Finding Empirical Truth in the Social Sciences

A Paper by Bradford Harrison

As a species on planet Earth, we've come to understand that there is a gaping disconnect between our ability to deploy science and technology successfully while, at the same time, utterly failing to deploy successful political and other *social* systems.

In this paper I show that the social sciences like political science and sociology are in fact hard sciences on a par with the natural sciences. The only difference is one of degree. I argue that the reason the human species has done such a dismal job of deploying its political and other social systems when compared with the "successful" deployment of natural science and technology is because we fail to understand that the political and other social sciences are absolutely to be pursued as methodological and scientific in exactly the same way as any natural science.

As a species, we've made stunning "progress" in the physical sciences, but little if any progress in the social sciences. If we aren't able to develop social sciences that give us the answers to our societal and basic survival problems, there's no hope for a stay that lasts much longer on Earth. Hard science has given us about as much as it can; now's the time for social science to take the wheel. Our very survival depends on it.

The American broadcast media and social media have become inundated with propaganda and falsities. Investigative journalism is all but dead now as advertising dollars pour into social media and left-wing media, where there absolutely is no truth. There are only financial and oligarchic power issues getting propagated and discussed. Politics is all about how much money a candidate has to spend and – more importantly – who is giving her that money. In 2024, America inexplicably re-elected Donald Trump for a second term, due solely to the power of propaganda, money, and lies. What so-called MAGA voted for now bears no resemblance to what they're getting. They were duped by the super-rich powers-that-be, including Donald Trump himself (the poster boy for the rich), and now the oligarchy is having a heyday and has already increased their wealth by literally $trillions in the space of just a little over one year. Such is the power today of propaganda, money, and lies.

But we can get back on a sane path by quite simply focusing on empirical truth. Scientific truth has given us the technology upon which we have created this mess, and now we must focus on social truth to redirect us from the suicidal path on which the super-rich, super-powerful powers-that-be have embarked. Simply training our minds to not be swayed by propaganda and lies will be our salvation. We don't need tons of money to make this happen. We just need tons of common sense.

I used to be of the opinion that humankind had a great future ahead in space – and not just in our solar system. I am still convinced that we have the wherewithal to get to Mars and even other exoplanets, but it has become pretty clear that these tasks will prove monumental and will take time and resources that we just don't have left. We're clearly stuck here, at least for now, and we'd better clean up our act if we intend for the great humans on Earth experiment to continue.
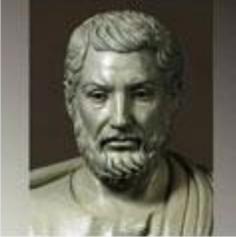
The known and the unknown

Human beings aren't nearly as smart as we like to think we are. We have this view of ourselves as possessing great and knowledgeable brains that can understand anything if we just try hard enough. But that's false. The early philosophical empiricists of the Enlightenment like David Hume and John Locke showed us that we learn by observation, not just by "thinking on" things. Hume showed us the consequences of the problem of induction – i.e., we are hard pressed to show *any* "facts" about nature that are *guaranteed* factual as opposed to our assuming them to be correct simply because we've demonstrated them before. There is no guarantee that the sun will rise tomorrow. We just assume that it will because it always has.

People put great hope in hard science, still. They talk of getting to Mars and then onto an exoplanet somewhere. But the problems in accomplishing this that are shown to us by today's physicists and engineers will take decades -- even centuries -- to solve, if they can ever be solved at all. And we are running out of time to fix this mess we're in. No one's going to come help us save us ourselves, and we certainly won't be able to abandon a planet we destroyed and simply go somewhere else.

Most social sciences are pretty easy to identify. Political science, sociology and economics are obviously social sciences. On the other hand, the study of anthropology is divided into cultural anthropology and physical anthropology. Physical anthropology is "hard" science-based and studies the physical world without bias. Cultural anthropology looks at societies and civilizations in an attempt to understand them. Anthropology straggles the line between social science and hard science, which makes it interesting in itself, but also demonstrates that the social and natural sciences aren't really all that different.

The chart below shows how the distinction between physical and social science relates to epistemology in general. You have the hard scientific sciences, which are equivalent to physical anthropology, and you have most of the other social sciences, which aren't strictly "factual" in the same sense as the hard sciences. Where the two sides meet – the unknown – is the core subject of this paper.

