

The Indianapolis Literary Club 2015-2016: 140th Year

“Legacies of Hoosier Aviation and Medical Science Visionaries.”

Essayist: Stephen J. Jay M.D. Read on Tuesday, 8:00 P.M., 16 Feb 2016, at the regular meeting of the Indianapolis Literary Club, Park Tudor School.



“When Nature has work to be done she creates a genius to do it.” ----R.W. Emerson

“Knowing is not enough; we must apply.
Willing is not enough; we must do.”

--- Johann Wolfgang von Goethe (1749-1832). *Wilhelm Meisters*, 1830

“The study of history is mankind’s warning to itself.

--- Y. Yevtushenko, *The Wild Berries*, NY: Henry Holt, p. 125, 1989.

“The growth of a frail flower in a path up
has sometimes shattered and split a rock.”

---Carl Sandburg, A Father to his Son, *The People, Yes*, 1936



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Names: Horace Meek Hickam; John Bamber Hickam

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Stephen J. Jay M.D.
16 Feb 2016

Indianapolis Literary Club

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Stephen J. Jay, Essayist

Legacies of Hoosier Aviation and Medical Science Visionaries

Horace Meek Hickam 1885-1934 and John Bamber Hickam 1914-1970

Preface

I wish to dedicate this essay to the memory of Richard K. Curtis, a warm-hearted person we all loved to interact with. His Club essays were fascinating first-hand accounts of the *Greatest Generation*. Richard flew the legendary P-51 Mustang in 51 missions in the European Theatre with the 15th Air Force and received the Distinguished Flying Cross.

Introduction

Thucydides' vivid account of the plague of Athens affecting Spartans and Athenians in the Peloponnesian War (5th c. BCE) brought sharp contrast to the causes of death in war-- by combatant or by disease. To ancient observers, war and disease were inseparable, and given exigencies of combat, warriors and healers, who were often the same person, used weapons or potions as the need arose. In Homer's *Iliad*, praise for the physician equaled praise for the maker of weapons, and Asclepius, the God of Medicine, appears as a heroic warrior and "blameless physician." The sons of Asclepius, Machaon and Podaleirios, were surgeons and "valiant warriors." Hippocrates said, 'he who desires to practice surgery must go to war'.

Today, it's common for successive generations of families to follow similar career paths, such as medicine or the military, handed down through family genes and traditions. Distinctly uncommon are families that produce in successive generations a historic figure in the military followed in the next generation by one in medical science. A warrior and healer of distinction.

My aim this evening is to reflect on how one Hoosier family from a small rural town produced a father and his son who transformed how Americans think about war and health. The father's persona and name evoke images of the tragedies and heroic feats of *The Greatest Generation*; his son became a principle architect of one of the historic medical science reports in the 20th c.

The Place: Owen County, Spencer, Indiana

Owen County, in southwestern Indiana, was founded in 1819 and named after Col. Abraham Owen (1769-1811), a 'gallant Kentucky officer' and an aide-de-camp to William Henry Harrison at the *Battle of Tippecanoe*. The county seat at Spencer was platted in 1820 in a valley along the north bank of the West Fork of White River, an area once inhabited by Mound Builders. The ancient Illinoian glacial lakes and sluiceways formed the Mitchell Plain, a limestone karst plateau, with sink-holes and caves. Yellow poplar, sugar maple, white oak, and sycamore dominated the forests. When white men came in 1809, the Miami,

Potawatomi, Delaware, and Eel River tribes were planting corn on rich bottomland and hunting wild game.

Spencer was named 12 Feb 1820 after Captain Spier Spencer, “another brave soldier from Kentucky,” who, like Col. Owen, died at Tippecanoe in Nov 1811. Over the next 100 years, a surprising number of families from this small rural village, sent men off to war who would become prominent figures in military history.

The Hickam Family of Spencer, Indiana: Horace Meek Hickam

One such family is the focus of this essay. The Hickam’s came from Ireland and Scotland in the 1730s to Pennsylvania, Virginia, and Indiana. Horace Meek Hickam was born in Spencer 14 Aug 1885, the oldest of four children of parents Willis Hickam and Sallie Meek. Horace’s brothers, Willis Jr. and Hubert became prominent lawyers in IN. Willis served as a private in the U.S. Army in 1918 and became President of the Indiana University (IU) Trustees in 1963, and Hubert Hickam served in the Indiana General Assembly. By 1900, when Spencer was the center of the United States population, there were only 2,026 inhabitants.

Horace Hickam, attended Spencer High School, showed early interest in the military, and organized a cadet corps. At IU, he served in the Indiana National Guard and after a year, he received an appointment to the U.S. Military Academy in 1904.

Early Professional Life in Military.

At West Point, Cadet Hickam excelled as a student-athlete, and at graduation in 1908, he was commissioned 2nd Lt. in the U.S. 11th Cavalry. With 17 other young officers, he volunteered for aviation training, his passion in 1911, only eight years after the Wright Brother’s Flyer, sailed 120 ft. in 12 seconds at Kitty Hawk, Dec 17, 1903. In 1912, Hickam began aviation training and married Helen Bamber (1889-1957) of Toledo, Ohio, April 20.

Before he realized his dream as an aviator, Hickam served in the U.S. Army Cavalry in the Philippines and, in 1916, in the Mexican Punitive Expedition to quell Pancho Villa’s raids into New Mexico. For his ‘first taste’ of combat with the 7th Cavalry under Gen. John Pershing, (22 April 1916) Hickam received the Silver Star for gallantry.

His next assignment was peaceful; he served as Professor of Military Science and Tactics at the University of Maine. Remarkably, Maine University’s President, Robert Judson Aley, was a boyhood friend of Horace, having grown up in Owen County and graduating from IU. Aley had risen from principal of Spencer High School in the late 1800s (1882-1885) to national prominence in education, and on leaving Maine in 1921, Aley became Butler University’s President.

