

Preface

Red Country, Blue Country. I am both red and blue. I was born in a farmhouse in Charter Oak township, Iowa, and I grew up in nearby Denison, Iowa. Denison is the county seat of Crawford County and contains most of the population of the county. In the 2016 Presidential election Crawford County went 67 percent for Donald Trump. The omnipresent political maps show our region as dark red country.

I was educated at the University of Iowa, in Iowa City, which is a university town, and of course liberal. I do not need to look up election statistics to know that it is dark blue on political maps.

I love both Denison and Iowa City. I cannot think of better places to grow up and go to school. I wish that young people today were as lucky as I was. The problem is not the place or the people. Red country people are good people. Blue country people are good people.

Let me give liberals a little reassurance about Denison, given its landslide vote for Trump: in 2008 Obama handily won the Presidential vote in Crawford County. On election night, as results began to show an Obama victory, I had tears in my eyes. I was proud of our country. When Obama took office he had a lot of good will, even in red country.

Yet Obama failed badly. Sure, he did some good things, and we enjoyed an exemplary First Family. But Obama did not convert opportunities to improve fundamental prospects for youth, who secured his election. He did not deal with energy and climate effectively, even though the required actions also would have addressed major economic and national security issues.

Obama lost Crawford County in the 2012 election. The public recognized that he had done little to fix the Washington swamp. Special interests still ruled. Obama was becoming an elitist.

I tried several times to affect government policy on climate, but failed. The most recent time was near the end of the Obama administration. I was a plaintiff, as ‘guardian of future generations,’ in a lawsuit against the U.S government brought by Our Children’s Trust. We were asking the Court to require the government to have a plan to reduce fossil fuel emissions at a rate that would bring atmospheric CO₂ back to a level required to stabilize climate.

Late in his administration, Obama accepted the idea that the U.S. needed to reduce its emissions by 80 percent by midcentury. That was almost the rate that we were suing for! So why not agree to a plan to slash emissions and settle the lawsuit? This would enable later Presidents to merely continue or perhaps even accelerate rational phase-out of emissions. Government actions that violated the settlement could be challenged in court. At the very least, it would deter any later President from expanding fossil fuel use.

I learned that a plaintiff is allowed to discuss a case with the defendant. As I have indicated, in conjunction with a number of young people I helped launch a lawsuit in 2015 against the U.S. government for causing dangerous climate change. So late in 2016 I tried to contact high level Obama Administration officials, but I found it more difficult to establish communications than it had been in the G.W. Bush or Clinton Administrations. Eventually a former high-level Obama official agreed to serve as a go-between, and through that person we tried to persuade Obama to accept a settlement.

However, each interaction was frustrating. The focus of the Administration was on preserving Obama's Clean Power Plan to limit coal use at power plants. What a trivial contribution. Coal use was already being phased down, because gas was cheaper, and clean power rules could just be reversed by a later President.

A settlement of our lawsuit made so much sense, but we ran out of time. I concluded that much of the problem was my slowness. Coincidentally, my wife Anniek mentioned a discussion she had long ago with my sisters – about my inherent slowness!

“Has James always been slow?” My sisters were taken aback by the question. They were already surprised that I came home, to Denison, Iowa, with a beautiful young European woman. It was the first time they had seen me with a girl-friend. I even talked to her. I was 29 years old. (I learned of this conversation only recently. Anniek's question was not one she would have asked on first acquaintance, so it likely was on a later trip to Iowa.)

My sisters' first reaction was denial that I was slow, but then something like “Well, he was slower after his appendix burst.” That explanation – that a 3-year old's burst appendix could cause slowness decades later – was implausible, but it forced me to think: my sisters had probably used that excuse on their little brother's behalf a number of times.

This also set me thinking more about the slowness and missed opportunity business. Upon reflection I had to admit that such occurrences stretched all the way back to when I was a kid!

