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Reason

Steven Pinker: The title of my talk which I hope I will make clear is “*An unnecessary defense of reason and a necessary defense of university’s role in advancing it.*” Or, “*Why we need universities to refine, teach and promote objective truth and disinterested reason.*” This is the general theme that Jon invited me to speak on.

The first question that we have to ask on this topic is, is this a hopeless aspiration? Is it old-fashioned? Is it so 20th century? Haven’t psychologist shown that humans are irrational? And aren’t we living in a post-truth era? So, those are the objections that I would like to deal with first in arguing for this aspiration.

So first off, we are not living in a post-truth era. Why? Why aren’t we? Well, is the statement “We are living in a post-truth era” true? *[Laughter]* If so, it cannot be true. That is we are still evaluating propositions based on whether they are true. *[Applause]* So, we are not in a post-truth era.

Likewise, “why humans are not irrational”, is the statement “humans are irrational” rational? If so, it cannot be true at least if uttered by a human. If this is a pronouncement from an advanced race of space aliens then maybe we could take it seriously. But otherwise, if humans were really irrational, who specified the benchmark of rationality against which humans don’t measure up? And how do they conduct the comparison?

This is an argument that was – a style of argument that was made most explicitly by the NYU philosopher Thomas Nagel in the last word, where he made the case that truth, objectivity and reason are not negotiable. As soon as you are making the case for them or against them, you are making a case and you are implicitly committed to reason. He calls it a Cartesian argument that after the famous Cogito, ergo sum argument namely just as the very fact that one might be questioning one’s own existence shows that one must exist. The very fact that one is examining the question of rationality shows that one is committed to rationality. Another fancy word for it is a transcendental argument, one that invokes the preconditions for its own existence.

And the corollary is that we actually don't defend reason. We don't justify reason. And we certainly do not as it sometimes claimed have a faith in reason. As Nagel puts it, this is one thought too many. We don't believe in reason. We don't have faith in reason. We use reason. It's the water that we swim in.

Now this Cartesian argument sounds a little bit like fancy schmancy tricky logic chopping but it really isn't. It's implicit in the very way that we carry on discussions. As soon as you try to provide reasons, why we should trust anything other than reason, that is as long as you're not bribing or threatening your audience but trying to persuade them, as soon as you provide reasons why you're right, why other people should believe you, that you're not lying or full of crap, you've lost the argument because you have appealed to reason. And that is why a defensive reason is unnecessary perhaps even impossible or self-contradictory.

Now, I think we should retire the cliché post-truth for a number of reasons. One of them is that it is based on the fact that some politicians, one in particular, lies a lot. I mean and politicians have always lied. It's sometimes said that in war, truth is the first casualty. I grew up with the expression, the credibility gap that was big in the 1960s often applied to Lyndon Johnson. And the bending or nullifying of the truth by people in power has long been consequential. It is thought to have led to the Spanish-American war, the first World War, the Vietnam War, the Iraq war and we've all been reading the papers the last few days and seen what's been happening in Gulf of Hormuz.

People are spreading conspiracy theories and fake news. Again, this really is not a new development, at least not in quality. In a forthcoming book by James Cortada and William Aspray called *Fake News Nation*, they showed that fake news and conspiracy theories have a long history in our country indeed in the world. The Protocols of the Elders of Zion, the forgery by the Czarist secret police of a worldwide Jewish conspiracy, the basis of many pogroms and lynchings and deadly ethnic riots were the spread of rumors about the perfidy of some minority group.

The idea that fake news is displacing truth. Well, we should examine the truth of that widespread that belief. Brendan Nyhan, a political scientist at the University of Michigan, did so in a quantitative analysis of the role of fake news in the 2016 American Presidential election. What he found was that fake news was – took up a minuscule proportion of the online communications during the election far less than 1%. It was mainly received by people whose minds were already made up. And it didn't change probably any minds.

And this actually makes sense when you think about it. If you got an email or a posts that said that Hillary Clinton was running a child sex ring out of a Washington pizzeria, chances are unless you already despised Hillary Clinton your mind would not be changed. But the main reason that we should retire the post-truth cliché is that it's corrosive and, if anything, possibly self-fulfilling. The implication is we may as well give up on reason and truth and just fight their propaganda, lies and dogma with our propaganda, lies and dogma. I think we can do better.