"known"	unknown	known
Wittgenstein's "paradigms" These are based on language and different ways of life	Yet to be solved, primarily thru consensus (voting) Cleisthenes Father of Democracy	Kuhn's paradigms These are based on science: conjecture and refutation

Note: The column on the right, known, also includes hard facts that we, as humans, can assert based on the best available empirical evidence. For example, Trump's loss of the 2020 election can be included here. There are virtually *no empirical facts* that demonstrate his assertion that he won. That lie certainly wins the distinction of being biggest political lie of the 21st century – at least so far. It has also been the most influential, unfortunately for America.

And you shall know the truth, and the truth shall make you free

There *is* empirical truth, and we *can* find it. This absolutely must be our primary and core activity if we want to survive as a species. That's *somewhat* easier in the natural sciences because we can verify, validate and reproduce what is true. In the social sciences we just have to work a bit harder.

When looking for what we can confidently assert to be true, I always start with the logical positivists and Ludwig Wittgenstein's *Tractatus Logico Philosophicus*. Then I use Kuhn to show the holes. Social science has the same holes – they are just bigger.

Truth Table	
Logical Positivism	For scientists. Also known as *Logical Empiricism*. This is scientific truth—facts that can be reproduced by anyone, anytime. See *Vienna Circle*. See *Tractatus Logico-Philosophicus*.
Scientific Paradigms	For physicists. Even with scientific facts, scientific truth is elusive. Perception affects even scientific hypotheses and conclusions. See *The Structure of Scientific Revolutions*. See Wittgenstein's concept of "pictures" in *Tractatus Logico-Philosophicus*.
Social Sciences	For social scientists. See Chomsky vs. Skinner. To what extent can you apply the hard sciences approach to the social sciences? See *Language and Mind*. See *The Blue and Brown Books*.
Consensus	For liberals and conservatives. Debate and agreement. See *News Flanks*. See *Sonny's Utopia*.
Moral Relativism	For hippies and Trump supporters. The further left and the further right you go, the more perception becomes reality. Empirical proof not needed. See *https://bradfordharrison.github.io/Against_Hierarchy.pdf*. See *The Idea of a Social Science*.
Faith	For monks, priests and preachers. *A priori* truth. See *Critique of Pure Reason*. See *The Bible*.

The Vienna Circle was a group of physicists and philosophers early in the 20th century who philosophized with regard to how science can deliver unequivocally true information about nature. Positivism is a philosophical term used to explain the process of discovering and documenting verified, validated, and reproducible scientific truth. The great Austrian philosopher Ludwig Wittgenstein provided a sort of handbook to the logic behind logical positivism, referenced by scientific philosophers to support how humans interact with the natural environment in with a deductive methodology that ensures the validity of our scientific information.

Later in the century an academic named Thomas Kuhn wrote a stunning expose of how we do science, and how scientific research and analysis is actually something of a social activity that moves through a series of "paradigms." Paradigms explain scientific discoveries, but "anomalies" develop in the paradigms, leading to new paradigms. Kuhn admitted that in some sense this make scientific inquiry "relativistic," but when we look at the real-world results we cannot deny that scientists aren't just spinning their wheel but certainly are making progress in understanding and manipulating the natural world.

Social science progresses in a similar fashion. The discoveries of social science aren't as obvious or as easy to validate and reproduce, but they nonetheless do represent real progress. Cultural relativism actually plays a very active part in this process. Diversity of thought and values provide a range of input into the Kuhnian-like paradigms of social science. Consensus among majorities in society and the world provide the paradigms that get tested by civilization. The trick is to keep moving forward like science does, and keep developing social truths that ensure our survival on the planet and make everyone's lives better.

Without guardrails, cultural and moral relativism can become meaningless. This is why the social sciences are so difficult. It's hard to keep the paradigms of social science from "winging off" into nonsense.

Beyond social science are in fact non-sensical human activities like cultism and most religion, but as long as the effects of these paradigms and ways of life are limited in any sort of real-world damage (like the crusades of the Trump cult) then they can actually provide some useful input into how society moves forward.

Victimless lies and victimless values

Lies that harm others are clearly wrong and must be exposed and addressed. On the other hand, victimless lies and values are harmless and don't hurt anyone. They are often a key part of someone's personal belief system, so should be "honored," but only to the degree they deserve in terms of empirical explanation of how society works and how we can make it better. Whimsical beliefs and fairy tales give us hope and make our lives better. Belief in a heaven while your roast in hell fall into the category of victimless lies and values. If that's what gets you through the night, believe on!

