Revolutionary Essays on Life, Earth, and Politics

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Ideas for the Next 400 Years

By

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Cambridge Scholars Publishing

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PREFACE

This book is an informal conversation, not an academic book. However, it is about the most serious possible ideas. Having worked on this for several years, I'm tired of it and I've got to get it done, regardless of defects. As result, the footnoting is questionable and I don't like formatting footnotes anyway. Rest assured though; we still achieve a degree of footnoteyness.

I don't cover many important topics like the economy, health, education, poverty, racial discrimination and sexism. These issues are important, and I hope you will have a chance to learn more about them. Much of what I cover is a simple overview of the real complexity of an issue, but it is a good start for the introductory level.

Don't let this book sit on a shelf. Give it to someone like a college student, or to a local library, or leave it where someone can find it. With luck, some ideas will take hold in some brains and the ideas will move forward, leaving the book behind.

I thank my wife Alison Shepherd Lewis and friend Elizabeth Zapata for hours of proofing and editing. I think Dane Smith, Andrew Biemiller, Mike Vandeman, and Michael Kemmer for their help.

OUR FIRST 800 YEARS OF THINKING

This book is for Americans concerned about the future of our country and for policy wonks (persons who take an enthusiastic interest in the details of a particular policy). By and large, the political process is controlled by those who take an interest in politics, large in number but small as a percentage of the population. Are you a member of the political class? Your membership is voluntary.

This first essay is for people who like to philosophize and for people who are looking for a personal philosophy and trying to decide what to do with their lives. As a young man, I really expected more steady progress in the world by now, after the Enlightenment, or after the Great War to End All Wars, or after the Second World War to End All Wars … and so on. I am now a pessimist, but I have developed some ideas that are a satisfying truth for me.

"First 800 years … "

Why has American progress been so slow, or even stopped? It may help to put the question into a long timeframe. Is our thinking too short term? Can we overcome our natural tendency to think in terms of less than 10 to 20 years? We will use an 800-year time frame to get away from short-term hopes and despairs, starting our discussion about 400 years ago and speculating 400 years into the future.

The historical period of the Enlightenment ran from about 1600 to 1815, ending with the beginning of the Romantic Era. I am interested in only two important aspects of the Enlightenment—science culture and empathy—which are still going on today. The Enlightenment started with a small number of people at the top of Western society and still has a long way to go before it has enough political power to move society forward.

"…of thinking"

Intellectual history intrigues me as the best way to understand history as a whole. I think the dominant ideas of American thinking of today help explain the failures of our democracy, and it will take a long time to change these ideas. These failures include not recognizing how much we are failing. We may need a few more centuries of effort.

For perspective, our current historical era, the early 21st century, is just one among many. Future generations may look back on ours as a minor period coming soon after the Victorian Era, and still socially primitive. By the 25th Century, more progress may have been made, and we can only speculate on how people then will look back on us now. It will not be pretty.

Similarly, can we anticipate how our great, great grandchildren will see us? Can we now somehow imagine ourselves in the future looking back on our current selves as quaint and provincial? It can induce a dollop of humility. The point is to at least for the moment step away from our parochial self-absorption, self-importance, and submersion in the present.

Nevertheless, I find it oddly unnerving to try to look back on myself after I've been dead for so long.

A brain-mind-culture based understanding

Human culture is located in a physiologically stable brain which, nevertheless, supports a rapidly changing culture from generation to generation. The brain functions both physiologically within itself and socially with other brains. While physiologically separate, it is designed to be social, and can be at least somewhat understood by its interaction with other brains over a period of many years. Brain and culture evolve from the interaction of heredity, socialization, continuing influences from outside, and the brain's own thinking. The brain is influenced by its experience with other brains and in turn, influences those other brains, not sequentially, but simultaneously, a continuous interactive causality. I find it hard to conceptualize this mix of interaction, long time span, the physiological and the social.

"Mind" refers to our conscious awareness of self, our moods, thoughts, actions, of who we are. Brain science approaches mind from a physiological perspective, with limited simultaneously so far in understanding higher level functioning. The mind usually forgets about the brain that sustains it and ignores its underlying causality. The brain-mind combination seems to work with a mix of direct perception, media-reported reality, experience, and scientific knowledge. Our mind uses mental models of how things work, but what we can know is limited by what the brain-mind can do.