My journey was not a ‘hero's journey.’ On the contrary, I lived a life largely of indulgence in various ways, but especially in what Richard Feynman describes as “the pleasure of finding things out.” I took advantage of Anniek's love, support and dedication to our family, as she handled most of the parenting and home-building.

In 2004, when near retirement age, I ‘temporarily’ reduced my government work time to 40 hours per week, spending at least as much time to prepare a talk to criticize the government for its failure to address climate change. I also argued that the Intergovernmental Panel on Climate Change (IPCC) was understating the threat posed by global warming of a few degrees.

My talk was ineffective. A year later I gave another talk of the same ilk. This second one drew the ire of the government, and their resulting efforts at censorship brought publicity. Students and environmentalists then cajoled me into trips where I encountered the most egregious fossil fuel activities, such as mountaintop removal coal mining and tar sands extraction.

I tried to help draw attention to the foolishness of pursuing these dirtiest and most carbon-intensive fossil fuels. In mid-2007 I began recording my Communications about these topics on a webpage (www.columbia.edu/~jeh1), but these had no effect where it mattered, on the governments of the United States and other nations.

Then, during the transition from the Obama to Trump administrations, I read the letter I had written to Obama in December 2008 during the prior transition. Nothing had changed! The policy advice in the letter remained valid, but unacted upon. I had tried but failed to get an audience with Obama. There would be even less chance with the incoming (Trump) Administration.

I was 75 years old, and not making progress. So the best thing I could do was write down what I had learned, for the sake of younger people: I resolved to write the long-delayed *Sophie's Planet*. Again I was slow, but I will try to get the book out before the next election.

Can scientific objectivity help us find a solution to our energy and climate problem? We will see, but my working assumption is that not only can it help, but that it is essential if we are to achieve the actions that are needed.

I will explain the scientific method later by describing how I learned it, but let me emphasize here one crucial aspect that is difficult even for many scientists. You cannot let your preference, your ideology, affect your assessment of a problem.

In part for that reason, I am a political Independent. If you are a Democrat or a Republican, a Liberal or a Conservative, I hope that I can get you to question your own party's positions, as well as the other party's. We need to draw back from unproductive extreme partisanship.

Now I write *Sophie's Planet* for young people, especially to those people who will provide leadership as the world digs its way out of a difficult situation. I point out some of my mistakes, in those cases where it might conceivably help a young person.

Sophie's Planet is the world that today's young people, their children, grandchildren and the 'seventh generation,' will inhabit. If we take care, *Sophie's Planet* will continue to be a spectacular planet, a world in which humans co-exist with and appreciate all life on Earth.

Yes, I understand that climate change is a real threat. Extreme climate events – floods, storms, heat waves, fires – are becoming more extreme, low latitudes are becoming uncomfortably warm, sea level is rising and may eventually threaten coastal cities. If we let these effects continue to grow, emigration pressures might make the planet almost ungovernable.

It is also true that there is, as yet, little effective political action to stop climate change. Indeed, much reaction that is occurring is at the extremes of the political spectrum and is unhelpful.

On one extreme, we see near-panic over the imminence of disastrous global effects. Young people, already living in a fast-paced stressful world, cannot avoid this din. The nurturing environment that children need in their formative years is impaired. Negative consequences for the mental health and well-being of our youth are growing.

On the opposite extreme, we see denial of human-caused climate change. This extreme is driven by fear that liberals will use climate change as a basis for increased regulations and taxes.

This is no time to despair or to panic. The average worldwide standard of living has never been higher. We have developed knowledge and the potential for technologic advances that are capable of dealing with climate change and preserving our remarkable planet.

Time is short, though. We must avoid passing the most dangerous point of no return, the point at which it becomes impossible to avoid rapid sea level rise of many meters, which would spell the demise of almost all coastal cities. To avoid such calamity, to restore a beneficial climate, we must understand the big picture: the climate system, the energy system, and the political system.

The fossil fuel industry dominates our energy system and is now driving both our climate and political systems. However, there is no good reason why we cannot regain control of our future

from the fossil fuel industry. It will take work – lots of hard work – but that has always been so, especially in a democracy.