Values are bonding mechanisms for sub-groups within the larger culture, and are very identifiable in the over-arching culture as meta-values. Values are at the heart of sociological paradigms. The Ku Klux Klan is a clear example of bonding values that are certainly not victimless. Most religious organizations are examples of groups sharing victimless values and beliefs like eternal life and eternal torture in hell.

In the 70s my generation and my peers in America learned the details of the American Indian and their ways of life. We were impressed with their relationship to nature and their lifestyles that kept their relationship with nature non-exploitative and sustainable. Of course the American Indian was brutally destroyed under the doctrine of manifest destiny (just like Trump is pursuing some twisted version of the Monroe Doctrine today), but my generation became well informed by studying this uniquely American history. We are moved by the plights of other indigenous cultures and environments as well, like the people of the Amazon rainforest. The Amazon is home to approximately 1.5 million indigenous people belonging to over 350 different ethnic groups. These people acting as vital guardians of the rainforest's biodiversity. The American Indian was the same. The values I am presenting in this paper are the direct result of the values I developed as a young "baby boomer" in America. We are what Trump and his cult now refer to as "woke."

Open democratic society and the natural environment are critical to fostering groups and sub-groups that share victimless values, and these groups are key voting participants that very much

help us find universal values that are universal in the same way as scientific "laws" appear to be universal.

Return to the Dark Ages

Most of what I have to say here can demonstrated through the lens of politics and political science. Currently America is living through the shit-show called the Trump administration, so it is certainly revealing for me to make my core argument by referencing today's political environment. Similar examples of the rise of authoritarianism, totalitarianism, autocracy, and fascism – whatever you want to call it – are easy to find around the world today, but Trumpism is what I know and what I have unfortunately lived through. Authoritarianism, totalitarianism, autocracy, fascism, Trumpism – these spell the "end of days" for humanity and if we don't stop them we will wind up with a planet that is not habitable planet by anyone or anything.

Trump's "castle" under his "golden dome" is a return to the Dark Ages of moats and fortresses. Trump and the rest of today's authoritarians/autocrats represent the end of the Enlightenment and a throwback to the days before Locke and Hume – and the creation of the U.S. Constitution. Orwell showed us how they operate. Trump's "truth social" website is the epitome of Orwellian nonsense. Many, many examples of Orwellian dystopia in Trumpism are easy to find. I won't bother to do that here. Many people have written about it, and documentaries have been made. Orwell was a genius and died way too young.

American voters put Trump into power twice. During his first term, he didn't really understand what he had and he failed to exploit his position and power to the same criminal extent that he is doing during his second term.