WWI

In WWI, Hickam was assigned to the Aviation Section of the U.S. Signal Corps. A rising star by 1918, he became Commanding Officer at Dorr and Carlstrom Fields in Florida. A year later, he was appointed Chief of the Information Division in Washington, DC, where he started the Air Corps Newsletter and wrote the first definitive history of the U.S. Army Air Service.

In 1921, Brig. Gen. William (Billy) Mitchell was the Air Service Assistant Chief, and Horace Hickam directed the Information Group. In this role, Hickam corrected a widely held belief that Congressional

expenditures for the Air Service in WWI were excessive and unproductive. Speaking for the Chief of the Air Service, Hickam (18 April 1921) said the cost was \$598 million, not the “billion-dollar” cost proposed by opponents. Hickam staunchly defended the Air Service, stating: the “greatest assets from the war are the thousands of trained flying officers and mechanics, together with our training fields (and) hangars...”

Emerging leaders in Aviation: Mitchell, de Seversky, Hickam

As an innovator in aviation and a brilliant pilot, Hickam worked closely with Brig. Gen. Billy Mitchell. To publicize the merits of Air Service pilots in 1920, Mitchell created the Flying Circus, the first air tournament at Bolling Field, Washington, DC; it featured aerobatic pilots in races and mock battles, thrilling crowds that flocked to witness displays of ‘stick and wire’ airplanes and fearless flying. Lt. Hickam was among the elite pilots who participated in the popular high speed-racing event held on a 25-mile air-race course from the Navy Yard to the Capitol Dome and Washington Monument.

Hickam developed close ties with the famous WWI Russian Ace, Alexander P. de Seversky, who became an American test pilot, innovator, patent holder, and consultant to the Air Service. An outspoken proponent of expansion of air power, de Seversky had personal and professional interactions with Hickam and Billy Mitchell.

These men knew the U.S. lagged behind European nations in development of aircraft and, with Mitchell’s lead, they tried to convince the army and navy that air power was the future of warfare. Mitchell’s goal was to build Congressional support for strengthening air defenses, building more reliable military aircraft and consolidating the separate army and navy air services into a unified air force. An outspoken proponent who often angered his superiors, Mitchell said, in 1921: ‘dreadnaughts were a dead technology’ and vulnerable to air attacks. He was widely criticized and needed his experts and colleagues, including, Hickam and de Seversky, to support him in the acrimonious debates.

Mitchell tests his Theory: USS Indiana

To prove the vulnerability of dreadnaughts, Mitchell conducted aerial bombardments on decommissioned ships. The USS Indiana, commissioned in 1895, had been decommissioned in 1919, in time for Mitchell’s bombing tests off Chesapeake Bay. While Mitchell considered the test on the U.S.S. Indiana successful, the Navy disagreed, despite Mitchell’s contention the Navy tried to undermine the bombing tests.

Not to be deterred, Mitchell decided to sink the pride of the German Imperial Navy, SMS Ostfriedsland, which during WWI peace negotiations was ceded to the US Navy. The Russian aviator, de Seversky, told Hickam that in WWI his bombing squadron observed that when their bombs missed vessels but landed alongside the ship, within a few minutes an SOS signal was raised on the mast indicating the ship was sinking. De Seversky concluded even small bombs exploding under water near the ship produced enough pressure to open steel plates of the ship’s hull. Hickam and de Seversky thought this “water-hammer” effect could increase the likelihood that SMS Ostfriedsland could be sunk during Mitchell’s tests. On July 21, 1921, in aerial bombardment tests conducted off Cape Hatteras, the Ostfriedsland was convincingly sunk, and Mitchell became a national hero and the “infallible prophet of aviation.”

Vindication of early proponents of air power

Despite Mitchell's efforts to stimulate action by Congress, few new aircraft were added to the Air Service between 1920 and 1924. From the creation of the Army Signal Corps in 1907 and the sinking of the *Ostfriesland* in 1921, it was not until 1941 that the U.S. Army Air Corps was established; it was not until 1947 that the U.S. Air Force was created.

Perhaps Mitchell's most remarkable accomplishment was in 1925 when he reported a fatal flaw in Hawaii's defenses—the lack of coordination between Army and Navy commands. Mitchell, in what some considered, "a wild flight of fancy," proposed the most likely attack would be launched by Japan; 100 airplanes would attack Ford Island, Schofield Barracks and Honolulu at 7:30 on a Sunday morning. The planes would fly undetected from the northwest and would put the fleet and military units out of action.

Mitchell's predictions in 1925 and the actual attack on Pearl Harbor, December 7, 1941, were remarkably similar. Some speculated that Japanese intelligence may have had access to Mitchell's report. One commentator said Mitchell was 'looking through the eyes of a realistic enemy while others were in denial'. Retired Admiral Sims, Naval Commander-in-Chief in European waters during the war, supported Billy Mitchell and said of the dissenters: "The average man suffers very severely from the pain of a new idea". But Mitchell's public statements pushed his superiors to their breaking point: Mitchell said: "These incidents are the direct result of the incompetency, criminal negligence and almost treasonable administration of the national defense by the Navy and War Departments," and Mitchell added: "The bodies of my former companions in the air molder under the soil in America, and Asia, Europe and Africa, many, yes a great many, sent there directly by official stupidity."

Hickam's later professional career

Horace Hickam testified at the court-martial of Billy Mitchell, echoing Mitchell's call for an independent air service run by airmen. Young air officers, including Edward Rickenbacker, took the stand to support Mitchell, and Mitchell's defenders in Congress compared him to Columbus, Joan of Arc, Galileo and Socrates. John Tillman, D-Ark quoted Lord Byron

"So the struck eagle, stretched upon the plain,
No more through rolling clouds to soar again,
Viewed his own feather on the fatal dart,
And winged the shaft that quivered in his heart".