I do not ignore the difficulties posed by growing political polarization and wealth disparities. These problems have grown large in recent years and are occurring almost worldwide. The wealthy are using political systems to protect their privileged positions.

The public is frustrated because government failure is obvious. People understand that our political parties have become elitist. Politicians take money from special interests and they want to maintain their elite status. The system is inevitably corrupt when politicians are allowed to take money from special interests.

Political corruption has been with us since time immemorial. The problems can be fixed. What is different now with respect to global climate change is the fact that one of the largest industries in the world, the fossil fuel industry, is intimately involved in creating the physical problem and corrupting our politics to thwart its resolution.

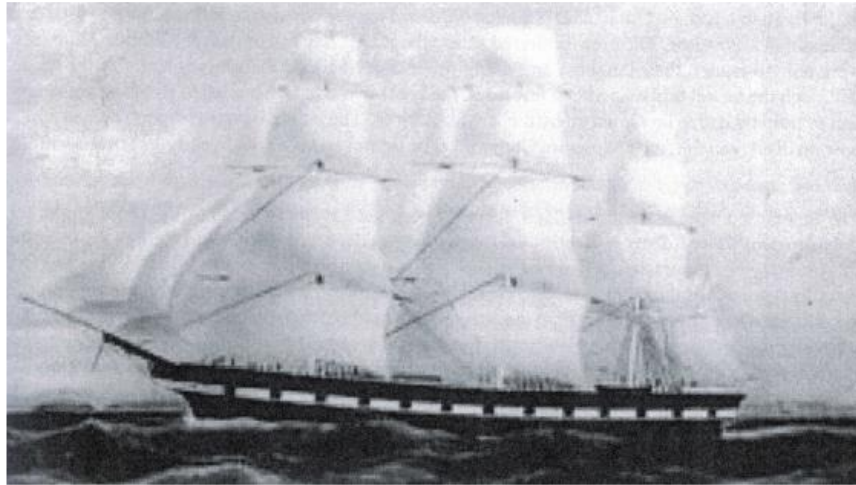
Fossil fuels are not evil. One gallon of gasoline contains the work equivalent of 400 hours of labor by a healthy adult. The convenient, concentrated energy of fossil fuels has helped raise living standards in much of the world.

However, fossil fuels are dirty and not renewable; and the carbon dioxide added to the air when we burn fossil fuels is the principal cause of climate change. The conclusion is fossil fuel companies will become clean energy companies or simply go out of business, if we wish to preserve our remarkable planet and its unique life.

This energy transition does not require a bloody revolution. We must instead harness our political systems to work for the common good. It is a challenge, but one that young people can approach with confidence, not with fear or worry. My hope is to provide information that young people, especially those who become leaders, will find useful in meeting this challenge.

Over the past half century I witnessed developments in the climate, energy and political systems. I believe that some of my experiences help illuminate the actions required to stabilize climate. You can assess that for yourself.

Acknowledgments: besides Anniek, I am indebted to many others. The ‘Iowa mafia’, especially Andy Laxis and Larry Travis, helped get me started. Makiko Sato’s many talents and dedication kept our work on track. Gary Russell, the architect of our climate model, provided the main tool that Reto Ruedy, Makiko and I used to help develop an understanding of climate change. Eunbi Jeong provides me the hope that our current research group – Pushker Kharecha, Craig Rye, Makiko, Eunbi and me, and attorney Dan Galpern -- may yet make a difference.



Picture of the William Tapscott in Mariners Museum, Newport News, Virginia

Chapter 1. Ancestry

Ingvert and Karen Hansen, my father's grandparents, emigrated from Denmark in 1860. Ingvert was born in Ribe County, Lihme, in rural Denmark in 1836. At age 19 he was converted to the Latter Day Saint (LDS) religion¹ by Mormon missionaries. He served four years as a Mormon missionary while he worked as a carpenter in Denmark. At age 23 he married Karen Pietersdaughter of Holme, Denmark, and in 1860 they used her small inheritance to pay for their trip to America, where they hoped to contribute to the building of Zion, the Promised Land.