American democracy suffered a stunning failure when it elected Trump the second time. MAGA gave Trump the reigns to a great country, a great democracy, and a stupidly large military-industrial complex, and he is causing damage that will take years to reverse.
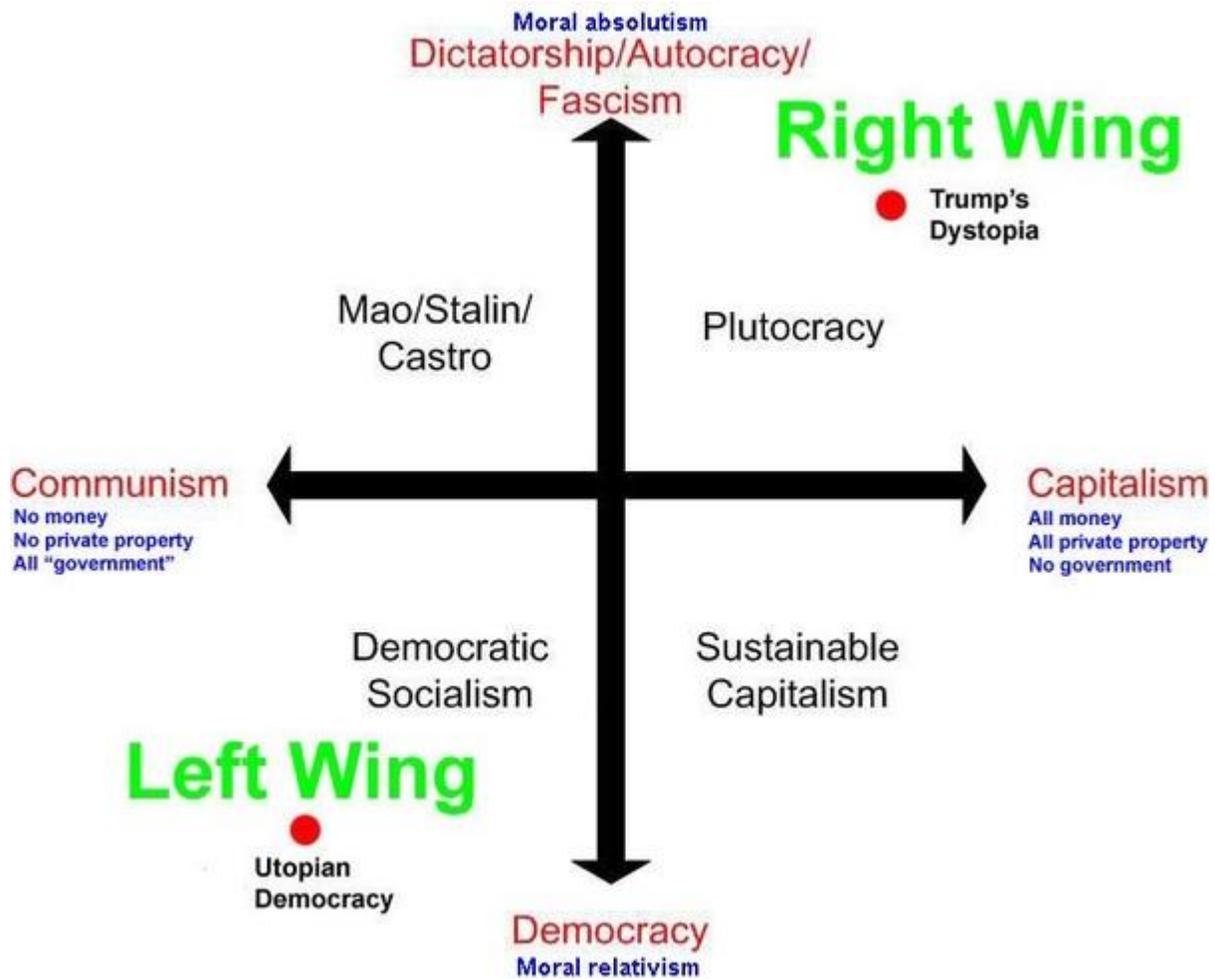
Core to the utter failure of American democracy in 2024 (and to a similar but somewhat lesser extent in 2016) is the impact of social media. Trump has been able to leverage the new social media to create a hallucination, a glorious lie called MAGA, that captured many Americans. Social media followed by early AI have been key to the destruction of American democracy and the U.S. Constitution under Trump. Once he was handed the keys to the castle, he took America back to the Dark Ages.

But America and the rest of the world are learning from the debacle. Authoritarian and autocratic dictatorships around the world have been exposed as the dangerous and regressive entities that they are. We've all gone through a horrible learning cycle during which we discovered what we absolutely *can't* have. It takes guns and violence to enforce

authoritarianism, but it takes only simple "proofs" to enforce democracy. This is what I am showing in this paper.

The political taxonomy that is determining our future

This graph, which appears on the Internet in a variety of forms, is what I have settle on to show where we are and where we must go to ensure our survival on Earth.

I've been showing this graph to people for many years and the single biggest criticism I get about it is that the rule of the majority (democracy) is just as bad as any authoritarian rule. To which I reply: At least the rule of the majority is utilitarian – the most common good is derived from it, as opposed to some arbitrary authoritarian rule of a minority or even one person. Any rule other than democracy can only come from some sort of arbitrary moral imperative or theology that is accepted on faith or by some other assumed (or forced) acceptance of an ideology that is somehow assumed correct absolutely -- and without needing in any sort of empirical verification as valid. Democracy is empirical; authoritarianism is strong-arming people into compliance.