On December 17, 1925, after three hours deliberation, the verdict: 'Guilty of insubordination'. The court reached back to Custer and sentenced Mitchell to suspension from rank, command and duty, with forfeiture of all pay and allowances for 5 years. Observers noted that Mitchell was uncommonly quiet for a moment after the verdict, but, with aplomb, exclaimed: "Why, these men are all my friends!" He smiled and shook hands with each judge; they each responded with a warm "Good bye, Billy". An inquisitive reporter gathered ballots from the court's waste container, compared handwriting, and found only General MacArthur voted for acquittal.

The court martial stirred a firestorm about U.S. air power. President Coolidge authorized the Morrow Board to investigate the independence of the Air Force. But, the real aim of the Morrow Board was to offset adverse effects of Mitchell's court martial. Horace Hickam testified in favor of a separate air force, stating: "I am confident that no general thinks he can command the navy, and no admiral thinks he can

operate an army, but some of them think they can operate an air force." Hickam continued: "the airplane was considered as a weapon of the ground troops, but that day has passed just as has the concept of naval vessels as transports for soldiers. The Air Force has come into its own right, and like the Navy it has come to stay."

The public and press were divided over the trial. The Indianapolis Star, September 7, 1925, said, "If they would do something especially dramatic there is probably no punishment they could inflict that would be more cruel than to pay no attention to him (Mitchell)." The South Bend News-Times, November 1 said: "If the rule of silence is applied to the Army, then it can be applied with equal severity to every other department of the government...The President is the accuser and the final judge, an inconceivable situation..."

From 1918 to his court martial in 1925, Billy Mitchell fought against Army and Navy traditions; despite compelling evidence, traditions prevailed. But World War II vindicated Mitchell, Hickam, de Seversky and other aviation pioneers. Military aircraft of the warring countries destroyed or sunk 33 battleships, including America's, Arizona, Oklahoma, West Virginia, Nevada, and California. The German Navy lost 7 and the Japanese Navy, 11 battleships.

Amid the upheavals of the Mitchell court martial, Horace Hickam's career advanced, and on March 1, 1932, he was promoted to Lt. Colonel and given command of the 3rd Attack Group, based at Fort Crockett, Galveston, Texas.

Two years later, Hickam played a prominent role in the sensational 1934 U.S. Airmail Scandal. The U.S. Postmaster requested that the Air Corps take over airmail operations as the government annulled contracts with the airlines over concerns of fraud and collusion. Hickam was given command of the Central Zone, headquartered in Chicago, one of three commands. The Air Corps priority was to maintain safety of pilots, while the Post Office Department priority was to 'put the mail through.' This conflict resulted in confusion, crashes, and pilot deaths, often in inclement weather. General Foulois defended the Air Corps handling of the controversial airmail program, and reaction to the deaths of pilots forced the President and Congress to release funds for the Air Corps to improve its navigation systems. If this had not happened, according to General Foulois, the U.S. "would have been as unprepared for WWII as it was for the first."

Fort Crockett: Horace Hickam's last duty post.

Fort Crockett would be Hickam's last duty post. Just six years earlier, (May 10, 1926) while a student at the Air Service Tactical School at Langley, Va., Hickam narrowly escaped death after colliding in mid-air with a fellow student (Maj. Harold Geiger). Both men parachuted to safety, and received the honor of induction into the famed "Caterpillar Club", a fraternal order whose members had survived an emergency parachute jump.

On 5 Nov 1934, Horace Meek Hickam was killed while practicing night landings on an unlighted runway, when his Curtiss A-12 Shrike attack plane hit an embankment and flipped over. He was 49 and was survived by his wife Helen (Bamber) Hickam, daughter, Martha Agnes, and a son, John Bamber Hickam, a student at Harvard University. Horace Hickam was buried in Arlington National Cemetery with full military honors on 10 November 1934; a large throng of friends and admirers gathered to pay him respects.

In a fitting tribute to this famous aviator, Major General Benjamin D. Foulois, Chief of the Air Corps,

approved the creation of a modern airdrome in Hawaii. From “tangled brush and sugar cane fields adjacent to Pearl Harbor on the island of Oahu”, 2,200 acres of ancient coral reef, covered by a thin layer of soil, was acquired in 1935 at a cost of \$1,095,54.78. Hickam Field was dedicated on Memorial Day in 1935; Gen. Douglas MacArthur, reflected that Horace Hickam was “an irreplaceable leader and a matchless friend.”

On Hickam’s death, the famous Crawfordsville, Indiana artist, Mary Oda Eglin, was commissioned to paint Hickam’s portrait from a photograph for placement at Hickam Field. The portrait survived Japanese bombing of Pearl Harbor. Mary Oda was the wife of Wabash College graduate and star athlete, Frederick Eglin, who like Horace Hickam was an aviator and also killed in a plane crash in the line of duty. Eglin Air Force Base is named after him.



John Bamber Hickam

Horace Hickam’s son, John Bamber Hickam, was born in Manila, Philippine Islands, 10 Aug 1914, where his father was stationed. As a child, John suffered prolonged major illnesses between the ages of seven and eleven when he was bedridden with a heart murmur, asthma, polio, and bone infections requiring multiple surgeries. Hickam read voraciously during this time, no doubt stimulating his early intellectual development.

Schooling

At Harvard, Hickam excelled in science and captained the Harvard Chess Team. In his second year, his father died and did not live to see John graduate summa cum laude and Phi Beta Kappa in 1936, receiving similar honors from Harvard Medical School, in 1940. In that year, Hickam engaged in research at the recently organized Aero Medical Research Unit at Wright Field, in Dayton, where pioneering studies of pressure suits (‘G-suits’), pressurized cabins, altitude chambers, human centrifuges, and oxygen masks for pilots were being carried out. The famed aviator, Wiley Post, tested his pressure suits at this facility. John Hickam, still in his 20s, was immersed in the frenzy of medical and aviation research.

Following residency training in Boston and Atlanta (Peter Bent Brigham, Boston; Grady Hospital, Emory University, Atlanta, 1940-43), Hickam served as Captain in the Army Medical Corps from 1943 to 1946, stationed in Dayton. There he met his future wife, Mary Margaret Kennedy, who had graduated from of the University of Minnesota and worked at Mayo Clinic before going to the Air Force Aero Medical Lab during World War II.