Ingvert, Karen and 729 other 'Saints' – converted Danish, Swiss and English Mormons – set sail in May 1860 from Liverpool on the William Tapscott, a three-deck sail ship usually used for freight. With unfavorable winds, the trip took 35 days on rough seas, during which 10 passengers died, 9 marriages occurred, and four babies were born, one of these to Ingvert and Karen. They named their first child William Tapscott Bell, after the ship's captain James Bell, which may have helped assure that the newborn was declared an American citizen by the captain. The captain had sole authority to declare whether a child was born close enough to shore to be a citizen. The most arduous leg of their journey, by oxcart from Omaha to Utah, required 2½ months. They reached Salt Lake City in October 1860.

Ingvert's carpenter tools, carried from Denmark, aided their pioneer struggles in the forbidding Utah landscape. But Ingvert and Karen became disillusioned with Brigham Young's version of the Latter Day Saint church, especially its polygamy (more precisely polygyny, plural wifism). From an apostate Mormon, Alex McCord, they learned about a smaller offshoot of the Latter Day Saint church – the Reorganized Church of Jesus Christ of Latter Day Saints, RLDS² -- with members located mainly on the eastern banks of the Missouri River in Iowa and Missouri.

The RLDS religion was closer to the church the Hansens thought they were joining when they left Denmark. So in 1864, now with three children, Ingvert and Karen set out with their oxen on the Mormon Trail in reverse. Their goal, on the advice of McCord, was to homestake in western Iowa, which in 1864 was tallgrass prairie, with tree groves growing mainly along the streams.

Upon reaching southwest Iowa Ingvert and Karen settled in Gallands Grove³, in the northwest corner of Shelby County about 15 miles southwest of present day Denison. A majority of the settlers already in the Grove were Mormons who had been driven from their homes around Nauvoo,¹ Illinois, but had decided not to follow the Mormon leader Brigham Young to Utah. The Hansens were nearly penniless, but according to Shelby County history, Alex McCord made it known that the Hansens were “hard workers, good credit, and needed help in getting settled.”

The homestead may have appeared to be Eden compared to Utah, but it was hilly, rocky land, difficult to plow. Some years the crops were lost to a grasshopper plague, chinch bugs, or drought and dust storms. It was not all bad, though: chickens and pigs fattened on the grasshoppers. Ingvert and Karen never strayed far from the Grove. The eighth of their 11 children was James Edward Hansen, my grandfather, known as Jim Hansen.

Our ancestry on my father’s side of the family is documented by my oldest sister, Donna Hansen Stene, in *The Hansen Family*.⁴ My grandfather, Jim Hansen, married Katherine (Kate) Von Tersch. Kate was daughter of Johan Von Tersch and Mary Wilwerding, immigrants from Westphalia, Germany and Belgium, respectively. Jim and Kate had eight children, the second being James Ivan Hansen, my father.

I wanted to do a simple calculation of the countries of origin of ‘the blood in my veins,’ assigning 25 percent to each of my four grandparents. My father’s side would imply that my siblings and I are 25 percent Danish, 12½ percent German, and 12½ percent Belgian.

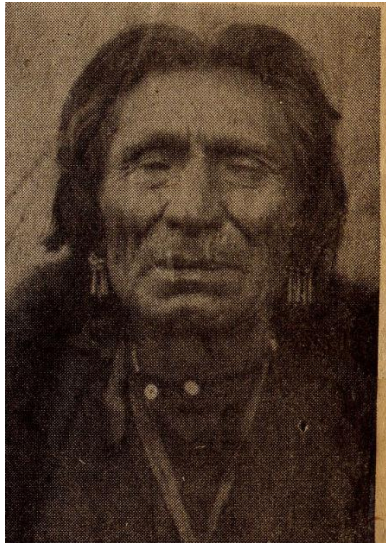
Donna has done a lot of work on our mother’s parents, John Ray and Florence Longenecker, but the story on that side of the family is complicated. The Rays go back five generations to Orville, Alsace, which is in France today, but is a region that was fought over for centuries and was alternately German and French. The Longeneckers go back nine generations to the Emmental valley of Switzerland and the Palatinate in southwestern Germany.