The most destructive trends in modern civilization involve moving from the bottom left to the upper right in the graph. That move toward authoritarianism plus unfettered capitalism represents the devolution of the human species. On the other hand, moving from the upper right to the bottom left represents enlightenment and true human progress. Democracy is where we hash out the *universal values* of humankind and must be fostered at every turn if the species is to survive. The move toward autocracy, demagoguery and unchallenged lies must be resisted as though our lives depended on it, which they do. For far too long the issues popular with the vast majority of Americans like universal healthcare and strict gun control been suppressed by the right-wing powers that be, who have figured out how to get what they want for the oligarchs, corporations, and the other super-rich and powerful despite what is popular with the American public.

Authoritarianism, autocracy, and right-wing fascism are not at all necessary. Trump is the poster boy for authoritarianism, autocracy and right-wing fascism. America somehow elected this man into office twice, and we are paying dearly for it now. But we must always remember that authoritarianism, autocracy and right-wing fascism – even if we somehow voted that into our federal government – are horribly destructive of democratic values, and the longer America is run like this the harder it becomes to return to the great American experiment in democracy.

How capitalism has failed us, and will continue to do so unless we fix our global economic systems right away

For centuries capitalism worked, more or less. The fit with human nature seemed mostly acceptable, and the globe was lifted out of the darkness of the pre-Enlightenment curses of superstition, irrationality, and unquestioned faith in and devotion to arbitrary human and religious hierarchies. China in particular has shown how capitalism was able to bring hundreds of millions out of a rural anonymity and into modernity. China now competes on the world stage with America herself and in fact could soon overtake America as the most powerful country in the world. But this is not to say that we likely would have been better off if humans had stayed primitive to a large degree, as we wouldn't have depleted the critical resources of the planet and turned the whole sphere into an unfortunate "Easy Bake" oven with the global warming that has resulted from the industrial age.

For capitalism to work, you need abundant renewable and non-renewable resources, which Mother Earth has been happy to provide – until now. For the sake of the planet, it would be better if we had stayed rural and "backwards." The planet would be in far better shape if "primitive" societies still constituted the bulk of humanity. Without a basically unlimited supply of renewable and non-renewable resources (which are essentially private property under the capitalist system) you have nothing. Capitalism is obviously failing now because it has exploited the abundance of the planet with impunity, with no plan toward sustainability. Early in the

industrial revolution (though unconscionable exploitation of labor was a hallmark of early capitalism) capitalism was "successful" in employing most people and generally increasing the "standard of living" and increasing lifespans for most citizens of the planet. That's no longer true. Capitalism's destructive and exploitative nature now is counter-productive to the survival of the species and has to be reined in if we are to survive.

The wealth gap and the rise of the oligarchy is now taking control of politics in addition to continuing to amass the majority of the wealth on the planet. The stock market is a barometer of how badly we are compromising planet Earth. The market goes up when the planet is basically "up for sale," and it goes down when a lid has been placed on the party — the punch bowl has been taken away, so to speak. Capitalists like Trump do not like the punch bowl to be taken away, and they really like it when they get all the punch they want. They don't want to be restricted in any way. Having billions of dollars certainly removes most restrictions on someone, but giving one of these guys the position of POTUS is terracide. A whole global class of depraved oligarchs – who used to simply concern themselves with building wealth – are now gaining political control of the planet. These are not the people we want running things. For example, in his second term Donald Trump has corruptly used his position as POTUS to make billions of dollars and to give his personal friends and campaign contributors special favors, just like any corrupt dictator of a third-world government. Most egregiously he basically handed over Venezuela's vast oil reserves (the largest in the world) to American oil companies (who he told to give him $1 billion for his 2024 campaign) by uing the U.S. military to invade the country and abduct President Maduro. Stunningly, hardly a single Republican politician objected.

To make matters worse, in their search for ever more productivity from every laborer, the oligarchs and their companies are now "automating away" jobs and creating a permanent underclass through the use of robotics and artificial intelligence. Capitalism is now failing badly. But few even notice. Trump has even tried to make it a crime to criticize capitalism. My very words right now may soon become a felony.

The most valuable assets on the planet come from the planet itself — clean air, clean and plentiful water, and protected areas like federal land. Non-renewable resources like coal, oil and copper are especially valuable because there is only a limited supply of them. Because of humans, planet Earth will eventually be a dead, hollowed-out shell, robbed of all non-renewable resources and unable to renew renewable resources because the soil, air and water have been so badly compromised. Sustainability and a roaring stock market are at complete odds. Companies look only at financial performance each quarter. In hyper-competitive economic systems like capitalism the future is moot. Environmental sustainability and a clean planet are a pipe dream that only gets in the way of competitive advantage today. Capitalism doesn't care about the future. It continues only able profitability and competitive advantage in

the current fiscal quarter. To worry about anything else is death for a company. That's it the nature of capitalism.