Going back to whether *Homo sapiens* is irrational, there are actually many reasons to believe. And I say this as a cognitive psychologist that this is overblown, that people are not always irrational. Starting with a common argument that one often hears from evolutionary – what people think of as evolutionary psychology, that we have lizard brains, that we – our minds are adapted to a rapidly detecting danger, a predator in the grass from a simple cues and that people can't be asked to be more cerebral than what evolution gave us. Well, as someone who can – also knows a thing or two about evolutionary psychology, I can – I'm here to tell you that that is not an accurate portrayal of how the human mind evolved.

In a wonderful paper called *The Cognitive Niche* by John Tooby and Irv DeVore, they argue that *Homo sapiens* is – we are not lizards. What makes us zoologically unusual is that we evolve to prosper by a combination of social cooperation, language and know-how, in particular, that humans everywhere developmental models of the world that allow us to explain, predict and control things. Let me be concrete. Let me give you a couple examples. This one comes from Napoleon Chagnon who spent 30 years with the Yanomamo of the – a hunter horticulturist of the Amazon rainforest. Let me describe one of the ways in which they obtain food.

Armadillos live several feet underground in burrows they can run for many yards and have several entries. When the Yanomamo find an active burrow, as determined by the presence around the entry of a cloud of insects found nowhere else, they said about smoking out the armadillo. The best fuel for this purpose is a crusty material from old termite nests which burns slowly and produces an intense heat and much heavy smoke. A pile of this material is ignited at the entry of the burrow and the smoke is fanned inside. The other entries are soon detected by the smoke rising from them and they are sealed with dirt. The men then spread out on hands and knees holding their ears to the ground to listen for armadillo movements in the burrow. When they hear something they dig there until they hit the burrow and with luck the animal.

On one occasion, after the hunters have dug several holes, all unsuccessful, one of them ripped down a large vine, tied a knot in the end of it and put the knotted end into the entrance. Twirling the vine between his hands, he slowly pushed it into the hole as far as it would go. As his companions put their ears to the ground he twirled the vine causing the knot to make a noise and the spot was marked. He broke off the vine at the burrow entrance, pulled out the piece in the hole and laid it on the ground along the axis of the burrow. The others dug down at the place where they have heard the knot and found the armadillo on their first attempt asphyxiated from the smoke. There's an awful lot of rationality that went into that sequence of hunting.

Let me give you another example from halfway across the world. This is from the citizen scientists Louis Liebenberg who has spent a lot of his life studying the use of tracking by the San in the Kalahari Desert. They use it in persistence hunting whereby they track animals by their spoor in order – even though animals are much faster than humans. Animals, if pursued, will eventually keel over from the heat if the humans can track their whereabouts for a long enough.

So, the San, Liebenberg points out, engage in inference that is they form hypothesis from sparse data in tracks and bents, twigs and displaced pebbles, often correctly inferring the species, the age and the condition of the animal which allows them to predict its movements. For example, a

deep pointed hoofprint they infer comes from an agile springbok who has to get a good grip, a shallow flat-footed hoofprint comes from a heavy kudu has to support its weight.

But together with inference, they engage in reasoning that is they – in trying to figure out what the animal was, where it went, they engage in debate. They articulate their logic. They defended against alternatives. And there's – and Liebenberg observed plenty of skepticism, challenging of authority, a young hunter could challenge the guess of an older hunter and challenging of dogma.

Again, I'll give you a couple of examples. Three trackers, I will not try to reproduce the clicks, Nate, /Uase and Boroh//xao told me that when the Monotonous Lark sings it dries out the soil, making the roots good to eat. Afterwards, Nate and /Uase told me that Boroh//xao was wrong. It's not the bird that dries out the soil, it's the sun that dries out the soil. The bird is only telling them that the soil will dry out in the coming months and that it is the time of the year when the roots are good to eat.

!Namka, a tracker from Bere in the central Kalahari, Botswana, told me the myth of how the sun is like an eland, which crosses the sky and is then killed by people who live in the west. The red glow in the sky when the sun goes down is the blood of the eland. After they've eaten it, they throw the shoulder blade across the sky back to the east, where it falls into a pool and grows into a new sun. Sometimes it is said, you can hear the swishing noise of the shoulder blade flying through the air. After telling me the story in great detail, he told me that he thinks the old people lied, because he has never seen the shoulder blade fly to the sky or heard the swishing noise.

