

The Indianapolis Literary Club: 2020-2021: 145th Year
"Changing the Nature of Things"

Stephen J. Jay. Tuesday, 8:00 P.M., Mon. January 19, 2021

Park Tudor School: Virtual Presentation



Plus ça change, plus c'est la même chose.

Alphonse Karr (1808-90) In, *Les Guepes*, 1849.

"How little can be done under the spirit of fear."

Florence Nightingale. *The Life of Florence Nightingale* v1 1846, p51.

"All science is the search for unity in hidden likenesses."

Jacob Bronowski, *Science & Human Values* 1956(65), p13.

"Curiosity and wonder are instincts as deep and right as hunger."

William Lowe Bryan Farewells, 1917.

"The beginning of wisdom is to call things by their proper names." "If names not be correct, language is not in accordance with the truth of things."

Confucius, Chapt XIII. *The Analects*

"Nothing endures but change."

Heraclitus of Ephesus (535-475 BCE) from Diogenes Laertius, *Lives of Eminent Philosophers*. Plato, *Cratylus*.

"The whole universe is change, and life itself is but what you deem it."

Marcus Aurelius. *Meditations*, Book IV.

"The most dangerous world views are the world views of those who have never viewed the world"

Attributed to Alexander von Humboldt. (1769-1859)



Key Words:

Change, Climate Change, Literary Clubs, Alexander von Humboldt, Pandemics, Public Health, Natural Science

yes x I agree to allow the webmaster of the Literary Club to upload my essay to the Club's Internet website. I also agree that, after the Literary Club transfers a copy of my essay to the Indiana Historical Society, the Society may upload it to the Society's Internet website.

Stephen J. Jay M.D.

Sir Joshua Reynolds (1723-1792) founded *The Club*, in 1764, London, whose members included, in addition to Reynolds and Samuel Johnson, seven men who wanted to ‘hear Johnson talk.’ This ‘intellectual aristocracy’ included thought leaders in the humanities, arts and sciences who inspired inquiry and debate to create and share knowledge to improve the human condition.
b,c,d,g,i,62

Previously, I spoke about literary clubs and the origins of the link between our Club and Johnson’s Club, the print from the 1848 painting, *A Literary Party at Sir Joshua Reynolds*.⁸⁹ In 2009, 35 literary clubs in America had been in operation for more than 130 years; eight were men’s clubs. This year there are three men’s clubs: *The Literary Club*, Cincinnati (1847), the *Chit Chat Club*, San Francisco (1874) and our *Indianapolis Literary Club* (1877). Five of the eight men’s clubs from 2009 are now coed.

While long - lived men’s literary clubs are rare, 11% of Americans say they’re involved in such clubs, suggesting they’re valued and respond to our needs to learn and change.^{27,75, 85,118,119,120,125}

My aims this evening are:

- To focus on change needed to address threats to health and wealth, from environmental degradation and communicable diseases,
- Reflect on the evolution of humans’ quest for change, from ancient to modern voices, drawing on the legacy of Alexander von Humboldt, who changed how Americans think about the nature of the world.
- Consider our challenges in steering a new direction for America, bridging cultural and societal divides to strengthen democracy with reason, science, and humanism.

Today, we have compelling public health problems with environmental change and communicable diseases.^{a,e,f,161} The good news - they’re preventable, using science and public health measures. But we lack consensus about these problems and the fact - based means to prevent them. When we destroy wilderness habitats of animals, disease - causing microbes may infect humans – called zoonoses. In December 2019, the SARS-CoV-2 coronavirus (Covid-19) passed through Fruit Bats in South East Asia to humans, creating the pandemic that in the U.S., by January 6, 2021, had caused 21 million cases and 357,000 deaths; with 4% of the world’s population, the U.S. has suffered 35% of global deaths.⁶⁷ The total direct and indirect human and economic harms and costs are incalculable; Harvard researchers estimate the costs at \$16 trillion.³³

There are other consequences to environmental change and our gathering storm. Charles Keeling (1928-2005)⁹⁵ measured increasing atmospheric CO₂ on Mauna Luau, Hawaii, in 1950s, predicting environmental harm. As atmospheric CO₂ and temperature increase, weather is unpredictable: sea levels rise and there are major risks to public health and wealth.^{45,72,h} The projected cost to the world’s economy of climate change - attributable disease is \$8 trillion, by

2050. Impacts are disproportionate: wealthy countries pollute, poor countries suffer but America is not immune. Today, Native American climate refugees struggle in the Mississippi Delta and in Alaska, and globally, refugees suffer physical and mental diseases that threaten countries' stability.