Speculative philosophy. This book is not about fact-free speculative philosophy untested by systematic observation. I have spent hours trying to understand many great philosophers, about 84 of them based on the Great Courses lectures I've listened to. I kept trying to connect their ideas with the real world. I have never really grasped their vast and complex ideas. I lost the will to keep trying because they did not make sense to me. They did not deal with my questions about brain-based understandings, science culture, and empathy. It seemed much easier for them to philosophize than to do the work of collecting information systematically and scientifically.

Science undermines speculative philosophy by not verifying its speculations. Our understanding is limited to our social brains.

Science culture has a message for speculative philosophers: Reality is real and unchanging but how we know it and what we know are limited by our physiology, by our senses and our brains. Reality does not change; our ability to understand it does, because of our amazing brains. We know truth within those limits, and that is, for me, realistic, good enough, and very satisfying.

Omar, the ancient Persian tent maker, expressed my feelings in a quatrain of the great poem, *The Rubaiyat of Omar Khayyam*:

Myself when young did eagerly frequent
Doctor and Saint and heard great argument
About this and that, but evermore
Came out by the same door as in I went.

We now discuss science culture, which concerns our thinking, and empathy, which concerns our feelings and social relationships.

From science to science culture[1]

Science. Science is our best guide to what is true in existence and, with research, might become even truer—the idea that science is dynamic, that truth advances. This can be unnerving for people who want truth to stand still, but that does not bother scientists. The anomalies and unanswered questions of science continue. After centuries, we now confront the standard atomic model, quantum mechanics, entanglement, an expanding universe, gravity waves, bending light, stretchy protons, black holes, dark matter, and dark energy—there is still so much we don't understand.

Science is the content studied and procedures performed by scientists; it is a social process for creating agreement on hypotheses that describe the reality we experience. There is no absolute truth about why, only a kind of truth about what and how. We can believe whatever why we want; it is just not science.

Science has rules for the science game that require a social process to deal with human fallibility, to referee among contending ideas. Science makes predictions and tests them using experiments and observations. Accepted hypotheses explain facts better than those rejected, but anomalies, observations that don't fit and require new explanations. Terms of a theory must have operational definitions allowing experiments with results that support the idea or not. Science uses direct observation and measurement by instruments. Scientific truth keeps changing in jumps and small increments.[2] It is a system for sooner or later overcoming the cultural biases of the scientists themselves.

Science is the only dependable guide we have to understand existence.

> "Science is merely an extremely powerful method of winnowing what's true from what feels good."
> —Carl Sagan

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[1] Many of these ideas are taken from lectures by Alan Kors, Birth of the Modern Mind, CD lectures from The Teaching Company.

[2] https://en.wikipedia.org/wiki/Occam%27s_razor.

Science culture. Science is about discovery, not pragmatism. By contrast, science culture is accepting what scientists say as usefully and relatively true and extending the thinking to what is probably true for pragmatic decisions. Science culture is a way of thinking based on probable and useful understandings.

Science culture is a social system that radiates outward from the scientists who make an initial discovery to those who replicate the research. From this small circle with direct knowledge, much larger numbers of scientists and educators accept the discoveries. They are persuaded by the reasoning and reputations of the writers and publishers. The culture expands further to students and the educated public, who accept far more, vastly more, than they can know directly or even understand in detail. For most of us, science is mediated to us by others.

Science culture includes socialization into it, by parents and schools educating the next generation.

We don't have to understand Newton or Einstein to have science culture. And we don't have to have, nor can we have, a large reservoir of scientific knowledge in order to think within a science culture.

Science culture requires enough wealth in society to support institutions which educate and employ scientists. Initial scientific research involved a very small number of people, was quite inexpensive and was supported by universities, government, and wealthy patrons.

Science culture requires an educated public that believes in science. Science culture requires procedures for enforcing integrity. In recent years, the attack on science by the far right has made stronger procedures necessary. President Donald Trump tweeted numerous politically motivated falsehoods, undermining scientific communication. By contrast, President Joe Biden established the first-ever inter-agency Scientific Integrity Task Force which, in February 2022, released a comprehensive assessment of scientific integrity policy and practices in the federal government.[1]

Science culture is, then, much broader than the content of science as such; it includes applying scientific thinking generally and pragmatically to everyday life, to how we understand the news, life,

[1] https://doi.org/10.1126/science.abo0036.

and the world. It is informal, intuitive, and general, with a sense of when to be skeptical and when something is probably sound.

Precursors

Science culture started about 400 years ago as a result of a social historical process. Something was happening in Western Europe and on the Atlantic seaboard in the America. The thinking of some of the elites of the time took a new turn, now called the Age of Enlightenment or the Age of Reason. The new thinking warped world history from a cyclical rise and fall of regional civilizations to a global and linear trajectory.