So, if anyone tries to excuse irrationality, dogma, repression of alternative opinions by saying that's just human nature, that's the way they evolved. I'm here to tell you, don't blame the hunter gatherers. Don't blame our ancestors. Skepticism, dogma debates are in our nature as much as reacting to the rustle in the grass. Why were truth and rationality selected for? Well, reality is a pretty powerful selection pressure. The armadillos either there or not. As Philip K. Dick put it, reality is that which, when you stop believing in it, doesn't go away.

[Laughter]

Also, I am often told out why do you bother to try to persuade people with evidence? People never change their mind when faced with evidence. And I don't think that is an accurate reading of the literature. It can be true under certain circumstances. But again, appealing to the work Brendan Nyhan, evidence can change people's minds even on highly politicized issues such as whether there has been a rise in global temperature among people on the right, whether the surge in Iraq worked among members of the left. If it is presented in graphs, people really – Nyhan showed really can change their minds.

A third reason that people aren't – we should stop saying that people are irrational across the board is it's many of the demonstrations of human irrationality, brilliant demonstrations from Amos Tversky, Daniel Kahneman and others, turned out to depend on how the information is presented to people and how rationality itself is defined. I won't have time to get into it this afternoon but Gerd Gigerenzer has shown that many illusions and fallacies can be eliminated if the information is presented to people with the right framing.

So, given that we do have the capacity to be rational, why are we so often irrational? And there are a number of specific reasons. One of them is the Herb Simon's hypothesis of bounded rationality. We can't process an infinite amount of information instantaneously. We're obviously adapted to an environment that though reality was a potent selection of pressure, we did not evolve with the kind of truth augmenting technologies that we have developed over the millennia and centuries such as written language, quantitative datasets, scientific method, hyper specialization and expertise.

Perhaps even more potently, facts and logic can often compromise our self-presentation as effective and benevolent, which social psychologists have shown to be powerful motives. If you want to convey the impression that you are infallible and omniscient and thoroughly noble in all respects, then truth and rationality be kind of a nuisance, because inevitably there will be facts that show that you are merely mortal. And a lot of denigration of facts and logic are really just attempts to shore up the advertising campaign that we all conduct for ourselves, some of us more than others.

Beliefs also can be signals of a group loyalty, especially improbable beliefs. As John Tooby has pointed out, it doesn't – if you try to affirm your common assumptions, common ground with the group by saying that you believe that rocks fall down instead of up. Well, anyone can say that rocks fall down rather than up. On the other hand, if you say that Jesus is three persons in one – God is three persons and one person at the same time or that Hillary Clinton ran a child sex ring out of Washington pizzeria then you have shown that you're willing to take risks at the – in order to demonstrate your solidarity with your group.

This is I think an underestimated source of what we think of as irrationality in the public sphere especially when it comes to politicized scientific issues such as evolution and climate change. The work of Daniel Kahneman, which I assume many of you are familiar with, shows that contrary to what most scientists think a denial of the fact of human evolution or of anthropogenic climate change is not correlated with scientific illiteracy that many people who believe in human-made climate change are out to lunch, when it comes to the science.

They'll say things like, helium is a greenhouse gas, radon is a greenhouse gas, global warming is caused by a hole in the ozone layer. We can deal with it by cleaning up toxic waste dumps. And they just have a vague sense of green and natural and unnatural. And the ability to predict belief in climate change from scientific literacy is pretty much zero. What does predict it, not quite perfectly but pretty close is simply political orientation, the farther you are to the right the more you deny human-made climate change.

Kahneman points out that there is a perverse rationality of this expressive cognition that is holding beliefs to signal the coalition you belong to. And that is, unless you're a one of a small number of movers, shakers or influencers your opinion on climate change really doesn't matter. It's really not going to affect the climate. You can think anything you want. However, your opinion on climate change or on evolution or on other issues is going to matter a great deal in terms of how accepted you are in your social circle.

For someone in a modern university to deny that there has been human-made climate change, conversely, for someone in a more rural, Midwestern community to affirm human-made climate change will be kind of social death. You'd be someone who's just doesn't get it, who – someone who is just too weird or disloyal to be accepted in the group. So, it is perversely rational for people individually to hold beliefs that their group holds.

Now, the problem is that collectively it may not be so rational. I've adapted a term by Kahan, "the tragedy of the belief commons", that what might be individually rational for everyone is collectively irrational because the climate itself, the atmosphere doesn't care how accepted or not you are in your social group. And you can see how this expressive cognition, if locally rational, can lead to nationwide irrationalities.