America has failed to lead efforts to control climate change and Covid-19, resulting from politicization and underfunding of science, public health and the rule of law.^{h,128} The U.S. response to these calamities has been fragmented, slow, confused and tragically lacking a science and public health - based national war plan.^{22,23,25} Most dispassionate leaders are alarmed over the flagging support of science. Anti-immigration policies threaten scholarly infrastructure and our science 'engine' that fuels global economies. Can America restore its leadership and truth-seeking policy based on facts, moral values and common sense? Galileo Galilei framed today's challenge, saying, "*By denying scientific principles, one may maintain any paradox.*"

How did we ignore the consequences of environmental destruction, after warnings of ancient intellectuals, from Hippocrates, (460-375BCE)^{77,78} Aristotle, (384-322BCE) and Lucretius, (94-64 BCE)^{5,65,103,104} to Renaissance (14-16th c) and Enlightenment scholars (1715-1789) and modern experts?^{150,155}

William Shakespeare (1564-1616)

More than 400 years ago, William Shakespeare (1564-1616) spoke of spoilage of the environment by humans with adverse effects on health and economy, 100 years before the Industrial Revolution. (1760-1840)¹⁷⁸ In Henry IV, Hotspur recalls the foppish courtier on the battlefield who finds it 'a great pity' that 'this villainous saltpetre should be digg'd/Out of the bowels of the harmless earth.'^{34,106} A quarreling Queen Titania and King Oberon, in *A Midsummer Night's Dream*. (2.1.82-114) create chaos in the natural world that foretells the climate hazards of today's global warming.³¹ From Titania:

"The spring, the summer,
The chiding autumn, angry winter, change
Their wonted liveries, (clothing) and the mazed (confused) world
By their increase now knows not which is which." (2.1.115-117)

Shakespeare saw merit in reform of man's malign impacts on the land. In, *As You Like it*, farming green rotations of corn and rye foretold resilience in boosting agriculture yields today.¹⁰⁶ And Shakespeare anticipated today's dilemma: balancing trade-offs: employment and profit or risking environmental ruin with consequences. He saw the limits nature imposes on humans' ... "spoilage of the "harmless earth".¹⁷⁸ Samuel Johnson's eight volume edition of Shakespeare's works, in 1765, reflects his affection for the Bard. Johnson said: "Shakespeare is above all writers ..., 'the poet of nature' who holds up to his readers a faithful mirror of manners and of life."^{3,109}

Alexander Von Humboldt, (1769-1859)

When I was a kid growing up near the State Fairgrounds, our phone number was the “HU” or Humboldt Exchange.^{9,42,74,84,96,135,172} A Prussian polymath, Humboldt was “one of the Age of Enlightenment’s brightest minds,” whose prolific writings popularized exploration of nature, expressing the holistic view that, “...all forces of nature are interlaced and interwoven.”^{142,175,176} He laid historical, philosophical, ethical and scientific foundations in natural science, conservation, and the land ethic.

Called the father of ecology, he melded natural science with aesthetics —writing with the feeling of the poet, the eye of the painter.^{63,143,154,175,176} Louis Agassiz, founder of natural science in America, and President Thomas Jefferson, (1801-09) lauded Humboldt’s vision of the “unity of nature,” and Humboldt’s long correspondence with Jefferson (1808-1825), James Madison and Albert Gallatin,^{37,38} reflect their mutual interests in science, politics and economics of New Spain.

Born, in 1769 Berlin, Humboldt graduated from Freiberg School of Mines which exposed him to fossils that became his research obsession - the migration of flora, fauna and people.⁴ A rising star, Humboldt was mentored by Sir Joseph Banks, a member of Johnson’s Literary Club, and a famous naturalist and world explorer, who accompanied Captain James Cook on the first voyage of *HMS Endeavour* around the world, in 1768-1771.^{101,175,176}

