Flat vs. round.

Last month, world attention was dominated by a disruptive virus, angered by ugly politics, briefly turned to a space station special delivery, and horrified by the retrograde murder of George Floyd. Michigan Urology also lost one of its foundational alumni, Ed Tank.

**One.**

A flat Earth was a reasonable belief for *Homo erectus* and their other hominin cousins, including *Australopithecus sediba* shown below in reconstruction at the University of Michigan Natural History Museum (visited just prior to the closure for coronavirus). The campfires,
hunting grounds, and cave dwellings of early humans reinforced a sense that their environments were mainly two-dimensional landscapes of hills, valleys, and forests.

That mind-set changed when clever *Homo sapiens*, sailing the seas and studying the skies, figured out the true fact of the round Earth: sailors noticed mountain peaks well before they saw the shorelines as they approached land and astronomers, lucky enough to see eclipses, deduced that circular shadows on the moon could come from spherical bodies. Aristotle captured some of these ideas in writing and a few intrepid navigators had enough faith in a round Earth hypothesis to venture west across the Atlantic, millennia later. [Below: lunar eclipse, *Wikimedia*, with permission, Tom Ruen 14 October, 2014.]

John Cabot in 1497 was one of the first identified Europeans to navigate to the North American Continent. Unnamed Norse explorers and fishermen as far away as the Basque region fished the Grand Banks seas and set foot in present-day Newfoundland and Labrador centuries earlier, but it was John Cabot from Bristol, England, to whom the first name can be attached. Originally named Giovanni Caboto from Genoa, he worked his way to Venice, then Spain, and finally England seeking funding for an expedition. Bristol, the second largest city in England and a major port, was where he raised enough capital to build a three-mast ship of 60-feet and 50 tons and find a crew to follow his belief in a round Earth. King Henry VII gave Cabot a Royal Warrant (a "visa" of the time) to explore what was presumed to be Asia. Cabot’s single ship crossed the rough North Atlantic with a crew of 18-19 in 34 days, explored Newfoundland or Labrador, and accurately returned to Bristol in 15 days. The journey was repeated successfully once, but the ship was lost in 1498 on a third try. [Below: traditional globe.]
Five years before Cabot’s journey, another immigrant from Genoa, then living in Spain, crossed the gentler southern Atlantic Ocean to Caribbean Islands with three ships. Christopher Columbus had obtained financing from King Ferdinand and Queen Isabella, making two other return trips, but never reached the mainland. In fact, no one from the Spanish contingent reached the actual North American continent until 1513. It is possible that Columbus and Cabot met in Spain between 1490 and 1494, but Cabot certainly knew about the travels of his fellow countryman. Columbus and his sons branded their enduring legacy effectively. Cabot, lost at sea on his third voyage, wasn’t so well represented by his son Sebastian who was more interested in his own opportunities than advertising his father’s accomplishments. The Cabot story was eclipsed until now. Was Giovanni Caboto an ancestor of Hugh Cabot? It’s quite possible.

Two.

Retrograde visions. Orlando Ferguson (1846-1911), a self-styled professor from Hot Springs, South Dakota, copyrighted his Map of the Square and Stationary Earth in 1893, subtitled “Four Hundred Passages in the Bible that Condemns the Globe Theory, or the Flying Earth, and None Sustains It.” He completely discounted two and a half millennia of recorded human history and verifiable knowledge in favor of his literal translation of the Bible and belief in a “square and stationary Earth.”
Born near Du Quoin, Illinois, Ferguson moved to Dakota Territory in the 1880s, opening a grocery store and hotel. After a fire destroyed the hotel, he built a bath house near Siloam Springs and became known as “doctor” to some patrons. Fergusson’s map never gained traction and fell out of sight until discovery more than a century later. The map was donated in 2011 to the Library of Congress by State Senator Don Homuth. [N. Jackson. Library of Congress Receives Rare Map depicting Earth as Flat. *The Atlantic*, June 22, 2011.]