A related phenomenon is what economists sometimes called pluralistic ignorance or a spiral of silence, namely, when everyone firmly believes that everyone else believe something but no one may actually believe it. Classic example being binge drinking in college fraternities where it turns out that very few fraternity boys actually believe that it's cool to drink until you puke and pass out. But they are – questioned individually, they are all convinced that every other fraternity brother believes that even if none of them actually believe it.

Michael Macy, Damon Centola and I forget Mr. Williams' first name, have shown that this is especially true when you have enforcement. When not only are there beliefs that never get challenged but people believe – people in a group feel that not only must they affirm a belief but they must punish or condemn or denounce those who don't hold it, often out of the equally mistaken belief that they will be denounced if they fail to denounce.

They see the denunciation as a sign of loyalty to the group which can lead to a cascade of denunciation that can spiral into the – what was called in the 19th century the extraordinary popular delusions and the madness of crowds like witch hunts and various bubbles and manias which can sometimes be deflated. The bubble can be pricked by a little boy saying that the emperor has no clothes but you've got to be either a little boy, an innocent little boy, or a very brave truth-teller in order to puncture this inflating bubble of preemptive denunciation.

Now all of this sounds kind of depressing but there are cognitive and social resources that can make us more rational, that can bring out what we can think of as the rational angels of our nature. And these have been explored by a number of psychologists Jonathan Baron, Dan Sperber and Hugo Mercier, Steve Sloman and **Jason Fernbach [0:25:24] [Phonetic]** and others. And they're based crudely on another saying from the coiner of the term, "The Better Angels of our Nature", a wise man who pointed out that you can fool some of the people all of the time and you can fool all of the people some of the time but you can't fool all of the people all of the time. That is a principle that can allow us to be collectively more rational than any of us is individually.

And the psychologists who've studied the promotion rationally noted that there are various tricks and prods and nudges that can make people more rational. One of them is simply calling on someone to articulate their position, turns out that many people who have firm, fervent opinions on say Obamacare. When asked to explain what Obamacare actually is, they are dumbstruck,

they actually know very little about it. And simply asking people, so what actually is NAFTA? They realized that they don't know and that makes them a little more epistemically humble about their opinions.

Having people defend a position against alternatives in front of disinterested bystanders, having a small group reach some consensus after discussion among themselves. There's another technique that was discovered long ago by rabbis which is that in Talmudic dispute at the yeshiva after you have your yeshiva students arguing their different interpretations, you then force them to switch sides and they have to make the strongest possible argument for the position that they were just arguing against.

The general rubric of what Jonathan Baron calls Active Open-mindedness, just the ethic that one – always to reconsider one's opinions, to listen to criticism. Knowledge of cognitive psychology itself to be aware of and discount the various cognitive biases and fallacies that psychologists have identified such as the availability heuristic, the representative heuristic, confirmation bias, gambler's fallacy and so on to be – to have your feet held to the fire of empirical predictions. And in science, the ideal of adversarial collaboration that two theorists who have opposite opinions on some issue get together and come up with some empirical test that a priori, they both agree will settle the question.

So the conclusion up to this point can be that humans can be collectively rational if they submit to norms and institutions that engage their rational faculties and sideline their irrationalities. What are some examples? Well, we have seen progress, thanks to some of them, a free press, a court system, better than trial by ordeal or by forced confession. Science, when it works, peer review for all it's – all its follies, deliberative democracy, checks and balances in a constitutional government. As James Madison put it "Ambition must be made to counter ambition." And maybe perhaps universities, and I will, I will get to that.

Now, is this just again an idealistic aspiration or can these rationality promoting institutions actually promote rationality? Well, in many ways they are and I'm going to say something that at first will sound shocking but I'm going to spell it why I think it's true. That there are many ways in which rationality is increasing compared to just say 20 or 25 years ago.

Journalism, for example, is supplementing your shoe-leather and opinionating with fact-checking organizations like PolitiFact did not exist 25 years ago and editors say that readers increasingly insist that journalists and their editors check politician's statements against the factual record, something that you did not – would not see several decades ago. We see the rise of data journalism such as Nate Silver's FiveThirtyEight.com where instead of citing the result of a single opinion poll which we know simply from sampling considerations can be highly misleading. There are ways of aggregating many polls.