Humboldt’s interests paralleled those of Johann Wolfgang von Goethe, who was inspired by Humboldt’s intellectual virtuosity.^k These men and Friedrich Schiller, the physician, poet - philosopher and composer, Felix Mendelssohn, were friends - intellectual giants, who melded Classicism, Romanticism, and the Age of Enlightenment to seek new value in unity and wholeness in life.¹⁵² Humboldt was inspired by the French Revolution’s aims of liberty, equality and fraternity, but he angered Europe’s ruling elite, colonialists and organized religion, as had Galileo, a science martyr before the Inquisition.^{63,100,116,151}

Obtaining permission from Charles the IV of Spain, Humboldt, with French botanist, Aimé Bonpland, explored Spanish colonies in the Americas, from 1799 to 1804 –travelling 6,000 miles on foot, by horseback and on a 40 ft river- canoe packed with men, animals and forty-two pieces of scientific equipment.^{132,143} They experienced hunger, danger and disease but amassed 60,000 plant specimens; thousands were new species. He collected anthropological, archaeological, astronomical, botanical, climatological, geological and zoological data from which he laid modern natural science foundations.⁵⁵ His detailed drawings and maps included the first use of isothermal and isobar lines on weather maps, to document climatic conditions in relation to flora and fauna, and geography.

When his Latin American trip ended, he was feted, in 1804, in Washington DC and Philadelphia, meeting with Thomas Jefferson and James Madison.^k Humboldt provided Jefferson with detailed

map information on the Mexico-American border that was invaluable to Jefferson's interest in expanding North America to the South, including today's Texas.^{130,146}

Humboldt passionately supported the bold American experiment of creating a democratic republic and friendship with Jefferson lasted till Jefferson's death.^{37,112} Three months before Humboldt's death, while attending a meeting in honor of George Washington, Humboldt proudly said: "Ich bin ein halber Amerikaner" - "I am half an American".^{146,168-170}

Fame: Humboldt spent thirty years in Paris analyzing and (1805-1834) writing of his explorations, *Views of Nature* (1808) and *Personal Narrative*, (1807) writings that inspired Charles Darwin to pursue science and to plan his own expedition, *Voyage of the Beagle* (1839) that followed many of Humboldt's original paths.^{k,6,35,36,83} In Humboldt's famous culminating work, *Kosmos*, in 1845: *A Sketch of a Physical Description of the Universe*, in five volumes and ten languages (1845 -1862), he attempted to unify knowledge of natural sciences and the structure of the earth and outer space.^{94,169} Indeed, *Kosmos* captivated Americans, and at Boston's *Humboldt Birth Centennial*, in 1869, Oliver Wendell Holmes, Sr., celebrated Humboldt with his poem, "Humboldt's Birthday"^{79,80,116} (Bonaparte, August 15, 1769 -Humboldt, Sept 14, 1769) and penned this last stanza:

'Bring the white blossoms of the waning year,
Heap with full hands the peaceful conqueror's shrine
Whose bloodless triumphs cost no sufferer's tear!
Hero of knowledge, be our tribute thine!

Holmes wrote that, like Rene Descartes and Immanuel Kant, Alexander von Humboldt 'commanded the future more from his study than Napoleon from his throne.'^{46,175,176} Humboldt's fame is reflected in the fact that more things in America have been named after him than anyone else: from newspapers and phone exchanges to cities, counties, schools, parks, rivers, lakes, a glacier, waterfalls, bays, mountains, to asteroids, an ocean current, the sea of Humboldt and a sea on Earth's moon, Mare Humboldtianum. Also named, flora and fauna: from trees, cacti, and mushrooms, to penguins, giant squid, monkeys, and an orchid and Lilly.^{k,18,49,51,70,72,129,154,169} The last volume of *Kosmos* was published posthumously, three years after he died at age 90, in 1859, the year his mentee, Charles Darwin, published "*Origin of Species*."

Humanism: Humboldt was a humanist and human rights advocate who called for freedom for all people, anticipating the international human rights movement;^{13,26,37,42,48,131,153,159,162,170} he advocated for the rights of Prussian Jews, minorities and women, to practice religion, hold jobs and public office. He was critical of his friend, Thomas Jefferson, a slaveholder, for not abolishing slavery during his presidency. Ironically, the 33 – year- old Jefferson's initial draft of the *Declaration of Independence* contained a strong anti-slavery clause that was removed during congressional debates.^{165,173}