Meanwhile, climate change rages on, predictably warming the planet and ensuring that it becomes basically uninhabitable by 2100. The Trump administration, led by Trump's EPA chief, has now stripped all regulatory power from the agency and the fossil fuel industry powers on, unimpeded. Trump crippled green energy in America to ensure the oil industry that supports him so strongly will run into no impediments to profitability. This is the fate of humanity under capitalism and many scholars believe we are past an environmental turning point. Children being born today are possibly being given a front-row seat to the final destruction of the planet and most life thereon.

Unrestricted capitalism is the mechanism for turning the core intrinsic value of the resources of the planet into money. The great giveaway of planet Earth to the 1% continues unabated under a financial regime of the unabashed, immoral, and self-centered pigs of humanity. Our survival is in imminent peril.

Diversity and input from indigenous people are key to finding sociological and political truth

So what I am suggesting is a sort of modern-day real-time scientific approach to the study of societies and civilizations. Indigenous people are as key to this as our huge urban centers. Losing indigenous people is akin to destroying the natural resources of the planet.

The rich diversity of our planet – and perhaps even the planets to which humankind will someday travel – are critical to forming the wide array of viewpoints and stances that are the input to our social systems and social democracy. Living in the empirical world is made richer by environmental diversity, and anything that gets in the way of fostering that diversity is criminal. Private property – the foundation of capitalism – doesn't foster this. On the contrary, the great fortunes are built on the absolute destruction of the foundation of diversity – the non-renewable and renewable resources in which we nest.

Authoritarian and fascism seek to destroy diversity and implement their own culture. Hitler's attempt at this was labelled *gleichschaltung*. Trumpism embraces and propagates what it calls "wokism" – which is really just diversity and which is the enemy of freedom and enlightenment.

Gleichschaltung — German word for the process by which Hitler and the Nazi Party systematically brought all aspects of German society, including cultural institutions, in line with Nazi ideology and policy.

Trumpism — American word for the process by which MAGA is implementing the goals of Project 2025, including highjacking the Kennedy Center and changing exhibits at the Smithsonian to conform with Trump's interpretation of American history.

Voting and the role of consensus in truth – Newsflanks.com

Voting yields majority consensus. If everyone voting can show that they understand the facts behind the issues – at least in insofar as the facts can be agreed upon to be the facts – then you get a valid vote. However, if parties are propagandized to such an extent that they actively believe lies, then that won't work, as America saw in the 2024 election when Donald Trump was unbelievably re-elected to another term as president.

My website – Newsflanks.com – seeks to find majority consensus on issues by educated and aware individuals from diverse backgrounds who display solid critical thinking skills. Online voting *must* become a reality because direct democracy (where everyone votes directly on all issues) must become a reality, but actual testing will be required before people cast their votes to ensure they do in fact understand the issues and can make a rational choice. Lies are the enemy of humanity.

On my website a flank is a collection of users who respond to some number of binary questions (yes/no) with the same answers. A binary question is defined as consisting of two possible answer choices, not including "no opinion"). A counterflank is the converse of a flank—i.e., a collection of users with exactly the opposite answers as those in the corresponding flank. The flank (vs. the counterflank) includes the user for whom the flank and counterflank are getting generated.

Questions are organized into surveys. I try to make a survey equivalent to a paradigm so that a flanks represents people who conform to the paradigm. A counterflank is then a competing paradigm.

Newsflanks provides two especially unique windows into survey results: flanks, and revelations. Flanks were already discussed above. Surveys are kept short to ensure that flanks/paradigms emerge so that the two sides of answers (flanks and counterflanks) to a survey become clear. We want clear and distinct flanks to understand the core reasons behind disagreement on the

issue or issues addressed by a survey. Ideally, we want half of the respondents to agree with you, and the other half to disagree. However, a small amount of overlap is important as well. Overlap maps to Kuhn's anomalies.