Donna points out that several of the wives were German in the marriages of the several generations of my mother’s ancestors, and Donna concludes “we are definitely more German than Dane!” DNA evidence has Germanic Europe at about 50 percent, Great Britain second and Scandinavia third. This ancestry will be of interest to me, when I later consider the roles of Germany and the United States in creating the climate debacle that young people face today.

Pioneer great grandfather Ingvert Hansen left almost no writings. We are only aware of his diary for parts of the travel from Denmark. We know that his farming in the “hardscratch” Grove soil was arduous, but he had five sons to help with the farming, as well as six daughters to help his wife, Karen. He likely retained his strong religious bent, as he eventually became the presiding Elder in the RLDS church in the Grove.

Our best source of information about Ingvert’s character, my sister suggests, may be the inscription on his gravestone, which reads: “An honest man’s the noblest work of God.”

One story from Ingvert’s pioneer days has been passed down the generations.



YellowSmoke photograph from newspaper article handed down by our father. The article described YellowSmoke as between six feet and six feet two inches in height and weight 200-230 pounds.

It's about Yellow Smoke, Chief of the Omaha Indians.

Chief Yellow Smoke was the keeper of the Sacred Pole, the centerpiece of ceremonies, subject of sacred songs, and symbol of the tribe's well-being. Yellow Smoke's name came from the yellow smoke stain on the pole, which was displayed in the Smithsonian Museum in Washington, D.C., and now rests with the Omaha Tribe at Macy, Nebraska, according to the Crawford County History website.

Yellow Smoke often visited the farms of Ingvert and his neighbor, John McIntosh, who was one of the first settlers in Shelby County, in 1849. It is possible that McIntosh and Ingvert tried to convert Yellow Smoke to the Mormon faith, as both Joseph Smith and Brigham Young advocated that approach. In any case, Yellow Smoke expressed a desire to be buried "like a white man" in the Grove. He got his wish much sooner than he would have wanted.

The most reliable account of Yellow Smoke's demise, in my opinion, is the story passed from Ingvert to later Hansen generations. Sparsely settled western Iowa changed rapidly in the second half of the 1860s when a railroad was built across the state, reaching Council Bluffs in the fall of 1866. The town of Dunlap on the Boyer River several miles west of Gallands Grove sprang into existence in 1867, after the town was platted by a railroad company. The second building constructed in Dunlap was a saloon named Respectable Place⁵.

Chief Yellow Smoke took a liking to gambling and drinking with white men in Dunlap. According to my ancestors, Yellow Smoke was mortally wounded after demanding his winnings from a card game, the winnings being 75 cents. An argument and scuffle ensued during which Yellow Smoke was struck on the head. The blow crushed his skull. Yellow Smoke managed to reach Gallands Grove, four miles east of Dunlap, where Omaha Indians were encamped, but he died several days later and was buried in the Grove.

An article in the New York Times on 5 December 1868 says that after Yellow Smoke was struck and injured on the evening of 27 November "He succeeded in getting to where there were several hundred Indians encamped, about four miles east of town. He expired on

Wednesday morning.” Wednesday was 2 December 1868. The Times story also notes “The Chief was always noted for being very friendly and strictly honorable. His band comprises some 1,500 warriors, who according to reports are gathering in fast and are greatly excited. Yellow Smoke was buried yesterday.”