Military Service and Collaboration with the U.S. Air Force

John Hickam was carrying on the military traditions of his father and traditions of turn-of-the-century pioneers of aviation medicine. In 1907, (Aug 1, 1907) President Theodore Roosevelt directed the U.S. Army to assign to the Signal Corps “charge of all matters pertaining to military ballooning, (and) air machines.” Two years later, (1909) the Wright brothers sold the world’s first military airplane, the Wright Military Flyer, to the Army. Aeromedical support was established in 1911 (College Park, Maryland), the idea of the Flight Surgeon was conceived in 1917, and a year later, the School of Aero- space Medicine was founded at Hazelhurst Field, New York.

Thus, John Hickam began his military aeromedical service first as a civilian in 1940, and then as an Army Captain in 1943, just 30 years after aviation medicine was created in the U.S. and less than ten years since the aeromedical laboratory had been established at Wright Field.

Academic Medicine Career Begins

After discharge from the Army in 1946, John Hickam began his academic medicine career. His early mentors included towering figures, such as Dr. Eugene A. Stead, Jr., at Duke University, where Hickam showed great promise and advanced quickly to Professor of Medicine. He was a clinician, teacher and researcher and excelled in all. A former colleague said, "John's laboratory was one of the honeycombs that literally buzzed with happy activity."

At Duke, Hickam gained prominence in cardiorespiratory physiology and collaborated with Wright Aeromedical researchers interested in the effects of flight on heart and lung function. The origins of Hickam's interest in this area are unclear but were likely influenced by Harvard faculty, such as Philip Drinker, who invented the "Iron Lung" and biochemist, JL Henderson, a pioneer in blood chemistry, who co-founded the *Harvard Fatigue Laboratory* that was instrumental in preventing war-related injuries and disease in WWII.

Hickam served on the Air Force Aeromedical Biosciences Panel in 1949, became a member of the Science Advisory Board (SAB) in 1952 (1952-57), and chaired the Executive Committee in 1955-56, one of only 6 SAB members to serve this position from 1946-1964. He was one of 11 contributors to the famous *Lovelace Report* that became the "bible of the USAF medical research and development strategies." In 1957, Dr. Hickam was recognized with the "Exceptional Civilian Award" for service to the U.S. Air Force.

John Hickam's relationship with the US Air Force after WWII helped shape the national aeromedical research agenda during a tumultuous and historic time. Amid the research challenges, the Air Force had to deal with shaky and uncertain ground of the Cold War: nuclear weapons; Korea; and on Oct 4, 1957, Sputnik I. Dr. Hickam was uniquely suited to serve the Air Force, providing leadership to address aviation challenges as had his father, Horace, during WWI and its aftermath.

Chairman of Medicine Indiana University School of Medicine (IUSM)

John Hickam was recruited from Duke University in 1958 to the position of Chairman of Medicine at Indiana University School of Medicine (IUSM). This move was a return to his family's native Indiana, close to Dayton where he would continue collaboration with the Air Force.

The transition to supersonic flight had begun in the post war period from 1945 to 1958, when President Eisenhower established NASA (National Aeronautics and Space Administration). Pilots were stressed in the cockpits, and research was incomplete yet critical in the design of aircraft that would improve pilot performance and safety, as space flight was on the horizon.

Hickam's multi-million dollar Heart Research Center focused on the effects of stress on cardiopulmonary performance, and a US Air Force contract established an IUSM research laboratory at Wright-Patterson. Always the innovator, Hickam and two medical students, with funding from the Air Force School of Aviation Medicine, produced the first human fluorescein retinal angiogram, a landmark discovery,

important in eye research and in clinical and aerospace medicine. The retina provided a ‘window’ to study the brain and cardiopulmonary function, non-invasively.

Hickam oversaw rapid growth of teaching and research programs; he catalyzed development of the Krannert Cardiovascular Research Laboratory and became known as a ‘maker’ of medicine chairman, a role model who could recognize students and faculty with budding talent and help launch their careers in clinical medicine and academia. By 1967, Hickam’s leadership had established IUSM as one of America’s top centers for cardiovascular research and teaching. Today the ‘sons and grandsons’ of Hickam’s mentorship are found in academic centers across the country.

A Thought Leader in American Medicine

Hickam was a preeminent researcher but also a thought leader among medical educators. Today, his name is linked to intellectuals who sought single rather than multiple explanations for observations in the natural world. William of Occam, a 14th c Franciscan friar, studied at Oxford and posited “pluritas non est ponenda sine necessitas” or, “plurality should not be posited without necessity.” Among competing hypotheses, favor the simplest one — hence the term “Occam's razor”. This ancient idea has been used by physicists, scientists, philosophers and Watson in Sherlock Holmes’s “The Sign of Four.”

In medicine, it was used to understand patients with confusing symptoms: Was there one disease or more than one disease? William Osler introduced the idea of Occam in the late 1800s. But, new theories provided a counter-argument to simplicity. The idea, attributed to John B. Hickam, states: “A patient can have as many diagnoses as he darn well pleases.” ‘Occam’s Razor’ and ‘Hickam’s Dictum’ continue to be taught and debated in medicine today.

Community and Public Service

John Hickam was an academician who was also community-minded. He was a central figure in developing the Indiana Plan for Medical Education in the 1960s, to improve the quality of training and patient care. Today, IUSM’s nine state campuses educate the largest student body in the country. Dr. Hickam’s ‘fingerprints and DNA’ are found in any ‘forensic study’ of the origins of successes of IUSM.

Dr. Hickam’s interactions with Sam and Myrtie Regenstrief led to the creation of the Regenstrief Foundation (1968) and Regenstrief Institute for Health Care (1969), a marriage among the Foundation, Health and Hospital Corporation of Marion County, and School of Medicine—the aim: to address Indiana’s health needs by using rigorous research to evaluate optimum ways of delivering quality health care.