Ancient civilizations had much learning short of science culture. Universities developed in India and China with schools of philosophy, logic, medicine, and mathematics. Their mathematics had concepts of zero, the decimal system, geometry and trigonometry. Rome had advanced civil engineering. The Middle Ages saw cathedrals built with practical knowledge. These achievements fell short of science culture and science as I have been defining them as on-going social processes for the general purpose of discovery and understanding.

The precursors for the emergence of science culture in Western Europe were long periods of political stability, some looseness in social controls, fragmented feudal localism replaced by national bureaucracies and new power centers in towns and cities. During the late middle-ages, laws and courts developed, there was greater wealth and education for more people. Western Europe had a common Latin Christian elite culture. Government and diplomacy developed with career ladders, expanding systems of money, accounting, banking, taxation, and trade. More and safer roads were built, navigation improved, and freedom of travel increased for persons and goods. The vast peasantry still had limited mobility, but there was more scope for a small and growing middle class in cities, towns, and estates. England, in particular, had more social mobility based on the Rights of Englishmen that created a yeomanry.

Johannes Gutenberg's invention of the printing press in 1450 led to an explosion of printing in Latin and local languages, greatly expanding the distribution of ideas, which was crucial for the growth of science culture in the aristocracy and urban middle class.

These precursors were also essential for economic expansion, the rise in trade of the 18th century, and the Industrial Revolution starting about 1760. Some new wealth went to the science culture that was growing alongside the economy. It can be difficult to see these long-term trends clearly, given an overlay of constant political turmoil.

Another important precursor to the Enlightenment was the spread of Greek and Arabic knowledge in Spain under the Moors, the Arabs who ruled Spain from the 10th to 12th centuries. Arab, Jewish, and Christian scholars met in Cordoba, Toledo, Seville, and Granada. After the Christians defeated the Moors in the 12th century, Archbishop Raymond of Toledo continued the three-way culture and employed translators for the books in the large library he had taken over. He increased the transmission of this knowledge to Europe. Translation from Greek and Arabic into Latin and then into Spanish continued into the 13th century. While much of the content was speculation, not science culture, some of it, like algebra, geometry, Arabic numerals to base 10, navigation, astronomy, medicine, and scientific observations, contributed greatly to science culture.

Universities. Higher education in Western Europe for males developed gradually from the Salerno Medical School and the University of Al Quaraouiyine (or Karueein) in Morocco in the ninth century, to the University of Bologna in 1088, and then more rapidly. By the time of Copernicus in the 16th century, there were 147 universities in Western Europe. They had the institutional strength, despite an antagonistic Catholic Church, to spread and sustain Copernicus's work. The earlier discovery of heliocentrism by Aristarchus of Samos in the 3rd century BC.

Wikipedia's list of universities in Europe reports, by century:

Century	Newly Founded	Total
11th	1	1
12th	1	2
13th	19	21
14th	25	46
15th	38	84
16th	63	147
17th	37	184
18th	23	207

Another Wikipedia article puts the number of early modern universities at the end of the 18th century at 143, and it may be more accurate by excluding mergers and disappearances.

Ironically, universities were both the bulwark of training of elites in supporting the dogma of the status quo and the institutional base for eventually over-throwing it. In 17th Century Western Europe, the dominant dogma was Aristotelian Scholasticism, a meld of pre-scientific Christian theology and Greek and Roman thought. It involved deduction and disputation and was an entirely speculative system of reasoning based on authority and ancient texts of the Bible and the Greeks.

Universities had the purpose of training teenage boys for the clergy, military, law, government, and medicine. The rate of founding of new schools slowed, but the numbers of students probably continued to rise.

Initially, most universities resisted the Enlightenment and clung to the old curricula, therefore much of the Enlightenment proceeded elsewhere, in state-sanctioned scientific societies, coffee houses, private houses of the elite, under private patronage. The Parisian salons of the wealthy were unusual in that they were often led by upper-class women.

Over time, universities came to play the major role in producing a scientifically knowledgeable upper strata in Europe and the Atlantic seaboard. Universities were the necessary institutional base for the development of a larger social system using science culture. Universities, initially bulwarks of anti-science culture, became bulwarks of science culture.

The Enlightenment: Galileo, Bacon, Newton, etc.

The Enlightenment eventually ended the credibility of medieval thought among scientifically educated people.