Influence: Humboldt's captivating accounts of his explorations influenced scientists, naturalists, writers, poets and artists.^{35,70,94,99} His eclectic vision influenced Darwin's, *Origin of Species* and Walt Whitman's, *Leaves of Grass*; ¹⁴⁸ Thoreau rewrote 'Walden' after reading Humboldt's, 'Kosmos'.¹⁷⁵ Humboldt's creative maps gave Americans a sense of place, and with his colorful graphic accounts of his explorations, he influenced the settlement of the American west.^{76,129,130}

Humboldt influenced and inspired Ida Pfeiffer (1797-1858) of Austria, the world's most famous female explorer of six continents, who created new facts in geography, ethnology and natural sciences. Humboldt was at her bedside as she was dying from malaria. She had been honored by the geographical societies of Berlin and Paris but not *The British Royal Geographical Society* that refused membership to women.^{40, 122}

Fall from fame - reviving Humboldt: From his pinnacle of fame, Humboldt, was all but forgotten in America by early 20th c.¹¹⁵ The Franco - Prussian War and WWI and WWII cast a pall on anything German. Also, the growing specialization in science contrasted with Humboldt's holistic writing style, which was going out of favor as scientists retreated into sub-specialty burrows.⁶⁹ But scholars have recently resurrected Humboldt as the natural science visionary and pioneer, whose research two and a half centuries ago sought to connect 'the little things' with the bigger picture—the interconnectedness of earth and civilization, an understanding of which is central to our global 21st c, challenges of pandemics and climate change.

Legacies: Alexander von Humboldt's legacies are many and varied.^{26,82} Called the "the scientific discoverer of America," ¹¹⁵ he changed how we understand the natural world, a web-of-life that does not exist for the use of mankind alone. He founded natural science disciplines and laid foundations for The Smithsonian, Sierra Club, and U.S. National Park Service. He inspired John Muir, whose tragic accident in Indianapolis, spurred him to fame as the 'father' of conservation in America.^{55,k} Humboldt also inspired generations of authors and poets from Lord Byron (*Don Juan*)⁶⁸ to Jules Verne and Edgar Allan Poe, who dedicated his 130 - page poem, *Eureka*, (1848) to Humboldt.

In 1801, Humboldt warned of harms of deforestation, industrial pollution and human-induced climate change; he even said that humankind's spoilage of earth might be carried into space as "humans spread their lethal mix of vice, greed, violence and ignorance across other planets." Today, as the Covid-19 pandemic and climate change rage on, scientists and health experts warn, as Humboldt predicted, that climate change is causing irreversible impacts on ecosystems and humanity.^{163,164} As Wendell Berry, said, there's "no distinction between the fate of the people and the fate of the land".⁵⁸

'Descendants' of Humboldt: Over the past four decades, there have been inspiring 'descendants' of Humboldt who have shared his 'unity of nature' vision and valued his mastery of communicating the wonder, possibilities and benefits of science.^{14,66,93} James Lovelock, author of *Gaia* (1979) proposed that earth was a self-regulating living planet where life itself sustains a habitable earth.^{50, 71,92,102} Carl Sagan and Ann Druyan's, *Cosmos* series, 1980 – sought

to touch the hearts and souls of viewers, strikingly similar to Humboldt's, *Kosmos*, of 1845;¹³⁶ Sagan's description of our threatened, "pale blue dot" resonated with tens of millions of viewers. Bill Nye - *Science Guy*, has sparked interest in science for millions of kids. (1993-98) David Attenborough's, *Planet Earth* series, (2006)^a and Neil deGrasse Tyson's, *Cosmos: A Spacetime Odyssey*, (2014), have advocated, eloquently, for restoring the planet and, in 2020, the National Geographic series: "*Cosmos: Possible Worlds*," aired in 171 countries in 43 languages.^{56,158}

Today, perhaps the youngest world-famous descendant of Humboldt is a 17-year-old Swedish teenager, Greta Thunberg^{114,138,139,167} —the TIME Person of the Year, 2019, - called a 'Joan of Arc of the environment' and nominated for a Nobel Peace Prize, she's rallied millions worldwide with impassioned advocacy for action to combat climate change—an irony since she has Asperger syndrome that's said to limit effective communication skills. Asked Sept 23, 2019,¹¹⁷ about her message for the United Nations and world leaders, her 4-minute statement stunned the UN and circled the globe. She ended with this: "The world is waking up. And change is coming, whether you like it or not." Thunberg urged leaders to follow the science, not "fairytales of endless economic growth." Like Humboldt, Greta Thunberg is changing the way people think about their world.

