigration was minuscule compared with inflows from Europe (just 4 percent of all immigration at its zenith). Nevertheless, California politicians, led by Dennis Kearney of the Workingmen’s Party, quickly learned that anti-Chinese speeches and policies translated into votes. Large bipartisan majorities in Congress soon passed the infamous Chinese Exclusion Act of 1882, suspending all Chinese admissions for ten years. Similar dynamics played out during the Great Depression, with nativist lawmakers blaming 16.5 million foreign-born for the nation’s economic suffering, a rationale used to deny asylum for European Jews during World War II.

Recent anti-immigrant movements have been whipped up by entrepreneurial politicians using xenophobia to tap into an underlying current of economic insecurity. A prime example is the early 1990s Proposition 187 movement in California, which Pete Wilson latched onto and rode to reelection as governor. Wilson cast immigrants as “takers” rather than contributors to the state’s economy, whose growing swelling had caused a fiscal crisis. His Democratic opponent, Kathleen Brown, never convincingly rebutted Wilson’s claims, which were not grounded in evidence. This year’s success of angry populist movements on both sides of the Atlantic can also be read as a tale of effective political entrepreneurship. There is convincing evidence that a backlash against immigration has been building in the American electorate since the 1980s, especially among white middle-class voters who object to large-scale registration changes from the Democratic to the Republican Party. The backlash has been driven, in part, by overwhelmingly negative framing of immigration in the mass media. USC political scientists Marisa Abrajano and Zoltan Hpain found that there are four times as many negative stories on immigration as there are positive ones, even in mainstream, liberal media like The New York Times. Nevertheless, it is unlikely that immigration would be center-stage in the 2016 U.S. presidential election. Donald Trump has not made it his signature issue, from the first day of his campaign. His fiery calls for wall-building and mass deportations have captivated many economically and culturally insecure white voters, especially those with less than a college education.

Similarly, in Britain, leaders of the “Leave” campaign, like Nigel Farage and Boris Johnson (now Britain’s Foreign Secretary) seized on immigration as the core concern of poor and working-class voters fearing depopulation from the European Union. As former Prime Minister Tony Blair observed after the Brexit vote, the hard right in British politics “took this issue and ran with it.”

As Pete Wilson’s California, U.K. immigrants were painted as security threats and petrolheads, leaving Britain’s economy and workforce in a lurch. In the same industries, in the same regions, is rare due to segmentation of the labor market over several generations. Very few native-born workers apply for jobs in immigrant-dominated firms. We also know that wage stagnation is driven far more by the decline of unionization, outsourcing, and technological change than by immigration.

Some people who support anti-immigrant candidates and movements undoubtedly view themselves as victims of “uncontrolled” immigration. But only a minority of such voters are low-skilled workers who personally experienced unemployment or depressed wages due to immigration. Many more seem to be responding to nativist appeals by entrepreneurial politicians, whose messages are amplified by both the mass media and social media. Their rhetoric demonizes immigrants by depicting all of them as burdens on the public purse and threats to national security and cultural cohesion, while ignoring the benefits of their presence to consumers, employers, and national economic performance.

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Can such policy nuances be communicated effectively in the heat of a national political campaign? “Remain” politicians did a poor job of addressing concerns about free movement of labor from other EU countries, in terms of its scale, pace of increase, and impacts on public services. The “Leave” campaign drowned them out with the simple message that immigration was “out of control” and causing profound problems.

Wayne A. Cornelius is the Theodore Glirded Distinguished Professor of Political Science and Mexican Relations, emeritus, and founding director of the Mexican Migration Field Research and Training Program at UCSD. Daniel Tichenor is the Philip H. Knight Professor of Social Science and Fellow of the Wayne Morse Center for Law and Politics at the University of Oregon, Eugene.
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Dementia pugilistica had first come to public notice in 1928 when Harrison Martland, a pioneer for神经学, opened up the field of chronic traumatic encephalopathy in an article in the Journal of the American Medical Association (JAMA). He also coined the term “punch drunk.” Fortunately, Martland was a medical examiner who had been well tested by the culture of cross-examination because he was subjected to a torrent of abuse by outraged boxing advocates. Martland foretold that neuropathologists connected to psychiatric hospitals would eventually document brain injury, as opportunities arose to examine the brains of punch drunk fighters.