Forecasting is no longer a matter of soothsaying or relying on the intuitions and gut feelings of experts but we have prediction markets which combine the principle of the wisdom of crowds with the principle of putting your money where your mouth is. And forecasting tournaments are the kind that Phil Tetlock one of Jon Haidt's co-authors has advanced that there are ways of

using Bayesian reasoning and active open-mindedness to make quite good predictions about what will happen in the next year.

Health care has seen the rise of evidence-based medicine. This should have been a tautology one would think but in fact the practice of medicine descended from medieval barber surgeons and the idea that you should only do things to people for which there is evidence that their benefits outweigh their cost has been something that's only really been taking over the medical profession recently.

In policing, we're living in a city— we're a meeting now in a city that saw a 75% reduction in its rate of homicide in just eight years, the most astonishing reduction of crime in history despite convictions by many people that violent crime would not disappear until we solve the problems of racism and inequality. Well, I don't think we solved the problems of racism and inequality but New York has still managed to bring its murder rate down by three quarters in eight years. They did it with largely with a system called Compstat, which is basically crunching numbers on where the murders are recurring, capitalizing on the fact that the distribution of violence is highly skewed, follows a power law distribution so that a large proportion of the violence occurs in a tiny number of areas, indeed a tiny number of perpetrators. If you know what they are, come down on them like a ton of bricks you can bring the murder rate down by a lot.

The world of philanthropy and volunteering is being shaped by the effective altruism movement which tries to distinguish measures that just cause a warm glow in donors from those that actually improve the lives of the intended beneficiaries. Psychotherapy is moving beyond the couch and the note pad and starting to use feedback informed treatment where the coping and mental health of patients are tracked day by day to see which therapeutic interventions are actually helping them or hurting them.

Government is starting to — many governments are starting to use evidence-based policy that is not to base policy on their own convictions on what will work but actually measure if the streets are safer if more kids are going to school. And behavioral insights, sometimes called the nudge movement after the book by Richard Thaler and Cass Sunstein which uses subtle manipulations to get people to do what's in their own interests.

Sports have seen the phenomenon of *Moneyball* where smarter teams can beat richer teams by processing data instead of relying on a hot stove speculation. Online discussion has seen the rise of the rationality community, sites such as LessWrong and Slate Star Codex which live by the credo of being aware of cognitive biases and trying to circumvent them.

Data have been available on scales that are unprecedented, thanks to open source datasets and new methods of data graphics made available in sites like Our World and Data, Gapminder and HumanProgress. For that matter, even every day fact-checking just settling barroom disputes has been revolutionized by at the urban legend tracking site Snopes.com and for that matter by Wikipedia, 80 times the size of Britannica and a number of studies shown about the same level of accuracy.

There is a cartoon that I saw a couple of years ago, the caption showed two guys at a bar. The caption was “Life before Google”. And one of them says “I wonder who played the Skipper on *Gilligan’s Island*.” And the other one says, “I guess we’ll never know.”

[Laughter]

However, all is not abright, there are arenas in which rationality is decreasing. The most conspicuous of which is electoral politics which is – we knew it’s almost perversely set up to inhibit rationality. Voters act on issues that don’t affect them personally but they vote as if rooting for sports teams. There’s no requirement that they inform themselves or defend their positions.

Practical issues like energy and healthcare are bundled together with symbolic hot buttons like euthanasia and the teaching of evolution. These bundles are them up strapped to regional ethnic or religious coalitions, so encouraging group expressive cognition. And the media by treating politics as in the proverbial horse race encourage a kind of zero sum competition rather than clarification of issues.

So the way I like to think about it is we’re living in an era of rationality inequality. But at the high end, we’ve never been more rational. But at the low end, there’s a lot of reason for concern. There are institutions that bring out what I think of as the rational angels of our nature and others, that would be, that’s an interesting question, particularly when it pertains to the institution that all of us are here to ponder namely universities.

Now, universities ought to be the premier institutions of rationality promotion. That’s kind of what they’re in the business of doing. One might think that’s their essential mission. And they are granted a number of perquisites and privileges that are in exchange for fulfilling the mission to add to the stock of human knowledge and to transmit it.

There’s government subsidization of entire universities when it comes to the state systems and to research and scholarships, when it comes even to private ones. The private ones have tax-exempt status. There is the extraordinary institution of tenure which the idea is not to make it easy to become deadwood but to allow certain kinds of professional intellectuals to express heterodox opinions without fear of being fired. There is exorbitant and hyper inflating tuition, we know that tuition has increased far faster than the rate of inflation for decades. And to send a student to an institution like my own, Harvard costs now close to \$300,000, the – after house, the most expensive thing that people have to absorb.