Edwin Abbott Abbott (1838-1926; shown above, *Wikipedia*), English schoolmaster and clever satirist, poked fun at his stultifying Victorian culture with a book in 1884 called *Flatland: A Romance of Many Dimensions*. Perhaps not wanting to be identified too closely to the ancient idea, Abbot used the pseudonym “A Square.” One of its illustrations (below) may have served as a model for the gendered entrances to the original Michigan Union, when it was built in 1917.
One of Abbott’s students at the City of London School, Herbert Henry Asquith, became Prime Minister of the United Kingdom from 1908 to 1916. Later the Earl of Oxford, Asquith, didn’t take Abbott’s *Flatland* literally when he oversaw the dispatch of the British Expeditionary Force (BEF) to the Western Front in The Great War in 1914. (Hugh Cabot would join the BEF in 1916.) The *Flatland* story was picked up in a 2007 film and two shorter films, *Flatland: The Movie* (2007) and *Flatland 2: Sphereland* (2012). Abbott's "romance" was a clever fantasy and is still an entertaining read (below), but *The Flat Earth Society* is a meme for people unfortunately stuck in obsolete versions of reality or obstinately clinging to it for self-serving reasons.

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**FLATLAND**

A Romance of Many Dimensions

*With Illustrations*

*by the author, A SQUARE*

"Pit, fi, foe, frie, o, a square up till!"

LONDON

SHELLEY & CO., 16 & 17, ESSEX STREET, STRAND

(First English Edition) 1884.
Hardy Hendren, an iconic presence in my clinical education and even more so for that of John Park, introduced me to the Flat Earth meme, once commenting: “If you stick around long enough, you’ll meet someone who believes the world is flat.” It was a good lesson and I didn’t have to wait long to find members of the Flat Earth Society. Hendren was one of the best early explorers of the round earth of pediatric urology, but warned his students that Flat Earther’s always try to block progress. [Above: Hendren as visiting professor at University of Michigan 2012.] Luddite is closely synonymous for the frame of mind in which persuasive argument, careful observation and reasoning, or scientific evidence fail to release a person from primitive beliefs.

Hardy educated his trainees in many ways even outside the operating room, where his rigor of thought, innovation, and tenacity were unmatched and those disciples carried his ideas and philosophy around the world.

Hendren’s clinics, relationships to referring physicians, and care for his supporting team set powerful examples for generations of students, residents, and fellows. After his own diagnosis of colon cancer, publicly discussed for all to learn from, Hardy quit smoking and became evangelical in urging those he encountered to quit. Trainees, colleagues, and people on the street were lectured vigorously. So too were parents of the children he treated – I marveled at his bravery, holding out a trash can to astonished parents in clinic to dispose of their cigarettes and lighters. Some may have seen this as an affront to personal choices, but Hardy was on a mission to minimize comorbidities of his patients, dispelling Flat Earth views of the world, including that of the healthy cigarette. Alberto Pena, Mike Mitchell, Rick Rink, John Park, Joe Borer, David Joseph, and Craig Peters with so many others took notice and found their own ways to perpetuate Hardy’s work in their practices and carry his ideas around the world. (Below: modern version of Cabot's journey.)
Debts of gratitude. Almost everyone I know in health care proudly carries a debt to influential teachers and role models. While the term, *debt of gratitude*, raises eyebrows of grammatical purists it does seem to work for most of the rest of us, especially in terms of our mentors and role models. Hardy Hendren stands tall in my list. Although I didn't train with Jack Lapides, only knowing him in his retirement years, Jack, too, is high on the list for the contributions he made to our field and his style of intellectual rigor was impressed on his trainees and disseminated throughout their careers to their own students and colleagues such as myself. I have heard Jack mentioned with reverence over the years by so many of those who came within his orbit including Bill Baum, Marc Taub, John Hall, Barry Kogan, Steve Koff, Evan Kass, Bart Grossman, Gary Wedemeyer, Jay Hollander, and Ed Tank to name just a few. Our role models, and so much more of what is good in humanity, get drowned out by the daily tragedies and evils that compel our attention to news cycles.