A British neuropathologist, J.A.N. Corsellis, did just that and in 1973 published an account of the “aftermath of boxing,” in which the brains of fifteen retired boxers whose days ended at the Ranwell Hospital in Southeast England were dissected postmortem. He described how the septum pellucidum, a neural tissue membrane that divides the two brain hemispheres, is split apart and the fluid filled spaces called ventricles become larger due to tissue loss from the surrounding brain. Along with this macroscopic injury, hemorrhages are common, the large ones being sometimes lethal. More insidiously microscopic hemorrhagic damage local areas throughout the traumatized brain. Nerve cells undergo acute and chronic injuries, some of which remind microscopists of the “tangles and plaques” microscopically visible in the brains of patients afflicted with Alzheimer’s neurodegeneration.

But an important difference between boxers’ and Alzheimer’s patients’ brains is the localization of the injuries. Alzheimer’s affects specific areas of the brain, whereas the boxers’ injuries affect different areas of the brain, including the cerebrum, an organ closely identified with function and coordination.

The Key Findings

Hamilton’s colleague at Pittsburgh, the forensic pathologist Benet Omalu, realized that Mike Webster’s brain provided an opportunity to better understand the impact of chronic trauma on an athlete’s brain after years of hard play and well documented instances of neurologic impairments. After he worked up the case material very carefully, Omalu took the slides to Hamilton and asked him to review them without any clinical or personal information about Webster. It is the custom in such consultations for each pathologist to review the microscopic slides without any other information and then offer an opinion. Hamilton asked if the patient was a boxer. Omalu’s wide smile confirmed that this was indeed an instance of chronic traumatic brain injury. They consulted Steve DeKosky, a nationally renowned Alzheimer’s expert, and after a further year’s work the case report was published. Throughout this process all three impressed the football player’s skull, but what is not well appreciated is how the force bends the brain inside the skull is bounced around and injured by being slammed against its bony container. What is not widely understood is that the brain is a gel-like organ, softer than the viscerum of a snail or a slug. When it is taken out of the skull, it is so soft that it cannot maintain its own shape, the shape that is maintained by intercranial cerebrospinal fluid that bathes the entire central nervous system.

The vulnerability of brain tissue is readily understood if you are a surgeon or a pathologist, but not so easily by athletic coaches or by sports organizations whose very practices subject organs and tissues to forces that lacerate the delicate nerve cells and their long, thread-like extensions called axons. The axons and their connections constitute the “wiring” of the central nervous system. But “wiring” a much used analogy, is a misleading term

When Science Meets Politics. After a stint in the White House, the economist Carl Kaysen recalled a conversation in the Oval Office. He had taken a group of weapons scientists there to persuade a President Kennedy to agree to the proposed Limited Test Ban Treaty. The pact, later signed by the U.S. and U.S.S.R., banned testing in the atmosphere. It was intended to protect against radioactive fallout and as a step toward nuclear arms control. Kennedy asked if they could assure him that any nuclear explosion would be detectable “within an order of magnitude.” The President was unfamiliar with this mathematical reference, so he asked what it meant. The answer given was that in simple terms it could be understood as a technical term for a value with a defined range. In this instance, it meant that any explosion having a yield with a TNT equivalent of at least one kiloton would be highly likely to be detected, but not necessarily one below that range. Kennedy was visibly shaken because he suddenly realized that some low-level cheating might go undetected. He thought about it and said finally, “In that case, I will trust science — within an order of magnitude.”

A subtle joke, thanks to Janet Goff: John: This is a terrible saurus. Jana: What’s the matter with it? John: It’s just terrible.