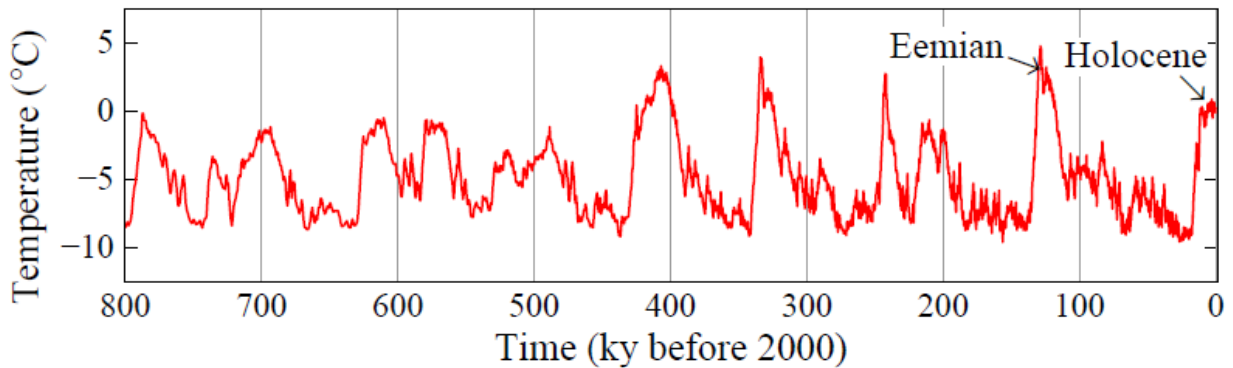
According to my father, Yellow Smoke was buried on Ingvert’s property. William, Ingvert’s oldest son, acquired most of Ingvert’s property, and passed it on to his son, Billy. William, born on the boat on the way to America, was 8½ years old when Yellow Smoke was murdered. According to Billy, Yellow Smoke was buried under a tree on Ingvert’s property, and subsequently they were never allowed to plow close to the tree, because of the grave. An article in the 15 June 1978 Harlan Tribune says that Indians continued to visit the grave and camp on the sacred ground as late as 1922. That article suggests that the grave may have been on the McIntosh property, but I believe that the information passed from William to Billy is more credible than a newspaper article discussing what it describes as a “legend.”

The YellowSmoke story and pioneer writings are relevant to later discussion.

Gallands Grove and surrounding areas changed enormously during the first two generations of settlers. We have no writings by Ingvert or his wife Karen describing their Iowa homestead. However, the Grove sits near the adjoining corners of four counties: Crawford, Shelby, Harrison and Monona. Historical data for these counties provide helpful information, especially a 488 page history of Harrison County⁵ that contains reminiscences of several early pioneers, including D.W. Butts and Sally Young:

Pioneer Butts decried the loss of the deep-rooted 6-foot prairie grass that, except for the occasional tree grove, once covered western Iowa, noting that the prairie grass was succeeded by 2-foot “tame grass” and weeds. He wrote “The grass, the natural product of this valley, was so high and luxuriant for miles and miles that horsemen might hide from each other at a distance of two hundred yards. Quite as surprising as this true statement is the rapid change by which this tall grass disappeared very quickly after the white man appeared with cattle and crowded out the deer and the elk and the red men. We expected to see the range gradually reduced, but were hardly prepared to see it go down from six feet to two feet in a few years. However, the wild hay of this section has been a mine of wealth to many, and it is yet to those who had the foresight to save it from the flock and plow. Forty years ago this part of the state was noted for grass and hay, as it is now for corn and hogs!”

Pioneer Sally Young wrote: “We located in this county in 1850 and found, as we thought, the garden of Eden, a vast prairie of beautiful flowers and a great abundance of wild fruits. At this time the country was very thinly settled, our nearest neighbors being six miles away.” She complained about the flies and mosquitoes, but continued “There were oceans of game, tons of fall acids in the shape of plums and grapes. The thousands of deer which roamed up and down the valley...were to be had at the little cost of shooting and dressing, and gave to the larder all, yea, perhaps, better than is now experienced by many, who at present live in this, what is termed the land of plenty. Great droves of wild turkeys lined the skirts of the interior timber track, and honey was far more plentiful then than now.”