And we have given universities at enormous role in credentialing and gatekeeping in the world of business and the professions where a bachelor’s degree is often a ticket or a prerequisite. Dubiously, when it comes to the actual qualifications for the job, studies that actually test how much knowledge people acquire after four years at a university are not a pretty sight. It is actually rather depressing and I say this as a university professor to see the results of exit surveys of what students actually know compared to what they came in with. And cynics have suggested that really that the reason that universities are allowed to credential people is that in effect they are proof that someone has just the cognitive capacity to make it through university if they have

acquired the degree and the self-discipline. So, I mean one way of thinking about it is that a modern university is a quarter of a million dollar IQ and marshmallow test.

[Laughter]

Now, admittedly, that's a cynical view. And let's hope that that is – that it doesn't come down to that. So, our university is fulfilling their mandate to promote rationality. Well, I'm not going to go over the evidence. I think many people in this room have evidence that at least leads us to question the extent to which they have been. So let me start just by putting it into some perspective. I have written two books that are largely driven by the observation of Franklin Pierce Adams that the best explanation for the good old days is a bad memory.

So, I'm – as someone who went to university in the 1970s, one of my – my first, one of my first experiences as a college freshman in 1972 was seeing the card table set up in the lobby of my college by the – I forget whether it was the Socialist Democratic Marxist Leninist Union or the Leninist Marxist Democratic Socialist Union. But a student was challenging them as they were handing out papers, their newspaper, adorned with Marx Lenin Stalin Mao. And I distinctly remember them yelling out “Fascists don't have the right to speak.”

So this is not new. Orthodoxy, intolerance, repression of non leftist ideas are not an innovation of the millennials or the Gen-Zs. And there are many examples in the '70s and the '80s of behavioral scientist including Arthur Jensen, Hans Eysenck, Richard Herrnstein, Thomas Bouchard, Linda Gottfredson being deplatformed, disinvited, heckled, shouted down and in some cases, physically assaulted. Just to give you a little souvenir from this era, here's a poster from 1984, coming here Edward O. Wilson who Jon noted in his introduction, sociobiologist and the profit of right-wing patriarchy. Then at the bottom of the poster says “*Bring noisemakers.*”

So it is not new, although I don't doubt that it has been getting worse. So by saying that this occurred when I was a student, it doesn't mean that we should be unconcerned or that nothing has changed. So why do universities fall short of what one might think of as their essential mission of promoting rationality? There are a number of hypotheses and I think probably all the more true to various extents. Jon Haidt and Greg Lukianoff have suggested if I can sort of summarize it in four words, helicopter boomers gave rise to snowflake millennials. The...

Participant: The Gen-Z'ers is going to...

Steven Pinker: Or made Gen Z'ers, yes, in fact because they are the... The millennials, themselves are parents now. Yes, helicopter millennials. There may be an increase in homophily, people being with people who are like them and the resulting tribalism of belief and opinion within universities. Bradley Campbell and Jason Manning have come up with an interesting hypothesis. I know that Jon has called attention to it called *The Culture of Victimhood*, a sociological development in which individual's esteem, they're – the regard in which they're held are no longer depending on their ability to retaliate against the insults with violence, the so-called “culture of honor” nor to their ability to control their emotions and undergoes – and exercise self-discipline as in the culture of dignity.

But the culture of victimhood, status, and prestige comes with a claim to have been victimized often ratified and enforced by a grievance bureaucracy in universities and expanding cadre of professionals who, are working in... Many of them I must say are maybe more from the boomer generation that work in cahoots with students to reinforce this claim to esteem and status by assuming victimhood status.

And we're seeing spirals of preemptive denunciation and pluralistic ignorance where it's really an open question how many students really believe in these in the outrage in the victimhood or whether they believe that – everyone else believes it enforced by denunciation if they fail to denounce. But I sometimes, I don't – this is pure conjecture but I do sometimes get the feeling that students feel intimidated and many of them in private would disavow some of the dogma and liberalism that the noisier ones promulgate.