At the start of the Enlightenment, astronomy was popular as the study of the divine heavens. The planets (the wandering stars) were of special interest. There was a problem. The common knowledge was the complicated Ptolemaic system, which described the sun and planetary movements accurately enough as going in odd orbits around the earth.

Nicolaus Copernicus. In 1543, Copernicus was studying the reported observations of planets and discovered a simpler explanation for their movement, that they revolved around the sun, called heliocentrism. Since heliocentrism was far simpler than the Ptolemaic system, it prevailed as the best explanation. Using a simpler explanation over a complicated one is called "Occam's razor."

Copernicus died the same year and thus did not get in much trouble with the Church. His findings were a great leap forward, but religious dogmatists soon objected.

Galileo Galilei. Galileo (1564-1642) of Italy improved microscope developed in the early 1600s after Dutch eyeglass makers improved glass lenses and combined them for more magnification. He improved the design in 1609 and turned the microscope around, making it a telescope: from magnification of the close and small to magnification of the distant and large. He pointed his telescope at ships coming into Venice and could sell merchants commercially valuable information about what was coming in. He pointed his telescope at the moon and stars. He reported the most amazing things. He confirmed Copernicus. The murmurings against Copernicus became an uproar against Galileo, whose persuasive writing was reaching large numbers of educated Western Europeans. Dogmatists prevailed enough to keep Galileo under house arrest from 1633 to his death in 1664, during which time he continued to do important scientific work. The scope of his work continues to amaze us, all part of a larger development of science culture.

Francis Bacon. Many Enlightenment thinkers created and defined science and science culture for the first time.[1] As a youth at the University of Cambridge**,** Bacon (1561-1626), an English contemporary of Galileo, was taught the medieval curriculum, and he rebelled. In 1620, in his book, *Novum Organum*, Bacon elaborated on empiricism, inductive reasoning, the philosophy of science, and scientific method. Bacon was the first to understand science as a social system of establishing truth based on observation, not dogma. Science was our best pragmatic guide to the verifiably true. Induction

[1] https://en.wikipedia.org/wiki/Francis_Bacon_bibliography, https://en.wikipedia.org/wiki/Essays_(Francis_Bacon).

means reasoning from observations to hypotheses that describe them. In practice, science is a lot messier than speculation, but facts are the foundation.

Many astronomers communicated privately among themselves rather than publish popular but dangerous books with heresies like Galileo's. These astronomers stayed out of trouble, indicating that the religious dogmatists did not read much; their goal was social control. Contemporary with Galileo, astronomers noticed that planetary orbits were not quite circular, and **Tycho Brahe** of Denmark made measurements that provided better data. From 1609 to 1619, **Johannes Kepler** of Germany developed near-exact equations to describe the elliptical orbit of Mars.

Isaac Newton. Newton (1642-1727) of England was born the same year Galileo died. Newton developed calculus and, in 1687, advanced Kepler's work with more universal laws of motion and gravity that applied not only to the solar system but also to much else.

It is easy to associate Isaac Newton only with his great insights into nature. However, he also applied reason to religion. In fact, he wrote much more on religion than on science. The English Civil War (1642-1651) involved a fight over religious truth. Newton studied religious scriptures such as the Hebrew prophesies of the Old Testament. He used reason to refute the divinity of Jesus and declare that the Trinity was a plot to sabotage Christianity by Athanasius, an early church leader. He ultimately decided to support a simple, tolerant faith based on pagan, Jewish, and Christian texts, woven together into a religion of empathy and science. His scientific and religious quests were not ideological, not doctrinaire, not trying to prove some preconceived idea, not trying to impose his ideas on others, just going where his thinking took him.

Newton was not isolated; he participated in a dialogue with many other scholars of the time. He was concerned that he and others would let preconceptions and attractive imaginings get in the way of truth, which required careful reasoning. While today we see him as an amazing scientific intellect, he himself wanted to find proper religious belief and to lead a godly life. I see him as a Unitarian, as an ecumenicist informed by Christian values.

John Locke. Locke (1632-1704) was the leading social philosopher of his time. While his speculative writing was not useful,

he developed pragmatic concepts of how we learn and know about reality. These concepts supported education based on science culture and empathy, which would become further developed by educators such as **Bronson Alcott** and **John Dewey**. Locke promoted basic human rights and freedoms, the rule of law, and limited representative government. The Enlightenment proclaimed the value of the individual as opposed to existing for the sake of the church or the state.

Science culture drives history

Science culture was a great achievement of the Enlightenment. It had the ideas and discoveries of a few leaders, but this was inspired by, and only possible because of, the development of society and the growth of a network of educated readers. They advanced the Enlightenment in many ways too numerous to mention. The growing educated public supported science as a way of understanding existence. Since then, science culture has been driving much of history for four centuries.