Antarctic temperature in the past 800,000 years relative to the Holocene average.

Modern agriculture succeeds in feeding a large population. Yet it has flaws that affect human health and the environment. There is something to be learned from the natural tallgrass prairie. Here let us note that there are potential improvements to current agricultural practices that would help restore biological diversity and increase soil productivity while also storing more carbon in the soil, changes that would help limit human-made climate change.

D.W. Butts wrote of “red men,” who were called Indians when I was a boy, or American Indians when corrected by our school teachers, or Native Americans today. First Americans may be more appropriate, but I will use the popular name.

By the late 1800s Native Americans in western Iowa had been moved forcibly to less productive land west of the Missouri River. Let us finish our initial remarks about Native Americans with one poignant paragraph from the Harrison County history,⁵ titled there as “Indian Troubles”

“The last difficulty with Indians in this part of the country was in 1885, when a band of about three hundred were in the habit of crossing the Missouri river into Harrison county. They were quite friendly, but annoyed the citizens very much by pilfering stock and poultry. To put a stop to this the whites, twenty in number, assembled and met the band when they had crossed the river. The twenty whites captured the three hundred Indians, loaded their bows and arrows into wagons and took them over the county line at Honey Creek, Pottawattamie county. The Indians were half starved, and the humane white people gathered together and raised a fund with which a steer was bought and given the Indians, who seemed to greatly appreciate the act of kindness. After the feast, the day following, they went over the river to their homes in eastern Nebraska.”

“Kindness of the humane white people” is Butts’ perspective. Let us recall the long history of Yellow Smoke’s ancestors in America, in the context of human history.

First archeological evidence of humans, *homo sapiens*, is from Africa about 300,000 years ago. The spread of humans into Asia and Europe occurred at least 60,000-80,000 years ago,⁶ probably earlier, but the Pacific and Atlantic Oceans isolated the Americas, which remained free of humans until late in the last ice age, just preceding the current interglacial period, the Holocene.

Earth’s climate varies naturally by large amounts, as shown by the chart of Antarctic temperature change over the past 800,000 years. Climate change on these time scales is global in extent, with global average temperature change about half as large as the Antarctic temperature change.



Beringia land extent included the green area during the ice age.

During the last ice age, which peaked about 20,000 years ago, a large ice sheet covered most of Canada and northern parts of the United States, including the locations of Seattle, Minneapolis and New York City. There was a smaller ice sheet in Eurasia. So much water was locked in these ice sheets that sea level was about 125 meters (400 feet) lower than today.

Lower sea level caused the continental shelf area around Alaska to be above sea level. Humans were becoming capable of living in cold climates, and people moved into Beringia. This land had shrub vegetation, trees and large animals, which provided fuel and food.

Archeology and genetics suggest that Beringians were isolated for several thousand years, but, as ice began to melt, they could move freely. Beringians were the founding people of North, Central and South America.⁷ These Native Americans occupied the Americas throughout the Holocene.

When Columbus arrived, just half a millennium ago, there were about 10 million Native Americans in what is now the United States, and perhaps 50 million throughout the Americas, with these populations uncertain by about a factor of two. Immigrants from Europe wiped out more than 90 percent of the Native Americans, via diseases they brought and warfare.

Mistreatment of Native Americans is now historical fact. We often deal with uncomfortable facts by briefly noting them in our textbooks, then putting them out of mind, perhaps believing that we cannot change history – but tomorrow’s history is being written today.

Nature’s Corridor is a dream today, a concept of contiguous land stretching north-south from the Arctic through North, Central and South America, land that allows free migration of wildlife. The Corridor might permit partial restoration toward conditions that existed during earlier Native American history, while being consistent with the pioneers’ notion of a range “where never is heard, a discouraging word, and the deer and the antelope play.”

E.O. Wilson proposes⁸ that half of Earth’s land be designated a human-free reserve to preserve biodiversity. Much of Wilson’s objective could be achieved with a region in the American West that grows over time, encompassing some existing reserves and national parks.