New Directions for America?

But, what about solutions? Covid-19 and climate change and the Jan 6, 2021, event in Washington D.C., have laid bare our vulnerabilities. Our nation's founding history coupled with today's realities, may help us steer a viable future. Except for women's suffrage and slavery, our founding fathers wisely weighed the importance of rational political communities, the benefits of common good, and the rule of law – foundations for democracy.¹⁴⁵ Today, our divisions stifle evidence – based mitigation of harms. Is Madison's vision of majority rule based on reason feasible today?¹³³ Pessimists say America has slipped into authoritarianism; optimists see light and hope for "Madisonian reason."^{32,53,133,140} If minds are closed and facts are fungible, we'll not achieve this goal; but using our brains and support we can succeed. In 1938, when Nazis invaded Austria, Winston Churchill, in the House of Commons, said that the conquest could not stand. He said, "We cannot say, "The past is the past without surrendering the future."^{C,26a} Indeed, the future will not be surrendered if, as Churchill proposed, we use our 'brains' and moral will. With such reason climate change and pandemics can be controlled.

Leaders in science view the anti-science mood today as threatening to democracies.^{81,118,119} On December 4, 1770, John Adams, said "Facts are stubborn things, and whatever may be our wishes, they cannot alter the state of facts and evidence."¹¹³ The Declaration of Independence (1776) and Constitution (1787), reveal how facts shaped our democracy with Jefferson and all who penned these documents steeped in science and the rule-of-law. The roots of anti-science beliefs are old and complex,^{47,60,121} but today's theories include:

- The end of cold war - a political imperative for science investments.
- The erosion of government funding for science and public health.

- The increasing normalization of disinformation in society, politics, and media. 111,134,156,157,166
- Failure of science itself to communicate its value.^{15, 85a.}
- Public fear of science and future discovery.^{12,57}
- And some corporate lobbyists whose money fuels anti-science propaganda – a classic tragic example – the tobacco industry- creator of the world’s largest pandemic in history. 19,121

To address today’s threats, America might consider the concerns of Washington, Madison, and Hamilton--- who worried that someone duly elected would subvert democracy with ‘mischievous actions’, where ‘passionwrests the scepter from reason.’¹⁰⁵ George Washington wrote his friend Marquis de Lafayette, on June 6, 1787, explaining his reason for attending the Convention was to keep ‘an aspiring demagogue’ with ambitious views from gaining power through emotional appeals to prejudice, distrust and fear.^{43,133,134.}

Changing these malign beliefs will be as difficult as losing weight. However, modern science tells us that all living things, from trees to slime molds can learn, remember and change - if slime molds can do it, surly, we can too.^{29,30,64,97,141,147} Change often elicits fear of the unknown. In Humboldt’s time – 1804 - Joseph M. Jacquard (1752-1834), a French weaver, revolutionized the textile industry with a new loom that controlled warp threads individually, creating patterns quickly and accurately. Weavers feared for their jobs, but, by 1820, Jacquard’s loom was found worldwide, known today as the great- great- great grandfather of modern digital computers. Today, new technology is developing exponentially often exceeding the capacity of societies to adapt - the result: fear, anger, powerlessness when jobs are threatened as in Jacquard’s time. Creating sustainable social safety nets can help society adjust and change.

- We might begin by finding common ground - public dialogue on the causes of anti-science beliefs - - Atticus Finch said, in *To Kill a Mockingbird*, “You never really understand a person until you consider things from (their) point of view.”⁹⁸
- We must depoliticize science and the rule-of-law and fund science and public health to meet society’s needs.^{j. 1,10,15}
- Reverse the social acceptability of anti-science attitudes.²⁴
- Consider adopting the 2018 *Pro Truth Pledge* for politicians, the media and corporate America - to help restore public confidence in news accuracy.^{52,124,151}
- Regarding our environment, climate change and pandemics: We must restore U.S. disaster preparedness and expand international viral and climate surveillance networks.
- Re- commit to the Paris Agreement to slow climate change.
- Support a just transition for Americans whose lives are being destroyed.
- And perhaps we should recreate a bold plan like the 1969 moon landing to restore optimism and support for discovery and change.⁹¹

Citizens have supported recent bold global initiatives – the historic 2016, *Paris Climate Agreement*, was signed by all 194 countries in the world. With visionary leadership, a bold grand challenge may be doable and help turn the public’s attention from destructive to constructive and optimistic ends.