While the official Age of the Enlightenment was over by 1815, science culture continued. By 1845, the math from the laws of gravity was so accurate that **Urbain Le Verrier**, the French astronomer, and **John Adams,** the English mathematician and astronomer, predicted that anomalies in the orbit of Uranus could be explained by another planet of a certain size and orbit. In 1846, astronomers looked with improved instruments and there it was—Neptune—which had been seen since 1781 but not understood as a planet. This success impelled science culture forward.

Charles Darwin. Darwin (1809-1882) of England did for humanity what the astronomers had done for the heavens, which was measurement, close factual study, insights, and sharing observations and data. Meanwhile, scientists were working on anomalies in Newton's theories.

Albert Einstein. Einstein (1879-1955), a clerk in a Swiss patent office, got interested in anomalies in Newton's laws being discussed by the physicists of his time. He proposed special relativity in 1905 and general relativity in 1915, replacing Newtonian physics.

Science and science culture have grown from a small base of scientists in a few fields of study in the 17th century to the world wide science of today, with hundreds of thousands of scientists, thousands of fields of study and a multi-billion-dollar science economy,

Science and science culture: limited but useful

Science cannot answer many questions; it cannot tell us how to live or provide some larger meaning for human life. It does not prove that we should be nice. It does not answer non-scientific questions, nor judge the good, the beautiful, and the true.

Science is our best guide as to the nature of existence, which science culture extends to useful information for everyday life. Scientists debunk dogma. They continue the effort to this day, for example, to expose Fox News' disinformation. Science is useful for showing what we do not know, such as limits on how the brain knows things and the limits on what it can know. We must necessarily act with uncertainties.

Newtonian physics is still useful despite anomalies. For example, science proves that the earth goes around the sun. Science culture, however, also holds that the sun comes up in the east. That the sun rises in the east and sets in the west is confirmed by observation and is scientific. I also believe the earth goes around the sun even though I have not done the research. In practice, I find it more useful to know that the sun keeps coming up in the east. For science culture, two truths are not a problem.

Free will: yes, no, sort of

Science has not been applied as much as it could be to issues such as free will and religion. Our minds tell us that, yes, we have free will, that we make decisions independent of our brains.

Nonsense. There is no free will. The brain controls the mind. The brain is designed to mislead the mind into thinking the mind is in charge, and the brain is unable to tell us how it does it.

This idea is slippery, unnerving, and difficult to hold onto.

Evolution worked just fine without mind awareness of brain. The brain evolved to serve the mind and creates the illusion of

autonomy and choice. Our brains create mindfulness; the thoughts of our mind result from what our brain is doing. Words exist in the brain as neural connections, not words, and arrive in the mind as words. Our minds get some sense of the brain indirectly. While our mind is aware of other things, our brain may be trying to remember that word we needed for yesterday's crossword puzzle and finally reports it to the mind, seemingly out of nowhere.

The fact of no free will, however, is useless. We cannot, as yet, understand the brain well enough to predict mind and behavior. We are unlikely to get soon any ability to predict mind from brain. Even with supercomputers, the brain is just too complicated and difficult to study completely. Of the many parts of the brain, the most important for policy and politics are the cerebral cortex and the limbic system, particularly the amygdala. Imagine how difficult it would be to track the connections of a single word from nerve connections to its meanings in the mind and being spoken and heard. If you doubt the complexity of the brain, listen to Schubert's Fantasie in F minor. The "cerebral cortex has six layers of nerve cells that contain **between 14 billion and 16 billion** nerve cells."[1] (No, they have not actually counted.)

So— we know from science culture that we don't have free will, but, as a practical matter, we must act as if we did.

What good is this knowledge? Ironically, we can use our limited knowledge of brain and mind to understand better why people act the way they do and how our heredity and experiences shape how we think. The more we understand the brain-mind relationship, the more functional freedom we have. Free will may be delusional in the abstract, but it is still helpful. We shall know the mind to some extent, and it will set us free to some extent. There is no better alternative.

Nature, without intending, has done what it can to make us think we have free will; it has given us intelligence, imagination, an awareness of time, memory, a perception of choice—which is as much free will as nature allows.

[1] https://my.clevelandclinic.org/health/articles/23073-cerebral-cortex.