Climate change and other human-imposed stresses on nature create an urgent need to find a plan for species preservation. Climate change also draws attention to the potential for restoration of tallgrass prairie and forests to contribute to drawdown of excess atmospheric carbon.

Native Americans have relevant knowledge and interest in restoring the land. Could Native Americans help devise and implement a plan to restore part of our land to its natural richness, provide habitat for wildlife, and draw down atmospheric CO₂?

Nature's Corridor could be a basic plank in the platform of a political party that aims to restore the American dream. Let's consider that topic later.

I struggled to write the next chapters of this book. I wanted to describe my life growing up in Denison, Iowa. Denison was a wonderful place to grow up. Our mother told us many times how lucky we were, and she was right.

Yet I wanted to know more about my parents' struggles as they tried to provide for their family. I dug into the 390 page *The Hansen Family*⁴ written by my oldest sister, Donna Hansen Stene, and her husband, as well as 62 pages of unpublished vignettes⁹ on our childhood written by my second oldest sister, Eleanor Hansen Maiefski, who was the story-teller in our early days of exuberant child-filled bedrooms. Their stories raised more questions, which led to hundreds of e-mail exchanges with all of my siblings, providing their remembrances and frank assessments.

As I learned more about my parent's early life, it seemed that they had inherited a situation with the odds stacked against them. Something strange must have happened during my grandparent's generation, the generation that followed our pioneering great grandparents, Ingvert and Karen Hansen.

¹ The LDS movement arose during an early 19th century period of Protestant religious revival, which some scholars relate to rejection of the rationalism of the Enlightenment or Age of Science and Reason. I believe it indicates that science and reason alone do not satisfy the need of many people for a spirituality that provides strength and helps give meaning to their lives. Joseph Smith founded the LDS movement in western New York after he had visions in which Smith claimed God instructed him not to join any of the existing churches. Smith said that an angel showed him the location of golden plates with writing that he translated, with divine assistance, to a new sacred text, the Book of Mormon, which he published in 1830 as a complement to the Bible. As Smith's following grew, local opposition forced repeated moves of the group, eventually to a small town in Illinois that they named Nauvoo. Nauvoo's population reached a peak of about 14,000 rivaling that of Chicago, but renewed tensions with non-Mormons resulted in the murder of Joseph Smith by a mob in 1844. The largest group of Mormons accepted Brigham Young as the new prophet and leader and emigrated with him to the Utah Territory. Under Young the LDS Church openly practiced polygyny, which Smith had instituted in Nauvoo. The LDS Church officially ended plural marriage in 1890, and today members who practice it are excommunicated. The LDS Church has extended its reach internationally via a vigorous missionary program, growing to a membership of about 15 million.

² The RLDS church changed its name to Community of Christ in 2001. It reports about 250,000 members today.

³ Abraham Galland was the first white settler in Shelby County, building a log cabin in Gallands Grove in 1847.

⁴ *The Hansen Family*, C.S. Stene and D.H. Stene, 389 pp., Library of Congress CCN:2009902650, 2009.

⁵ [History of Harrison County, Iowa : its people, industries and institutions, with biographical sketches of representative citizens and genealogical records of many of the old families](#)

⁶ [Soares, P., L. Ermini, N. Thomson, M. Mormina, T. Rito, A. Rohl, A. Salas, S. Oppenheimer, V. Macaulay, and M.B. Richards, Correcting for purifying selection: an improved human mitochondrial molecular clock, *Amer. J. Human Genetics*, 2009; doi:10.1016/j.ajhg.2009.05.001.](#)

⁷ Rutherford, A., *A Brief History of Everyone Who Ever Lived*, Orion, 2016.

⁸ Wilson, E.O., *Half-Earth: Our Planet's Fight for Life*, Liveright Publ. Corp., 272 pp., 2016.

⁹ *Surviving After the Great Depression*, Eleanor Hansen Maiefski, 62 pages, unpublished.