Serving the Nation

In John Hickam’s brief but productive academic career, he published original articles in major medical journals, contributed to medical textbooks, served on editorial boards of prestigious journals, was president of national organizations, and a trustee of the Thomas A. Edison Foundation. But among his many accomplishments, Hickam is best known for his central role in writing one of the most important medical research reports in American history. He was appointed in 1962 by U.S. Surgeon General to serve as one of the ten preeminent scientists on the U.S. Public Health Service Surgeon General’s Advisory Committee on Smoking and Health.

In the 1950s, Americans were frightened about smoking and cancer. The American Cancer Society (ACS), American Heart Association (AHA), National Tuberculosis Association (ALA), and the American Public Health Association (APHA) asked President Kennedy in 1961, to establish a commission on smoking "seeking a solution to this health problem..." Hoosier, Leroy E. Burney, US PHS Surgeon General under President Eisenhower (the subject of an essay presented to members in 2004), set the stage for the Kennedy's action, when he stated in 1959 that smoking caused lung cancer in men.

The Surgeon General's Advisory Committee met from 1962-1964 at the National Library of Medicine (NLM-NIH) in Bethesda, Maryland, and reviewed 7000 scientific papers from 1200 journals regarding cigarette smoking and disease. Hickam was the lead author of the Report's major sections on cardiorespiratory diseases.

The Committee concluded that cigarette smoking is a cause of lung cancer and laryngeal cancer in men, a probable cause of lung cancer in women. Smoking was correlated with emphysema, coronary heart disease and reduced birth weight of newborns. Surgeon General Luther Terry released *The Report on Smoking and Health* to the public 11 Jan 1964 with the conclusion that: "Cigarette smoking is a health hazard of sufficient importance in the U.S. to warrant appropriate remedial action."

Smoking rates and exposure to secondhand smoke in the U.S. have been more than halved since 1964. This remarkable progress has been attributed to use of the public health prevention and treatment model, as opposed to the crime, arrest and incarceration model that, since it was launched in 1970 as the "war on drugs," has been a dismal failure. Despite the progress in decreasing the tobacco burden, the powerful tobacco lobby in Congress and state legislatures, including in Indiana, continues to stifle progress in protecting the public's health.

Death

Dr. Hickam was Chairman of Medicine from 1958 to February 1970, when he died, unexpectedly, at 55 of a cerebral vascular accident. Walter Daly MD, a Club member and contributor of memorable essays, succeeded him.

Dr. William H. Hudnut, III, Pastor of the Second Presbyterian Church said of John Hickam at the memorial service, 12 February 1970, "It was undoubtedly the unique combination of talent in research and teaching and the practice of medicine that made John so good. "... His astute mind, indomitable will, warm heart, and humble spirit; he possessed the highest wisdom of all, the wisdom of humility." Some believe Hickam's compassionate care of patients was shaped by his own struggles with illness as a young boy.

In April 1971, the AMA Archives of Internal Medicine designed an entire issue of the journal as a memorial to Dr. Hickam. His friends described him as wise and witty with an easy humor, loved by his patients. He had a warm personality and a voice gently pitched with "a ring of mid-America in his conversation". Colleagues noted that "... his passing deprives those who knew him of a sincere and gentle friend; his students of an inspiring and stimulating teacher; those who worked with him of a wise and generous counselor; his university of a remarkable leader; his profession of a fine mind and one of the truly great men of American medicine."

Mary Kennedy, John Hickam's wife, died in 2010, 40 years after her husband's death. She became a curator at the Indianapolis Museum of Art in the Lilly Pavilion until her retirement in 1995.

Legacies of Horace and John Hickam, Father and Son, a warrior and a healer

What are the legacies of Horace and John Hickam, the warrior and the healer?

The lives of these men, spanned only about 100 years, but they accomplished much as visionaries, leaders, and innovators, who showed a kindred-pioneering spirit during their short lives. This was a momentous period in American history, with the development of aviation, from 'stick and wire' planes to space flight and from advances in medicine, from ancient remedies to miracle cures. The Hickam's contributed to this rich 20th c history.

Horace and John Hickam pursued seemingly contradictory professions and the premise that warriors and healers may be 'cut from the same cloth' may be a strange idea to some, but with the influence of genes and the environment on one's persona, there is some basis to the idea, and it's consistent with views of ancient observers. Horace Hickam was an aviation warrior; his son perhaps fits Homer's description of the warrior-healer, who combined military interests with medicine. Regardless of this perhaps arbitrary distinction, it's clear that father and son had many personal and professional qualities in common: excellent students and teachers, intellectually inquisitive, collaborative and respected for their honesty and humility.

The Hickam's 'roots' were in the Midwest, Owen County and Spencer, Indiana. Did their homestead here embody and shape their personas and illustrious careers?

As I mentioned at the outset of this essay, a surprising number of prominent military men were born and raised in Owen County in the late 1800s when this was the population center of America. Horace Hickam and three other contemporaries became preeminent military leaders: Adm. John H. Cassady, commanded the USS *Saratoga* and the US Sixth Fleet in the Pacific; Rear Adm. Henry Mullinnex, also commanded the USS *Saratoga*; he died with the sinking of the USS *Liscome Bay*; Henry Mullinnex's brother, Rear Adm. Allen P. Mullinnex, (b. Attica) fought in the Battles of Iwo Jima and Okinawa. Remarkably, John Cassady took command of the USS *Saratoga* from fellow Spencer, Indiana native, Henry Mullinnex, perhaps the only time in US naval history, that an officer relinquished command of a ship to another, born in the same small town.

Contributing to this strange geographic military gathering in Owen County is Ernest Viquesney, born in 1876 in Spencer, veteran of the Spanish American War and a prominent sculptor, who created one of the iconic figures in American military history, the Spirit of the American Doughboy statue, found today in 140 American cities, including Spencer.