Hoosier’s have long been engaged in our natural environment.^{11,87} The New Harmony settlement was a 19th c. ‘hot bed’ of gifted natural scientists, and it’s not surprising that Alexander von Humboldt corresponded with Indiana’s famous, Richard Owen, the professor of natural history at Indiana University and president of Purdue University who laid foundations for IU’s world-class biogenetic programs.^{2,39,88,90} Today *Purdue University Center for Climate Change Research*¹²⁶ and Indiana University’s, *Environmental Resilience Institute*, are nationally recognized programs addressing how science, public health, the law and politics may lessen economic and health impacts of climate change and Covid-19. Fairbanks School of Public Health is leading research into Covid-19 rates, in Indiana.^{44,86}

Indiana farming and forestry play an important role in combatting environmental degradation, using ‘smart- farming’ practices to preserve the soil and lessen carbon pollution.^{7,54} Agriculture, land management and forestry together account for 15% of global greenhouse gas emissions, a challenge and an opportunity.^{8,20,21,41,160,163} In 2020, an Indiana Senator submitted a bipartisan Bill in Congress: “Growing Climate Solutions Act,” that’s generated interest among farmers, foresters, and the public.^{107,108} This Bill supports farmers increased use of ‘smart farming’ practices and increases access to carbon pricing and carbon credit markets, thus decreasing greenhouse gas emissions and improving the lives and livelihoods of farmers.¹⁷⁴

Conclusions:

With new leadership in America, there’re hopeful signs for change. Steven Pinker at Harvard recently authored, *Enlightenment Now*, making an optimistic case for human change based on reason, science, humanism and progress, echoes of Alexander von Humboldt and his modern descendants.^{59,61,123,127}

Our challenge? - seeking and speaking truth to power. In our national divide, instead of the distinguished scientist and humanist, Jacob Bronowski’s, *Habit of Truth*, our growing national ‘habit of disinformation’ is disheartening and dangerous.^{12,61} Thomas Jefferson’s argument for democracy was based on John Locke’s definition of truth - grounded in observations of the physical world, observations that fail this test are “but faith, or opinion, but not knowledge.” Our nation’s future standing as a world- leader, requires truth- seeking as the prerequisite for change.¹¹⁸

Let’s end where I began, with *The Club* of Johnson, whose legacy is intertwined with our story of pandemics and climate change this evening.³² A member of *Johnson’s Club*, whom we met earlier, was the gifted scientist, explorer, and naturalist, Sir Joseph Banks, who was President of the Royal Society of England for 42 years; Joseph Banks mentored the young polymath, Alexander von Humboldt.¹⁴⁴

In the spirit of James Burkes' 1978 TV series, 'Connections,'¹⁶ and consistent with Humboldt's vision of the 'unity of the nature', let me offer the following historical links that connect *The Club* of 1764 that met at Turk's Head Tavern, in London, with the recent discoveries regarding climate change and pandemics, specifically, the Covid-19 vaccines.¹³⁷ Granted, the origins of vaccines are as complex as Humboldt's web - of - life, but, nonetheless, connections may be described across the sweep of time.

It starts with sequencing the genome of the Covid-19 virus from lung secretions of hundreds of patients with coronavirus pneumonia, in China – the sequence published, Jan 10, 2019.^{17,171,177} Sequencing was enabled by Watson's landmark discovery, in 1953, of DNA's structure; but Watson's discovery,^{73,88} was, in turn, enabled by creation at Indiana University of the world - class biogenetics research programs, in the late 1800s to early 1900s, under pioneering leadership of Richard Owen, Fernandus Payne and Herman Wells, that spawned four Nobel Prizes in genetics; but Richard Owen's curriculum and innovations at Indiana University were drawn from discoveries of Charles Darwin, who, was, in turn, mentored by Alexander von Humboldt, whose theory of the 'unity of nature' was, in part, shaped by Sir Thomas Banks, whose intellectual prowess was arguably molded by the Samuel Johnson Club's 'Aristocracy of the mind.'²⁸