Rescuing religion from belief, rescuing God from metaphysics

God exists. There is just too much scientific evidence to deny it. The problem is looking for God outside of the social brain and its culture of beliefs leading to behavior. Atheists are confused and misled by all those who believe in an outside God, overlooking God's obvious existence within the social brain, a brain that believes in some external reality.

"Social brain" emphasizes that the brain evolved to be social, a physically separate organ designed to develop and think socially.

Religion exists in the brain, and therefore in the mind. Evidently, many brains need God for feeling comfort and security in a world of real and imagined dangers. This inchoate need reaches the mind as God, as a reason to live, as an explanation, as a source of certainty. Many brains need something the mind calls God or something similar—pantheism, spirituality, the holy, the divine, meaningfulness, optimism, counting our blessings, national identity.

The need of our brains for religion leads to many kinds of theologies in the mind: Catholicism, Protestantism, Judaism, atheism, nationalisms, and ideologies.

The brain easily persuades the mind to embrace ideas with more certainty than is possible in terms of science culture. A person may claim to have a religion but not live up to its precepts, which is understandable considering the brain is an organic mass of nerves producing thought.

Science culture brings thinking about religion to a more realistic, exciting, and interesting place. Religion in the brain is a challenging question beyond the science itself. The brain's need for religion or some personal philosophy of life in no way trivializes religion or ends debate. The search for meaning and the holy continues. Theology becomes the study of the spiritual within us, hopefully for the purpose of empathy and ecumenicism.

The idea of the mind serving the brain applies to concerns beyond religion. Examples of such needs include family, work, politics, music, art, entertainment, sports, travel, philosophizing, and optimism. It's all in your mind because it's all in your brain.

Dogmatism

The opposite of science culture is dogmatism, used broadly to include unsubstantiated beliefs, superstition, sectarianism, fundamentalism, and some forms of tribalism, partisanship, ideology, and nationalism. Dogmatists interpret everything to support their preconceptions. They misinterpret facts, select facts to support their dogma, ignore or deny contrary facts, make things up, believe things that are not true, do not seek objectively to find evidence for beliefs, and are willfully ignorant. In other cases, dogmatists are socially dominant and able to suppress dissent. In all cases, the needs of the brain for certainty preempts concern for real understanding with acceptance of the unknown.

Note: the parallel rows below are not necessarily on the same topic.

Science culture: The Enlightenment	Dogmatism: Aristotelian Scholasticism
Reliance on science culture to understand the world by proximate causes (how), not ultimate causes or purposes	Assumes ultimate causes without empirical evidence; arbitrary truth does not change, "truth" by speculation
Continuing development of observation, theory, experiment, instruments, and quantification; questions leading to more questions	Assumes legitimacy of authorities like emperors, kings, princes, popes, and priests and ancient documents; belief in absolute truth
Respect for unknowability; acceptance of uncertainty;	Stable beliefs about the natural world based on authority
Use of science culture to understand the past despite it being partly out of reach of research, using plausible natural explanations	Teaching of traditional thought through formal "disputation" based on authority, logical deduction from authority, and how things appear
Belief in freedom of inquiry and belief; skepticism tested by empiricism	Nature explained in terms of material, formal, efficient, and final causes with degrees of perfection in a great chain of being
Open to new ideas	Willful ignorance about science and facts
Increasing availability of knowledge through printing and other media	Supernatural rewards for virtue and punishments for sin after death
Thinking based on scientific reality, personal contemplation, values, and inspiration	Thinking based on dogma, superstition, authority, and unsubstantiated claims
A search for deeper, more important meanings beyond the idiosyncrasies of a particular group, time, or place	Acceptance of the supernatural, conspiracies, miracles, and revelation as fact

The bias of science culture against social science

Science culture started during the Enlightenment and is both a way of understanding specific content and an attitude for pragmatic understanding of existence. Science continues to grow in size and scope into vastly more fields, subfields, and cross fields, driving global development.

Science culture, however, has had a cultural bias toward the physical sciences, technology, nature, and medicine, and away from social science. Social science lacks the kind of precision of Enlightenment natural philosophy.

Emile Durkheim. Durkheim (1858-1917) of France, considered by many to be the father of sociology, came after the Enlightenment. He insisted on using social facts and scientific tools such as statistics, surveys and historical observation in his study of suicides in Catholic and Protestant groups. Social science does, in fact, use evidence as much as the physical sciences, but by and large, it is a different kind of evidence.