Thus we seek "revelations" on Newsflanks. A revelation is a point of agreement, hopefully unanimous, in a survey. Even better, the other responses should break 50% - 50%. The best revelations are unanimous and occur within the context of a survey that would yield 100% opposite flanks if that one point of agreement (a revelation) were eliminated from the survey. In a larger context, revelations are "universals" in the same sense that scientific "laws" are universals. But they can shift in the same way scientific laws can shift in the Kuhnian sense.

Ideally flanks can be mapped to groups of people who share clear cultural and sociological backgrounds, or other characteristics such as shared talents, abilities, or special interests. From this data we can analyze how people's backgrounds and experiences lead them to believe as they do. Revelations give insight into "universal" values and beliefs – or at least widely held beliefs that prevail within a superset of people with otherwise opposite flanks. These are both the political and sociological aspects of newsflanks.com.

Successful societies and communities are the "proof"

Natural science depends on verifiable theories and truths. If you can replicate the results of an experiment, then you have real truth and real knowledge. The same applies to the social sciences.

The Vienna logical positivists were key to setting in stone this approach to science and knowledge. The early writings of Wittgenstein served as a sort of logical empirical foundation for the absolutely true knowledge sought by the positivists. Wittgenstein showed us how we can map our paradigms onto empirical reality.

Elections also provide validation of previous votes, as do the success and endorsement by other societies of successful societies. When things get bad we get close votes. When they are good, the majority is clear in its endorsement – validation – of success and truth. Peaceful and a well-engineered societies that simply provide the platform for happy lives without denigrating the environment and ruining our future are key to demonstrating all the proof we need to show that our social hypotheses and theories are *correct*.

A little bit more about Kuhn, Wittgenstein, and paradigms

Thomas Kuhn's *The Structure of Scientific Revolutions* describes how scientific "paradigms" evolve in scientific communities that seemingly describe empirical research but which in fact include the personal biases of the scientists themselves. Kuhn explains that scientific "progress" involves one paradigm being "proved" wrong and another paradigm replacing it. Nevertheless,

what appears to be relative points of view as expressed in these paradigms, science does move forward in its understanding of the physical world, as proved by humans' ability to take this knowledge and manipulate physical reality.

The same paradigms form in the social sciences. Ludwig Wittgenstein's later work, in particular the *Philosophical Investigations*, published shortly after he died, shows this. His so-called *Blue and Brown Books* were the preliminary writings that soon led to *Philosophical Investigations*.

Wittgenstein describes how social scientists and humans in general create paradigms built on the vagaries of human language itself to communicate and jointly view the world. Peter Winch's *The Idea of a Social Science* explains exactly how Wittgenstein did this, but he comes to a drastically different conclusion than what is being presented here about the relationship between the hard science and the social sciences.

The paradigms carry over into interpretation of law and even voting itself. The same events are interpreted in entirely different ways based on the personal biases and even ideologies of the observer. The shooting of Renee Good by ICE agents in Minneapolis demonstrated this. Democrats and Republicans came up with two entirely different explanations of what happened, demonstrating how the two different political persuasions can influence actual visual interpretation similar to a Rorschach test. The two paradigms clashed, just like Kuhn's scientific paradigms.

The mystery of language and the rise of AI

AI is as dangerous as it is beneficial. We have to get this right. AI can create a hallucinated world or a thoroughly vetted, empirical, and truthful one. We just have to develop and deploy AI correctly.

Kuhn's paradigms show how we meticulously discover the physical world, while Wittgenstein's "paradigms" unveil how we discover how human society works. AI is a demonstration of how the human mind works. When used with debate and consensus we come much closer to understanding ourselves. Noam Chomsky's innate capabilities of the mind and language (see table earlier in this paper) appear over time in our AI, by *demonstration*, which is the only way we can objectively see then and understand them. As Hume showed us, our knowledge is inductive and based on experience. In AI our intelligence is *shown* to us. Before neural networks and matrices built with databases and GPUs, I denied that we could ever build an intelligence greater than our own because we couldn't even actually step outside of ourselves and see how our minds work. I didn't believe we could even build a machine that could pass the Turing test. But at that time our AI was built around deductive logic, not inductive logic. It took massive demonstration by huge and fantastic machines and processors operating based on induction rather than deduction to create an intelligence as great – and possible even greater – than our own.