Sir Isaac Newton said: "If I have seen further it is by standing on the shoulders of Giants." From Johnson's Club, to Sir Joseph Banks, to Humboldt, to Darwin, to Richard Owen and IU leaders, to Watson's DNA structure, and finally to sequencing the coronaviral genomes - voila - Covid-19 vaccines, in 2020.⁷³ Although the history of the diaspora of Johnson's Club and literary clubs, in general, has not been well researched, our story suggests *The Club* continues to shape people and other literary clubs such as ours and that the motto of *The Club* seems fitting today: *Esto Perpetua*, May It Last Forever.^{32,101,144,149}

Indianapolis Literary Club, January 19, 2021

Changing the Nature of Things

Stephen J. Jay

Jan 19, 2021

Acknowledgments

I am grateful to those who aided my research: archivists, librarians, scholars, historians and authors, past and present. I researched Humboldt's views regarding women's roles in society. There is a dearth of specific information on the topic, but AvHumboldt was likely 'progressive' in his views of women.

- Dr. Bucur, Indiana University Dept of Gender Studies. John W. Hill Chair, European History, Professor, Gender Studies, Prof History. Regarding Alexander von Humboldt's views of 18th c German feminism, she said no faculty at IU were focused on this area; kindly referred me to professors at Freie University or the Humboldt, in Berlin.
- Cathleen S. Fisher, PhD, Government and Politics, University of Maryland, President American Friends for Alexander von Humboldt Foundation serves on the Advisory Council of the German Center for Research and Innovation in New York and has published articles on German - American and transatlantic relations. In response to my query of Dr. Bucur, Dr. Fisher (Dec 1, 2020) agreed this is an important topic but was not familiar with any primary sources regarding Humboldt's views of women's rights and suffrage. Last year, the 250th anniversary of Humboldt's birth, none of the presentations spoke to this issue. Dr. Fisher suggested I contact Dr. Sandra Rebok who has researched and spoken extensively on Humboldt's life.
<https://www.americanfriendsofavh.org/staff>
- Giles R. Hoyt, Ph.D. Professor emeritus, Director emeritus, IUPUI Max Kade German - American Research and Resource Center, 401 East Michigan St. Indianapolis, IN 46204, [Maxkade.iupui.edu ghoyt@iupui.edu](mailto:ghoyt@iupui.edu). is an admirer of the Humboldt's (Wilhelm and Alexander) but more familiar with Wilhelm von Humboldt's philology, not Alexander's humanism-feminism. Dr. Hoyt recommended a long and careful exegesis of Alexander von Humboldt's work to try to discern his position on 19th c feminism.
- Dr. Sandra Rebok, author, scientific consultant in historical research, has researched Alexander von Humboldt and Thomas Jefferson and presented at the Max-Kade Center for German - American Studies among other scholarly activities. (Dec 2, 2020)
<https://sandrarebok.net/humboldt-global-sciencesd>. She said: "This is an excellent research topic and will certainly make an important contribution." She noted his views on slavery have been studied in detail, as well as his connection to the Jewish circles in Prussia. However, she was not aware of any study on his reflections on women's rights in general - nor of any larger reflection of Humboldt on women's rights. Dr. Rebok recommended a chapter on Humboldt and Jewish women:
<https://babel.hathitrust.org/cgi/pt?id=hvd.32044014839484&view=1up&seq=2>. This is a book on the women in the Humboldt family: <https://www.amazon.com/Schönheit->

[Grazie-und-Geist/dp/3938740396](https://www.geschichte.hu-berlin.de/en/bereiche-und-lehrstuehle-en/wissenschaftsgeschichte-en/faculty/susanne-schmidt-ph-d). Dr. Rebok remembered reading some comments in his diaries regarding the situation of indigenous women in Spanish America. She said that when he gave the lectures at the Sing-Akademie in Berlin, he explicitly opened those lectures for women as well (rather unusual this time).