Another person adds to Spencer's military lore. Helen (Nellie) Artie Tarleton Belles (1856-1937) grew up in Spencer, was the mother of Harold Macmillan (1894-1986), and is credited with his intensive early education in London. Macmillan served with distinction in WWI and WWII and became Prime Minister of the United Kingdom in 1957, one of four Prime Ministers, including Churchill, Atlee, and Eden, who served in the 'Great War'.

Was this a random cluster of distinguished military minds with roots in Spencer, Indiana? Or was it the result of some fundamental law of nature? Homer, in *The Odyssey* said: "His native home deep imag'd in his soul." Wendell Berry said: "If you don't know where you are, you don't know *who* you are". Perhaps Horace and John Hickam, with roots in Owen County, would have embraced the sentiment expressed near the end of Carl Sandburg's (1878-1967) poem: *A Father to his Son*:

“Let him seek deep for where he is born natural.
 Then he may understand Shakespeare
 and the Wright brothers, Pasteur, Pavlov,
 Michael Faraday and free imaginations
 Bringing changes into a world resenting change”.

Today Spencer, IN, has 2,300 persons, approximately the same number of inhabitants as in 1900
 McCormick’s Creek State Park and Cataract Falls Covered Bridge are on the list of National Historic Places.
 There is no statue or visible plaque of Horace Hickam in Spencer. There is a pictorial display in the Owen
 County Heritage and Culture Center museum and local accounts of other military heroes from Owen
 County.

Conclusion

In 2010, Hickam Field USAF was joined with the U.S. Navy Naval Station Pearl Harbor to become the Joint
 Base Pearl Harbor-Hickam (JBPHH) that for 80 years has led in projecting air power across the Pacific.
 Horace Hickam’s service, life and legacy embody the essence of America’s *“Greatest Generation.”*

In 2014, the US PHS celebrated its 50th Anniversary of the 1964 Surgeon General’s Report that John Hickam played a
 central role in writing. This Report ranks as one of the top news stories of the 20th c. -a milestone in modern science,
 medicine, and health, for it launched the most effective research- based public health program in American history.

Horace and John Hickam are American and Hoosier heroes, not Francis Bacon’s “...ill discoverers that
 think there is no land when they can see nothing but sea.” The Hickam’s imaginations were rich and to
 paraphrase Albert Szent-Gyorgyi, they could look at the same thing as everyone else and think something
 different. Both Hickam’s translated their ideas into action; they were creators and mentors of creators in
 the finest traditions of America.

End

SJJay

Indianapolis Literary Club

Legacies of Hoosier Aviation and Medical Science Visionaries

February 16, 2016. (revised March 15, 2016)

The Indianapolis Literary Club 2015-2016: 140th Year “Legacies of Hoosier Aviation and Medical Science Visionaries.”

Essayist: Stephen J. Jay M.D. Read on Tuesday, 8:00 P.M., 16 Feb 2016, at the regular meeting of the Indianapolis Literary Club, Park Tudor School, Indianapolis, Indiana.

Sources, references and citations

To the reader: A complete list of citations for this essay is available from the author and numbers 190, including Selected General Readings (6); General Readings (140); Peer-reviewed research papers, (22); News clippings, popular press and internet sources (22).

This essay is dedicated to the memory of Richard K. Curtis a member of ILC. A kind man and an inspiring hero of the “Greatest Generation.” Adam Kent-Isaac. World War II Veterans Now Stationed at Meadowood. Bloom (Bloomington) Magazine, October/November 2012.

<http://www.magbloom.com/2012/12/world-war-ii-veterans-now-stationed-at-meadowood/#sthash.VaA3vocD.dpuf>.

Selected General Reading for Horace Meek Hickam (1885-1934) and his son, John Bamber Hickam (1914-1970):

1. Arlington National Cemetery Website. Horace Meek Hickam, Lieutenant Colonel, United States Army Air Corps. <http://www.arlingtoncemetery.net/hmhickam.htm>
2. Colonel Horace Meek Hickam. Image of Colonel Hickam in Army Uniform. Pioneer Airpower Advocate. https://en.wikipedia.org/wiki/Horace_Meek_Hickam
3. Horace Meek Hickam. https://en.wikipedia.org/wiki/Horace_Meek_Hickam.
4. Irwin GW. John Bamber Hickam (Aug 10 1914-Feb 9, 1970), pp672-3. In, The Encyclopedia of Indianapolis (1994) by Bodenhamer, David J.; Barrows, Robert G. (Robert Graham), 1946-; Vanderstel, David Gordon. <http://indiamond6.ulib.iupui.edu/cdm/search/collection/EOI/searchterm/Encyclopedia>
5. John B. Hickam. Chairman of Medicine Indiana University School of Medicine. 1958-1970. <http://medicine.iupui.edu/about/history>
6. Memorial. John Bamber Hickam, M.D. Trans Am Clin Climatol Assoc 1971;82: lx, lxi, lxii. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2441043/?page=1>.

Essay Indianapolis Literary Club

Feb 16, 2016.

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Essayist: Stephen J. Jay M.D.--“Legacies of Hoosier Aviation and Medical Science Visionaries.”