Last week's UMMG Town Hall responded mainly to the covid disruption of our work and lives and something David Spahlinger said caught my attention. He offered the metaphor that in the present phase of our national and personal traumas many people are in the "valley of disillusionment." In our UM health system David is in the tough position of being the daily lightning rod for complaints, anger, disillusionments, and expectations for solutions to extremely difficult problems. Yet as an internist and intensivist, working in the thick of things and as president of the health system making rounds throughout all corners of the medical center, he is eminently credible. His talk noted that some of our colleagues "bristle" when they are told that "we are all in this together," because the reality is that the suffering is inequitable. People suffer in very different ways - from the front line maintenance worker to the ICU nurse to the junior emergency department resident to the exhausted hospitalist to the beleaguered phone line staffer to the senior administrator trying to do their jobs. Each person's home and family situation is unique and it is perhaps presumptive when leaders presume cohesion of a group. Spahlinger said:

"The financial impacts of no merit increase and suspension of retirement contribution are not felt equally by everyone. Likewise, not everyone is working on the front line risking their own health. Those at home are under stress as they wonder if they have a job to come back to. My point is that everyone is suffering in different ways. The reason I say we are all in this together is that I don't think we can prevail as an organization and carry out our mission unless we face the challenges ahead together."

From my point of view as a colleague of David Spahlinger over the past 30 years, we all owe a great debt of gratitude for his excellence as a clinician and credible leader in our health system.
Ed Tank. Michigan Urology lost one of its most extraordinary alumni when Ed died in Portland, Oregon on May 13 at age 88, leaving his wife Rosalie, four children, seven grandchildren, and a three-year old great-grandson. Born on March 23, 1932 in New Rochelle, NY as the first of two children, Ed grew up in the midst of the depression admixed with the urban excitement of his region. As a young boy he recalled meeting the legendary Yankee baseball player, Lou Gehrig (1903-1941) in an elevator. The Tanks moved to Western Springs, Illinois, in the Chicago area sometime around 1938 and Ed attended public schools in the La Grange district. The east drew him back for college at Amherst where he dove deeply and enthusiastically into liberal arts, in addition to having an outstanding collegiate wrestling career. In college he fell in love with Dixieland Jazz and loved to travel to Jimmy Ryan’s Jazz Club on Manhattan's West Side to hear Wilbur de Paris and his band.

Medicine attracted Ed late in his college years and after graduating in 1954, he returned to Chicago for a postbaccalaureate year at Loyola to fulfill medical school requirements. This got him into St. Louis University Medical School, graduating in 1959. Along the way on a road trip back to Amherst for his third year college reunion Ed reacquainted with a childhood friend, Rosalie Butterfield in Philadelphia and the couple married in six months. In St. Louis the couple had their first child while Ed was coincidentally rotating on the obstetrics service where Rosalie gave birth to Ellyn Marie.

In July 1959 Ed began surgical internship and residency at the University of Michigan under Gardner Child, III. The couple remained in Ann Arbor for two additional years, living quite happily as Rosalie recalls living in converted wartime housing then still present in Pittsfield Village and growing their family, with Julie who was born at St. Joe's.

A research year was necessary in the surgery program, unless a resident had served in the military – and if so they were forgiven the year. Ed chose to do his research in Boston 1962-
1963, working closely with Bill Bernard on hyperbaric medicine and was inspired to pursue pediatric surgery. A third daughter, Katie, was born at Boston Lying-In Hospital.

The Tanks returned to Ann Arbor in the summer of 1963 through summer of 1965, as Ed completed his surgery training under Gardener Child and during Reed Nesbit's last years of leadership in urology. In July 1964 their son Ted was born at University Hospital. Ed took the family back to Boston at Children's Hospital for two years of training under Robert Gross, whom Rosalie recalls as mostly “a name” rather than a strong presence in the program at that time. She recalls Arnold Colodny’s strong influence then and Ed’s “double dose” of pediatric urology rotations under Alan Perlmutter.