Indeed some of these is a paradoxical byproduct of progress inequality. Very few people actually are at least very few people in universities are genuinely racist, sexist, homophobic or transphobic. Virtually, everyone believes these are bad things and that means that accusations of racism, sexism homophobia, transphobia are – can be weaponized. There's no one who defends them. That means everyone is vulnerable to being accused and probably the only convincing way of defending yourself since there's virtually nothing that you can say if you're accused of being a racist. You say, "Well, some of my best friends are you know..." I mean that's not just going to work.

However, if you are denouncing others, then that removes any cloud of suspicion that you yourself are a racist and that can lead to these spirals of denunciation. So should we care? Should everyone care? It's sometimes said that academic disputes are fierce because the stakes are so small. But no one knows who said it first by the way, I did the – I should have added that actually to the rationality promoting technologies that you can actually – thanks to Quote Investigator and a couple of other sites, you don't have to attribute every quote to Mark Twain, Winston Churchill, and Woody Allen. You can actually track down and be aware that most people didn't say the things that they said as Yogi Bear. Yogi Bear may or may not have said.

But, in fact, the stakes are not so small when it comes to what's happening in the university. One of them is simply whether universities are carrying out their fiduciary duty to sound education and research that they – for which they are absorbing massive amounts of money and time and attention. The others, their influence on the rest of society as Andrew Sullivan said in an article last year, "We are all on campus now and the various follies of political correctness and social justice warfare have spread beyond the ivory tower and may be found in tech, in business, in health care and elsewhere."

I did mention two other hazards of the current climate of intolerance and irrationality on campus. One of them is that universities are losing the battle to secure the credibility of their own research. When it comes to issues such as climate change or gun violence, there are many skeptics generally on the right who say, well... You say that scientists, climate scientists are virtually unanimous that humans have been causing perhaps dangerous levels of climate change. But that comes out of the university. Everyone knows that universities are just echo chambers of

dogma and ideological policing. Why should I believe what comes out of a climate science department at the university given the follies that we all read about?

The other danger of allowing universities to fester in intolerance and dogma and repression is that it can lead to perverse backlashes. But in many ways, the regressive left is an incubator of the alt-right. And I've seen this happen including to my shock in some of my own former students. But when they see certain opinions being just unexpressible, when they see student – speakers being deplatformed, people being assaulted, demonized, a natural conclusion is you can't handle the truth. There must be hidden truths that university – that are just too uncomfortable to be voiced or discussed in universities. And as a result, the only option is simply to withdraw into an alternative universe of understanding.

And since that alternative universe can have the opposite of the current dogmas but without any of the qualifications, nuances, counter-evidence context can often metastasize in rather a destructive form. So I'll just give you some examples. It is not quite undiscussable but least difficult to acknowledge sex differences in many universities. Nonetheless, we're all men or women or people who notice our contrast between those who defend – define themselves as men and women. We deal with them. We can't help but notice that men and women are not indistinguishable. What do people conclude who aren't willing to kind of drink the Kool-Aid that men and women are indistinguishable?

Well, if it's taboo they can often lead to categorical understanding, men are this way, women are that way. Often, quite insulting to women if you just listen to a speech by Milo Yiannopoulos and there are some rather hair-raising examples. Perhaps just performance but perhaps a reaction to the denial of any sex difference on campus.

Whereas if sex differences were discussed openly and in a proper intellectual context, then they could be presented as they are in reality namely hugely overlapping statistical differences when sex differences exist so that in any trait in which women are better than men, they'll be many individual men that are better than the average woman and vice versa and differences that go in both directions. It's not such a flattering picture to men if you look at the literature on sex differences.

Racial differences. Since the – sociologists all know that if you take any social variable and you subdivide it by ethnicity and race, the means are never identical, it just never are. The reasons in the vast majority of cases probably – perhaps all of the cases are because of cultural differences. But because as the story of Amy Wax at UPenn makes clear, discussing cultural explanations for racial differences is almost as radioactive as discussing biological differences.

And the result is that observers of the squelching of analysis of ethnic and racial differences looking at what happened to say Amy Wax for even bringing up the possibility of cultural differences will say, well, there must be a repression of big and negative racial, biological differences between the races, something that could have been a preempted if the full range of hypotheses were examined.

And a third example is the fact that it's almost impossible to hear anything good about capitalism on an American campus even though, again, if you are not in that bubble, there's plenty of evidence that capitalism brings more advantages than disadvantages. Would you rather live in South Korea or North Korea? Would you rather live in Chile or Venezuela? In the former East Germany or the former West Germany?