Acknowledgments: Thank you all

1. **Alexandria Austermann**, MSLIS, Librarian, Science Information Center, U.S. Army Aeromedical Research Lab, Ft. Rucker, AL., kindly searched the USAARL library catalog but found nothing on Dr. John Bamber Hickam. She recommended that I access the Defense Technical Information Center (DTIC) (See below).
2. **D. (David) Garon Bailey**, MLS, DO-II, (david.bailey.46@us.af.mil), Lead Medical Librarian, Franzello Aeromedical Library, USAF School of Aerospace Medicine, Wright-Patterson AFB, OH, said they have “some” of John Hickam’s work in their library. He shared a preliminary search of their holdings on Jan 21, 2016.
3. **Samantha Blatt**, Chemical Heritage Foundation (Philadelphia, Penn) processed my request from the Beckman Center for Oral History for the interview (1986-87) with Herman E. Schroeder (OH#0063). Schroeder, b. Brooklyn 1915, was a graduate of Harvard (AB chemistry) 1936; PhD, Organic chemistry 1939 and an undergraduate classmate of John Bamber Hickam; they both graduated in Chemistry summa cum laude. Schroeder, a prominent chemist at E.I. du Pont de Nemours & Co., reflects (pg. 7) on his interactions “very bright friends in my class,” including John Hickam.
4. **Stuart Bondurant** M. D. dean emeritus, University of North Carolina School of Medicine, past president of American College of Physicians and the Institute of Medicine (IOM). He collaborated with the USAF in researching limits of human tolerance to accelerations of space flight. Dr. Bondurant provided personal reflections of John Hickam, the man, his scholarship and involvement in the 1964 Surgeon General’s Advisory Committee. Luther Terry MD, then US PHS Surgeon General, told Dr. Bondurant) that John Hickam played a leading role in writing the cardiorespiratory sections of the report but was led in editing the entire publication. Dr. Hickam was a mentor to Dr. Bondurant. In 1957, when Dr. Bondurant was a post doc fellow, he worked with Dr. Hickam, researching cardiorespiratory function in normal subjects, using ‘G-suits’ to engorge pulmonary vasculature to mimic circumstances faced by pilots. (As aside: Dr. Bondurant was S Jay’s faculty advisor in medical school)
5. **Elizabeth C. Borja**, CA, Reference Services Archivist, National Air and Space Museum, Archives Division, MRC 322, Washington DC., found no correspondence in their archival repositories search between Horace Meek Hickam and John Bamber Hickam.
6. **Defense Technical Information Center**, Ft. Belvoir, VA. (See Alexandria Austermann) My request for information regarding John Bamber Hickam’s interactions with the U.S.A.F. Wright-Patterson Aeromedical Lab in the 1950s, when Hickam served as Chair, Executive Committee, Science Advisory Board, was returned unanswered : “Librarian 1: Unfortunately, nothing that we have that references Hickam is available for release to the public.” (Question #11095736.) Library staff clarified that the information available were contracts and not related to my request.
7. **Desiree Butterfield-Nagy**, M.L.I.S. Archivist/Special Collections Librarian, University of Maine, Raymond H. Fogler Library, Orono, ME, kindly searched the University of Maine archives for information regarding Horace Meek Hickam’s tenure as a faculty member in 1917. Hickam was listed in the Faculty Catalogue as Professor of Military Science and Tactics, Major, Signal Corps, Aviation Section, U.S. Army. It was noted that “military instruction is required by law” under Required Courses, Military Science and Tactics. A four- year curriculum was provided. There was

no file for Hickam's correspondence, but Desiree found an article in the University of Maine: "The Maine Campus" student newspaper, pg. 1, col 1, Vol XVIII, Nov 31, 1916, titled: New Head for Maine's Military Department: Captain Clark to be Relieved in December by Lieutenant Hickham of Pershing's Army. (Note 'h' in 'Hickham' is correct but later changed to Hickam). Correspondence between President Aley and Hickam was not found. In the U. of Maine Yearbook, Prism, 1918, p228, the legend includes: Military Department Commissioned Officers, 1916-17, US Reserve Officers' Training Corps, Horace M. Hickam, 1st Lieut. 7th Cavalry, U.S. Army, Professor of Military Science and Tactics. <http://digitalcommons.library.umaine.edu/yearbooks/26/>

8. **Shari Christi**, Archivist Wright Patterson, Dayton (See Brett Stolle). Shari found two images in Charles Dempsey, U. of MI, 1985, "50 Years of Research on Man in Flight" from 1940 (Dr. Hickam) and 1945 (Dr. Captain Hickam).
9. **D. Chris Cottrill**, Smithsonian Libraries, Head Librarian, National Air and Space Museum Library, Washington, D.C. searched unsuccessfully for evidence of correspondence between Horace Meek Hickam and his son John Bamber Hickam. Cottrill forwarded my query to the National Air & Space Museum Archives since any original correspondence or personal papers collected by the Air & Space Museum would be among their holdings.
10. **Walter Daly MD**, retired dean Indiana University School of Medicine and former chair of Medicine (succeeding John Bamber Hickam), provided personal reflections of Dr. Hickam and insights into why there are no known papers for Dr. Hickam. Dr. Daly recounted that upon Dr. Hickam's sudden death, his secretary (a 'lioness' guarding the den'), was very protective of Dr. Hickam and discarded his papers—she didn't want people "rooting" around in them. Dr. Daly said that John B. Hickam was 'humble and knowing' and would have recognized the benefits of preserving his papers for his successors and historians.
11. **Justin Davis**, Indiana Division Librarian, Indiana State Library, searched the ISL holdings for information regarding Horace Meek Hickam and his son John Bamber Hickam. In addition, he searched unsuccessfully for evidence of interactions among Horace M. Hickam and other prominent military figures from IN such as Admiral Henry M. Mullinex who was also born in Spencer, IN and suffered a tragic death as did Horace M Hickam.
12. **Anne Evenhaugen**, Librarian, Smithsonian American Art Museum, National Portrait Gallery Library, Smithsonian Libraries, found an image of the portrait of Horace Meek Hickam by Mary Oda Eglin, a native of Crawfordsville, Indiana and famous unofficial U.S. Army portrait artist. <http://www.eglin.af.mil/photos/mediagallery.asp?galleryID=2617&page=3>. Her husband, a famous aviator was honored in the naming of Eglin AFB. Smithsonian is not sure where this original painting is today.
13. **Harvey Feigenbaum, MD**, kindly reflected on his interactions with Dr. Hickam. John Hickam recruited Dr. Feigenbaum from Philadelphia do his medicine residency and cardiology fellowship at IUSM and afterwards join the faculty, in 1962. Dr. Hickam was a mentor of Dr. Feigenbaum and created an environment in which Dr. Feigenbaum's could carry out his early pioneering research that focused on using ultrasound technology to assess heart function. Called the 'Father of Echocardiography,' Dr. Feigenbaum indicated that Dr. Hickam's leadership was pivotal in creating the Regenstrief Foundation and Institute in the late 1960s. Dr. Feigenbaum was part of the Regenstrief family (Sam Regenstrief, was Dr. Feigenbaum's wife's uncle) and Dr. Harvey Feigenbaum, Sam Regenstrief, and John B. Hickam led the successful effort in 1968 to create the Foundation which has been a major community resource for almost 50 years for exploring the