- Susanne Schmidt, Ph.D. Institute für Geschichtswissenschaften, Humboldt-University Zu Berlin. Chair of history of science. susanne.schmidt@hu-berlin.de. [susanne.schmidt](mailto:susanne.schmidt@hu-berlin.de) (at) hu-berlin.de. <https://www.geschichte.hu-berlin.de/en/bereiche-und-lehrstuehle-en/wissenschaftsgeschichte-en/faculty/susanne-schmidt-ph-d>. Jan 4, 2021 email: Dr. Schmidt indicated that 'Alexander von Humboldt does not make a showing in sources related to the history of feminism.'
- Kim Tolley, Professor Emerita, Notre Dame de Namur University; Managing Editor, History of Education Quarterly who has written of von Humboldt's influence on young women's geography and Natural History education in 19th c. in America kindly replied to my query, stating that she had no knowledge of Alexander von Humboldt's views of women's suffrage. (Nov 24, 2020)
- Angela Courtney, Head of Arts and Humanities, Librarian for English and American Literature Librarian Arts & Humanities, Herman B Wells Library. Indiana University and molecular biology development in the early -mid1900s and his leadership in recruiting world- class scientists in biology, genetics, molecular biology and related fields.
- Dina Kellums, dmkellam@indiana.edu. Director Wells Library E460, Bloomington, IN, kindly provided (Dec 5, 2020) IU Archives references to Humboldt, <http://purl.dlib.indiana.edu/iudl/findingaids/lilly/InU-Li-VAD9981> including a biography and on Archive Grid (<https://researchworks.oclc.org/archivegrid/> a number of references to National repositories. <https://researchworks.oclc.org/archivegrid/?p=1&q=Alexander+von+Humboldt>
- Dr. Anita Runge, Managing Director, Margherita von Brentano Center, Freie Universität Berlin. xanita.runge@fu-berlin.de (email Dec 23,2020 home page www.mvzb.fu-berlin.de)
- Andrea Wulf, author, in 2015, *The Invention of Nature*, one of the New York Times 10 best books of the year, focuses on Alexander von Humboldt. On Jan 5, 2021, Andrea Wulf responded to my query, noting she did not look specifically at Humboldt's views on women; but he was in contact with female scientists and respected their work: Mary Somerville, whom he met on her visit to London, April 1827, and later in (AvH to Bunsen, 25 Sept 1839) how much he respected her book. Also, Caroline Herschel, whom he met in London on 25, Sept 1839. He facilitated her receiving the Gold Medal for Science from the Prussian king (AvH to Caroline Herschel Sept 25, 1846). Andrea Wulf suggested I contact: Alexander von Humboldt Forschungstelle, in Berlin. The Berlin-Brandenburg Academy of Sciences and Humanities. <https://www.bbaw.de/forschung/alexander-von-humboldt-auf-reisen-wissenschaft-aus-der-bewegung>.

References: Changing the Nature of Things

Below are general non-technical references. A complete list of references (no. = 178) is available. Please contact me for a digital list that includes scientific papers, scholarly books, interviews, essays, news clips, audio links and correspondence.

Selected General non-technical References

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- b. Bakshian A Jr. History's Coolest Literary Club. April 20, 2019. *The National Interest*. <https://nationalinterest.org/feature/historys-coolest-literary-club-53257>.
- c. Curtis LP, Liebert HW. *Esto Perpetua: The Club of Dr. Johnson and his Friends 1764-1784*. Archon Books, The Shoe - String Press, Inc., 1963. Hathi Trust. <https://catalog.hathitrust.org/Record/001064159>.
- d. Damrosch L. *The Club: Johnson, Boswell and the Friends who shaped an age*. New Haven and London: Yale University Press , 2019.
- e. MacKenzie D. *COVID-19: The pandemic that never should have happened and how to stop the next one*. Hhachette Books. 2020
- f. Quammen D. *Spillover: Animal infections and the next human pandemic*. New York: W.W. Norton & Company, 2012.
- g. Rogers P. Johnson's Club and late Victorian literary culture. *Journal Victorian Cult* 2013; 18(1) <https://doi.org/10.1080/13555502.2013.774239>.
- h. Roth K. World's autocrats face rising resistance. *Human Rights Watch World Report* 2019.
- i. Sambrook J. Club [Literary Club, Johnson's Literary Club] (act. 1764-84). <https://doi.org/10.1093/ref:odnb/49211>.
- j. U.S. National Academies. Rising above the 'Gathering Storm'. Beryl Lieff Benderly Dec 14, 2007. *Science AAAS*. <https://www.sciencemag.org/careers/2007/12/rising-above-gathering-storm>.
- k. Wulf A. *The Invention of Nature*. Alexander von Humboldt's New World, New York: First Vintage Books, Penguin Random House. 2015.

End Essay, *Changing the Nature of Things*

Acknowledgments and References:

Indianapolis Literary Club, January 19, 2021

Essayist: Stephen J. Jay