It's interesting to note that Wittgenstein's intellectual development moved forward in the same way. From *Wittgenstein's Conception of Philosophy*, by K.T. Fann (1971):

> **We have seen what 'can be said' according to the *Tractatus*: that, and only that, 'can be said' which is capable of being true or false, so that which of the two possibilities is actual has to be decided by 'comparing the proposition with reality.' A proposition has 'sense' in so far as it is a logical picture of the world. But no picture can be true *a priori*. It is impossible to tell from the picture alone whether it is true or false without comparing it to reality. Logical propositions are true *a priori*, they are tautologies and their negations are contradictions. Thus, '...the propositions of logic say nothing', they are senseless. Nevertheless, they are not nonsensical, for they *show* 'the formal-logical-properties of language, and the world', or the limit of language and the world.**
>
> **…**
>
> **[In the *Investigations*] The purely *a priori* method of the *Tractatus* is under attack and he now recommends (in a certain sense) the *a posteriori* method of investigating the actual phenomenon of language. This shift of *methods* is what constituted the break between the earlier and the later Wittgenstein.**

If civilization continues to march toward authoritarian regimes, we will never understand how we really "work." Violence and "might makes right" will destroy society and end human beings' life on Earth, as well as that of other species and the rest of life on the one-beautiful planet Earth. Our reality will continue to be rigged by the super-rich, oligarchical powers that be, and we will live in illusion. AI will help with that.

AI's platonic models, Kuhnian paradigms, Wittgenstein's rule-based private language games, democracy and voting – this, on the other hand, is how society progresses both scientifically and intellectually. The distinction between physical and social science is merely one of degree and difficulty, but they are both the same human endeavor.

Humans will always be needed to provide the empirical data upon which AI models are trained and paradigms created. We're the ones who can see, feel, hear, feel, and smell. But we must live in a rich and diverse natural environment and in free and open cultures to get there.

AI finds answers to queries. The answers it provides have found the greatest consensus in the data the model was trained upon. When AI is done right, the answers delivered are the most firmly grounded in empirical reality. In other words, the most empirically *true*. The more data, the better. AI aggregates answers to queries and then tests all possible answers against all known scenarios. It can even create entire paradigms that may be at odds with each other, but AI can resolve those differences and get to the truth, but only when it is used properly.

Tomorrow

Unless we do something – and fast -- here's what coming for America and the rest of the world:

2030	Unemployment due to AI, robotics, self-driving vehicles and drone tech changes the face of global politics and challenges the role of democracy
2035/2036	U.S. social safety net likely collapses (Social Security, Medicare, Medicaid, SNAP)
2043	U.S. debt becomes insurmountable; default becomes inevitable
2050	Globe *must* meet zero greenhouse emissions
2100	Collapse of Earth's natural systems that previously underpinned organized human activity on the planet

National unemployment, national bankruptcy, global environmental devastation – all "end game" serious, and very real. The only solution to fixing this mess is to view and implement social science as a science that enlightens us all as to the truth – and ensure *everyone* is included. If lies and global delusion are allowed to continue, if we continue to conflate victimless values with the values that should be having an impact on our society, there's no hope. We have to separate the wheat from the chaff. Comprehensive national and international democratic mechanisms must be shored up and expanded, or we will all simply wind up as dupes with a front seat to the end of humankind's saga and utter failure on planet Earth.

Human society must move toward more democracy and wealth equality. This must be accompanied by a universal living wage and universal basic income. AI, robotics and drones will come to automate most of the work that needs to be done over the next twenty years, and we will all need to rationally determine how we can all live together in sustainable societies. Empirical and social/scientific analysis via a rich diversity of scientific paradigms (hard science and social science) and voting can and will support our efforts with solutions that we all agree are credible, sustainable and – most of all -- truthful.

Every person and critter born on Earth deserves to enjoy the planet, free of authoritarian rule and exploitation. Humankind has the tools to make that happen. We just have to use them, and no longer abuse them. Everyone must participate (vote) to ensure the common good. Democracy and education – the two things authoritarian regimes hate the most – must flourish. We can't let any single group with any single value system, agenda, or way of life – especially billionaires – dominate the lives of the many.

There's much to be done, and a very short time in which to do it. If humankind does in fact become rational and is able to evolve human society on Earth based on empirical fact (as best as we can use paradigms to accomplish this) then there is a glimmer of hope that we will continue to move forward and survive, even thrive!