David Hume. Hume (1711-1776) of Scotland, was, for the most part, a science culture-based philosopher and objective historian, but he went off the rails when it came to the Puritans, citing "the wickedness of Puritan fanatics." He maligned the Puritan's beliefs and other dogmas with a fury he did not apply to non-sectarian politics and ideas. He and many other scientists did not try to use science to understand religion and the reasons people held anti-scientific views. Dogma was refuted but the causes of dogmatism were not studied.

We need a better scientific understanding of what leads to science culture and what leads to dogmatism in genetically similar brains. The brain is so complex that research for decades to come will get only a partial understanding of how it works.

The brain develops from birth with a plasticity predisposed for learning behavior, culture and language in childhood. It is predisposed to focus on social relationships such as with family. Development continues throughout life, from dependent babyhood to independent adulthood, to dependent old age.

Such research will have to deal with the biases of the scientists doing the research, whose disapproval of disinformation (our now

fashionable term for lying) can get in the way of explaining why people lie. Why did rioters storm the Congress to overthrow the government on January 6, 2021? Why do people believe Fox News propaganda or conspiracy theories? Are these something to be understood or just complained about? Why have people followed Hitler, Trump, and Putin?

The hard science we have is not very useful for the social problems we face. We have failed to study ourselves scientifically as social and political beings. We have reached, I think, a time in history when that must change.

Empathy

Science culture is about what we can know about existence and how we know it, not about values or the purpose of existence. Science refutes dogma but leaves us high and dry about how we should live.

A dictionary definition of empathy is, "the ability to understand and share the feelings of another."

My use probably needs a better term because it goes beyond awareness of the feelings of others and includes understanding that their welfare is important for and inseparable from our own. Empathy is the opposite of a zero-sum game. If you lose, I've lost also. Being selfish requires us to be unselfish. Our feelings for others makes their welfare important for our welfare.

Empathy does not mean denying our own needs or passivity if we disagree with someone. It includes honesty in seeking answers, understanding, considering all the facts. It means seeking collaborative relationships for mutual benefit rather than subordination of self to the other or domination or exploitation of the other at their expense. It is not always possible, but it is a value one can choose.

Empathy on a larger scale came out of the Enlightenment and its emphasis on the potential of the individual, undefined and uncontrolled by some power like a church or a state. In England there were the Rights of Englishmen with early seeds set forth in the Magna Carta, and major political reforms during the 19th century that expanded the freedom of the individual. In France there was a revolution declaring liberty, equality and fraternity. In America there

was some democracy and the Bill of Rights. The actual achievement is ongoing, requiring the gradual institutionalization of democratic processes and development of better citizens.

My use of empathy seems similar to Daniel Goleman's Emotional Intelligence, which includes it and self-awareness, self-regulation, motivation, and social skills.[1]

Empathy values the individual, personal freedom, a willingness to learn, and the possession of self-confidence. It requires education to be able to develop individual knowledge and ability. It includes respect for others, fairness, tolerance for cultural, ethnic, racial, sexual, and gender differences; it celebrates diversity.

Empathy is relevant for policy. Economic growth is desirable but disruptive, and needs government to protect the environment, workers, consumers, and the disadvantaged. Society needs a fair sharing of the burden of paying for government as foundational for national welfare and unity. It includes empathy for the earth, stewardship of nature, care for creation, and protection of biodiversity.

Empathy in politics requires democracy, rule of law, equality before the law, due process, expertise, conversation, and collaborative decision-making to achieve balance among competing values. It is slow and messy but effective and preserves the legitimacy of the political system.

To be effective, empathy policy relies on science culture to know the facts, achieve pragmatism, and accept uncertainty.

A philosopher who embraces the concept is **Richard Rorty**. His hero is the strong poet who seeks reform based on empathy. Language cannot capture reality because reality is too complex; language can express the contradictions through irony. Solidarity through empathy is needed to hold society together, reaching out to include the excluded. Fiction can help us empathize with the marginalized.

Empathy plays a role in business. Is enterprise about cooperation or competition? Businesses that drive too hard a bargain may be less successful than those that "leave something on the table," creating good will and a willingness to cooperate in the future.

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[1] Daniel Goleman, Emotional Intelligence, Bantam Books, 1995.

Defense

Empathy does not mean naiveté. It includes using science culture to defend ourselves against and to understand objectively when a threat requires defense. Poisons, lions, lightning, psychopaths with guns, foreign armies, air pollution, bad drivers, and ideologues can kill us, so we take precautions. Grifters and demagogues are an especially pernicious threat because they use their ability to appear empathetic to harm their victims. They exploit a victim's credulity, ignorance, compassion, or vanity to swindle them of their money or their vote.