Having been born and raised in the metropolitan area of Bayonne, New Jersey, which sits between Staten Island and the rest of what is now called the Big Apple, I came to share the general perception over how the city got its name. Bayonne, France is a Basque coastal city in the southwest of that country, famous for its jambon and for inventing the bayonet. Our town had originally been populated not by Frenchmen but by the Dutch settlers of New Netherlands. “They named a neighboring city Hoboken and a nearby body of water the Kill Van Kull, another Dutch name it retains. So how did the city come to have a French name? After World War II, a French army captain named Henri de Bayonne came to visit and claimed that his ancestors had given the town the family name. But he offered no proof and the claim was dismissed. About twenty years ago, I finally uncovered a plausible answer. I had been invited to Em-den in northern Germany to present a paper at a conference. On the way I got to know a water pistol was confiscated from algebra class, because it was a weapon of math disruption.

2. A water pistol was confiscated from algebra class, because it was a weapon of math disruption.

Thetism is a non-prophecy organization. 11. Two hats were hanging on a hat rack, saying “why? You hat said to the other: "You look at here, I'll go on a head."

12. I wondered why the baseball kept getting bigger. Then it hit me.

13. A sign on the lawn at a drug rehab center said: “Keep off the Grass.”

14. The midget fortune-teller who escaped from prison was a small medium at large.

15. The soldier who survived mustard gas and pepper spray is now a seasoned veteran.

16. When canibals ate a missionary, they got a taste of religion.

17. If you jumped off the bridge in Paris, you’d be in Seine.

18. Then there was the guy who sent ten puns to friends, with the hope that at least one of the puns would make them laugh. No pun in ten did.

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By Henry Powell
Professor Emeritus of Pathology

One of the pleasures of attending the annual meeting of my professional specialty is the chance to get together with former trainees. Several years ago, when I went to the neuropathology meetings, Ron Hamilton, who trained here, told me he was going to be a character in a movie and wondered who would get to play him. The movie, called “Concussion,” was screened in 2015. It came about because Hamilton, a professor at the University of Pittsburgh, had been instrumental, in collaboration with a mentee, in calling attention to the brain injuries sustained by Mike Webster, a center for the NFL’s Pittsburgh Steelers. Known as “Iron Mike,” Webster’s outstanding playing career had earned him induction into the Football Hall of Fame; but his life ended at the age of 50 under grim and miserable circumstances. He was one of seven former players known to have committed suicide as an indirect result of brain trauma. (Another was the Chargers’ Junior Seau.)

What I learned took me back to the earliest years of my training, and concerns the study of brain trauma as a public health measure. The gist of the story is that medical specialists have known for some time that two very popular sports, boxing and football, link the human desire for entertainment to severe injury and lifelong trauma – something that the athletes themselves, their professional associations, and the general public have been very reluctant to acknowledge.

Peter Lampert’s Pioneering Role

I first heard about the neuropathology of brain trauma from the late Peter Lampert (1929-1986), the first neuropathologist to be recruited to UCSD and the head of both neuropathology and the Department of Pathology here. For those fortunate enough to be trained by him, he was a great mentor. Although his research interests focused on viral brain infection as well as on the pathology of multiple sclerosis, Lampert was keenly interested in how the brain reacted to every kind of injury. A brilliant experimental pathologist, he sought to demonstrate with electron microscopic images the impact on individual cells of different kinds of injury. Trauma was especially concerning because there is no path to recovery for injured tissues. The pathologist’s job was therefore to identify the structural injuries in damaged brains and educate our colleagues and the broader public about the risks.

Lampert had worked at the Armed Forces Institute for Pathology along with a colleague, John Hardman, during a time when boxing was always in the news and when the medical profession believed that its risks should be publicized. Public concern about boxing was especially keen in the UK, where anti-boxing advocates such as the extraordinary Baroness Edith Summerskill (both an MD

Peter Lampert and the Inquiry into Brain Trauma in Boxing and Football

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