science of patient care--the goal: to rigorously study and improve the delivery of quality health care in the community. Dr. Feigenbaum said another goal of Hickam's for the Foundation was to ensure the survival of Marion County General Hospital's teaching research and patient care mission. Since 2005, Dr. Feigenbaum has been Director of the Regenstrief Institute. The new Regenstrief Building sits on University property where Sam Regenstrief 'wanted it in the first place'.

14. **Jennifer Herron**, Emerging Technologies Librarian MLIS, Ruth Lilly Medical Library, IUSM, Indianapolis, kindly searched for papers relating to Hickam's collaboration with Wright Patterson Aeromedical Laboratory.
15. Dr. **Conrad Johnston, Jr.**, Distinguished Professor Emeritus, Professor Emeritus of Medicine, Indiana University School of Medicine, was a personal friend of John B. Hickam; Johnston worked in Hickam's research lab at Duke University and was recruited by Hickam to come to Indiana University School of Medicine. Dr. Johnston said probably the only living person to answer questions about John Hickam's roles in the 1964 USPHS Surgeon General's Report and Hickam's USAF research was Hickam's colleague, Stuart Bondurant, dean emeritus at University of North Carolina Medical School. (see Bondurant)
16. **Charles Kelley M.D.**, Indiana University School of Medicine, provided first- hand remembrances of his interactions with John Hickam during planning for Regenstrief Foundation and Institute in 1968 and 1969.
17. **Thomas Bamber Hickam** son of John Bamber Hickam was gracious in sharing his remembrances of his Dad who passed away when he was only 15. He also shared his limited knowledge regarding his grandfather, Horace Meek Hickam.
18. **Dina M. Kellams**, Director, Office of University Archives and Records Management. Indiana University Wells Library E460, Bloomington, Indiana 47405. Ms. Kellams searched for material on Horace Meek Hickam who attended IU 1903-04 before going to West Point. She also searched for papers of John Bamber Hickam. She found none.
19. **Paul Lazar**, Volunteer to Librarian, Smithsonian Libraries (202 633 8230) searched for the portrait painting of Horace Meek Hickam by Mary (Lucille) Oda Eglin, Indiana artist who was married to Wabash Grad (1914) Frederick Eglin. (See Anne Evenhaugen)
20. **Tab Lewis**, Textual Reference Archives II Branch provided (August 14) a U.S. Public Health Service (RG90) document: Surgeon General's Committee on Smoking and Health, General Records, 1962-1964, folder title list.
21. **Anton Neff**, Owen County Indiana Historian, kindly provided information regarding Spencer natives and aviators, Thomas G. Cassidy and his cousin, Admiral John H. Cassidy. John H. Cassidy interacted with Admiral Henry M. Mullinex when they exchanged command of the USS Saratoga in 1943. Mr. Neff could find no reference of interactions between Horace M. Hickam and Mullinex, perhaps because his parents moved to Attica when he was a youth. Mr. Neff confirmed that Spencer has no original plaques or painting of Horace Hickam, but there is a pictorial display in the Owen County Heritage and Culture Center museum. None of the images are original. Mr. Neff will check with Robert Hickam (from Colorado) a relative of Horace, to find if he has information regarding whereabouts of the Horace Hickam portrait by Mary Oda Eglin.

22. **Sara Pfundstein** Librarian, Genealogy Div. Indiana State Library, found references to early Indiana Hickam family ties to Ireland, Scotland as well as U.S. links in Pennsylvania and Virginia.
23. **Caitlin Reeves**, Harvard Schlesinger Library, that holds Alice Hamilton papers, found no correspondence between Hamilton (Mother of Industrial Toxicology in the U.S.) and John Bamber Hickam, who served on the US PHS Surgeon Generals 1964 committee that issued the famous report on Smoking and Health.
24. **Kim Anne Sohnle**, teacher, Creston Middle School in Indianapolis and grandchild of Mary and John Bamber Hickam, kindly provided contact information for her parents.
25. **Brett Stolle**, CA, Manuscript Curator, National Museum of the U.S. Air Force, Research Division/MUA, Wright Patterson AFB OH. www.nationalmuseum.af.mil. Stolle found the following: "After completing an exhaustive search, we do not retain the personal papers or research projects of John Bamber Hickam, MD, in either of our collections. Shari Christi found the information in "50 Years of Research on Man in Flight", - 1 of a doctor in 1940 and 1 of a Capt. in 1945. (Images of John Hickam in group photo)
26. **Stephen Towne**, IUPUI Special Collections and Archives, kindly searched the IUPUI library for papers of John Bamber Hickam found information from 1965 regarding JBH's research funding from the USAF. Towne found nothing in faculty annual reports and other sources from that period that lists grant funding amounts.
27. **Helen Wilson** (Hickam), daughter of John Bamber Hickam, kindly shared recollections of her Dad, who died when she was a teenager, and her famous Grandfather, Horace M. Hickam.
28. **Jodie Steelman Wilson**, Head, Reference & Local History Department, Crawfordsville District Public Library, searched unsuccessfully for information on the portrait of Horace Hickam, painted by Mary Oda Eglin. Wilson authored the book: *Hidden History of Montgomery County, Indiana* 2012 that has a chapter devoted to Mary Oda Eglin. Wilson kindly shared her knowledge of artist Eglin.

SJJ Feb, 16