For defense, science culture and intelligence are especially important for rational, evidence-based, pragmatic assessment of threats. Violent offenders stay in prison to protect the public, but there is room for restorative justice.

Pacifism underreacts. Armed defense is necessary when being nice is irrelevant. A military capability understood by adversaries to be effective deters aggression. Empathy looks for steps for détente, diplomacy, and de-escalation to persuade enemies to be adversaries without illusion that it will work.

Existentialism

Existentialists, like Hume are skeptical about any absolute truth, religious or otherwise, only the relative truth of science. Beyond that, we choose what we believe however much we may claim something is absolutely true. From Hume and the skeptics of the Enlightenment to 20th century existentialists, it is clear from philosophical argument and science that we can have no provable theology or metaphysics.

Our scientific understanding of the fallibility of human senses and brains shows that people often embrace contradictory, unverifiable convictions. Big truth is an invention of the human imagination; it is a cultural construct to meet the needs of the brain. We may feel the need for certainty about the meaning of life; we just cannot have it. We cannot by reason know our essence directly; we must instead make an existential choice.

Existentialism does not have advice about how we make that choice, but we nevertheless cannot avoid making it. We live with the

irony that our brains are in charge, but we nevertheless must make a decision that feels free. Perhaps the challenge is for the mind to figure out what the brain is up to.

Values do not come from guilt or duty, or from intellectual analysis or logic. Ethical reasoning and moral education are secondary. The mind may articulate ethics and logic in making choices, but they really come from deeper within a person. Empathy comes from feelings without a philosophy attached, part of an inchoate sense of who we really are.

We may discover our essence by trying to do things that society values, but which nevertheless don't work for us. We may have resolutions about what we should do that turn out not to be realistic however much we might wish them to be. Some New Year's resolutions just don't work.

A better sense of who we are may emerge from experience, contemplation, intuition, enjoyment, and judgment. It may come from what feels authentic and comfortable.

We can sense—have intuitive feeling about—how we should live. We can't really reason our way to an answer. We are contradictory and complicated organic matter, and we change over time. Our values become more defined as we mature during our teens and twenties and become more durable with age. Empathy is one of those choices based on intuition about who we really are.

"I feel; I intuit; I tell my story; I commit my life." -comment from a friend.

Chauvinism

> "Chauvinism is the belief in the superiority or dominance of one's own group, who are seen as strong and virtuous, while others are considered weak, unworthy, or inferior. It includes "a form of extreme patriotism and nationalism, a fervent faith in national excellence and glory."[1]

"Chauvinism" is the best term I could find so far for the opposite of empathy, but I would prefer one that emphasizes the emotions and actions more than beliefs.

[1] https://en.wikipedia.org/wiki/Chauvinism.

The Southern Poverty Law Center defines a hate group as an organization or collection of individuals that – based on its official statements or principles, the statements of its leaders, or its activities –has beliefs or practices that attack or malign an entire class of people, typically for their immutable characteristics. An organization does not need to have engaged in criminal conduct or have followed their speech with actual unlawful action to be labeled a hate group.[1] The immutable characteristics are usually race, religion, ethnicity, gender, gender identity, and disability.

Chauvinists abuse power, intimidate others, and are violent. There is no concern for social justice or poverty. They are anti-environmental and destructive of the creations of other cultures. They use divisive, offensive, and hateful speech to dehumanize and rationalize hostility towards imagined enemies. They make personal attacks on opponents. They have little interest in policy, merit, or performance.

Chauvinists use dogma for social control. Objective truth, history, fact, and science don't matter. They select facts and make up lies to fit their agenda. They have absolute certitude and live in a self-created reality of willful ignorance, fear, denial, and conflict creation. There is no integrity of thought, no room for debate, only self-referential solipsism. They invent threats based on their dogmatism, on their ideology and paranoia in the face of contrary evidence.

Chauvinism crosses the line from inactive or passive prejudice against others to actively justifying violence against them. It transitions from relying on persuasion to using the coercive power of the state to suppress dissent and freedom of information.

Chauvinism has many forms—authoritarianism, supremacism, theocracy, revanchism, xenophobia, bigotry, intolerance, harassment, racism, sexism, and other similar -isms, insurrection, military aggression, military occupation, torture, genocide, ethnic cleansing, and apartheid. Bullying is child abuse and retail chauvinism writ small and personal.[2]

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[1] https://www.splcenter.org/20200318/frequently-asked-questions-about-hate-groups#hate%20group.

[2] David Robson, "The Nordic way to stop bullying," BBC, Mar 13, 2022.