In the summer of 1968 Ed returned to the University of Michigan as its first pediatric surgeon, but encountered turf issues developed with other surgical disciplines, distrustful of the emergence of pediatric surgery as a discipline. Thoracic surgeons were unwilling to relinquish the chest to Ed. Jack Lapides, Michigan's new chief of urology, offered additional training in the urology domain and Ed, therefore, spent two years as a urology “resident” under Lapides while still holding surgical responsibilities as a faculty member. Ed Tank then became the first trained pediatric urologist at the University of Michigan and remained on the faculty until May 1973 when he took a job in Portland at Oregon Health and Science University. The University of Michigan then had no pediatric surgeon until Arnie Coran came in July 1974. Portland had been selected after a “big family discussion,” according to Rosalie. Ed enjoyed his work there with Jack Campbell, but found he had to focus on pediatric urology exclusively, even though he had hoped to practice general pediatric surgery as well. Ed was a superb clinician, surgeon, and teacher and inspired a generation of students and residents, one of the earliest being Rob Kay who came from UCLA medical school to Portland for residency 1974-1979, before going to the Cleveland Clinic. Ed's first associate in pediatric urology was Steve Skoog who came in 1992, having trained at Walter Reed Army Medical Center and the Washington National Children's Hospital under Barry Belman in 1985-1986. Steve recalls his first case with Ed was a 7-year old with Mayer-Rokitansky syndrome who had a Young-Dees urethroplasty and bilateral reimplantation.

Ed, wanting to cut back somewhat clinically, left the university in the mid-1990s and joined the Northwest Urologic Practice with Tom Pitre, operating at Emanuel Hospital.

Ed was leader in pediatric urology nationally, serving as Chair of the Section on Urology of the American Academy of Pediatrics 1990-1991. Some of his papers stand as "classic" in pediatric urology literature. Ed loved the Northwest and continued his boyhood love of fishing. He and Rosalie explored the round earth from Alaska to Antarctica. Ed was a big reader - always carrying a serious (nonfiction!) book with him. Rosalie recalls that she couldn't talk him out of lugging a large hardcover biography of Truman or Eisenhower with them as they trekked the Himalayas.

Ed and Rosalie then focused most of their time in Sunriver and on their grandchildren, but continued some work for a time at Madigan Army Hospital and Native Health in Alaska before it had regular coverage. His collegiate passion for Dixieland Jazz persisted throughout his life and
he made Rosalie a convert to it, "umpteen jazz trips" across the country and around the world - actually all around it.

Ed and Rosalie loved and supported local classical music and repertory theater. Ed was a cheerful and generous maverick and always a passionate teacher, whether the subject was pediatric surgery, fish anatomy, crabbing, or subjects of his wide-ranging reading. Ed Tank was the first bona fide pediatric surgeon and pediatric urologist at the University of Michigan - a wonderful physician, teacher, role model, and friend to those lucky to have known him.

[Below: the subtle arc of the horizon from Portland to Detroit on a Delta Airlines Boeing 737 five miles high.]

Postscript.

On this round and small Earth, everything and everyone is connected. Events and ideas that originate at one spot may reverberate widely and persistently around the sphere. Navigation of the round Earth was not universally beneficial, certainly not for indigenous peoples of the Americas, Australians, or enslaved Africans.

David Spahlinger's point, quoted above, links a number of issues at this distressing moment in time, including our rattled workplaces at the University of Michigan and the death of George Floyd on a Minneapolis street. I took from David's statement at the Town Hall, that a legitimate understanding of the diversity of suffering predicates any solution to any particular challenges of the moment (and any claim to unity, i.e. "we are all in this together"). This applies beyond UM to regional, national, and global predicaments of poverty, war, and human justice. If individuals of diverse perspectives and circumstances are to find solutions to existential problems, any effective leadership for them must be credible - credibility built not only on respect for diversity but also
commitment to fair amelioration of inequities as we rebuild from months of the covid economic crisis and centuries of retrograde human inhumanity.

Thanks for reading Matula Thoughts, this June, 2020.

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