Now, this isn't obvious facts but if saying something like that quite obvious is close to taboo. Then people who do look around the world and see what's happening will extricate themselves from that whole arena and come to conclusions that are far more extreme than an open discussion would lead to a form of anarcho-capitalism or plutocratic capitalism in which there can be no social safety net, no regulations, even the slightest provision of health care would be a slippery slope toward Mao and Stalin.

The reality being that there is no such thing as a developed capitalist country without extensive regulation and a social safety net. So we're not even talking about reality when we talk about an unfettered, untrammled, total free-market capitalism. If that fact were better known that capitalism both brings advantages and in reality always is accompanied by regulation and a social safety net, we probably have more intelligent discussions on all sides.

So to summarize, I suggest that we must safeguard the truth and rationality promoting mission of universities. It's feasible because we are not living in a post-truth era and humans are not always irrational. The rational angels of our nature must be encouraged by truth-promoting norms in institutions. Many are succeeding despite perhaps growing rationality in equality. Universities may be falling short of their rationality promoting mission. This mission nonetheless matters for society to enjoy the benefits of rationality in return for the perquisites and grants to universities to secure the credibility of university-based research on vital issues and to prevent backlashes of irrationality. Thank you.

[Applause]

Nick Gillespie: Thanks. Hi everybody, on Nick Gillespie. I'm the editor-at-large at *Reason*. Thank you for coming out. I want to thank Deb and Jon for a fantastic conference. So let's give them a round of applause.

[Applause]

Steven Pinker: I hope I plug the name of your magazine.

Nick Gillespie: Yeah. Well, you know it gets around. We – the truth as you know it seemed a little bit arched, so the reason is good. And I want to also thank Steve as Jon made clear is a Canadian and it's kind of he's one of those immigrants who is doing a job that Americans want to do.

[Laughter]

Nick Gillespie: Which I think is defending rationality and enlightenment value. So, thank you for that. You're almost – you're a spiritual Mexican in that, right? So I want to ask – to start off and I'll ask a couple of questions and turn it over to you guys. But what is the source of post-truth or truthiness in the university? Because you know we're talking – this is an organization that's about the academy and there's a lot of reasons for you know things happening outside. But where – what is the – you know kind of the wellspring of this in the university?

Steven Pinker: Well, I mentioned in a number of hypotheses, I really – I can't claim to know the answer but this one that Jon and Greg have noticed that maybe generational differences in the students. The – I suspect that the success of the drive for equality and inclusion, the fact that very few people really are racists, especially in the universities, there are data that back this up. In fact, fewer and fewer people are racist in the country as a whole can... Bizarrely this is often considered a reactionary thing to say.

Nick Gillespie: Right.

Steven Pinker: But the – not only overt racists' opinions in pretty steady decline that is the number of people who will say either the blacks and whites should go to separate schools or if a black family moved in next door, I would move out or pejorative opinions like the reason for inequality is that blacks are less intelligent or less hard working. Those have been going down, down, down and some of them are now in the range of crank opinion like...

But also, more subtle, measures of implicit racism, I reported in *Enlightenment Now* with the help of Seth Stephens-Davidowitz, the result of Google searches that people do in private. How many people search for racist jokes? How many find them funny? That's been going way down. And my colleague, Mahzarin Banaji looking at two decades of her own research on implicit bias from the implicit association test is showing that even unconscious bias is going down.

So we all agree racism is bad and sexism and so on. But that does provide a kind of an incentive for competitive status-seeking for who has the brighter halo by using it as an effective weapon of mass destruction, accusations, and racism.

Nick Gillespie: Let me be more forceful I guess or direct. What is the role and Jon made a joke about deconstruction and gobbledygook. Yesterday, one of the speakers said, "I will tell you I got my Literature PhD at the high watermark of Theory and I consider myself a postmodernist.

Steven Pinker: Capital T – Theory.

Nick Gillespie: Yes, that's right. But is that part of the problem, the rise throughout the '70s, the '60s and '70s and into the '80s and '90s of a set of theories or set of ideas that said that truth is absolutely socially constructed and that it reflects power? I mean how important is that to the discussion that we're having there? And then also saying then all viewpoints are essentially equally false and everything becomes a kind of will to power. *I might have this [0:56:33] [Phonetic]*.

Steven Pinker: Yes.

Nick Gillespie: So how – is that part of which are...

Steven Pinker: So did... Kellyanne Conway take too many courses in French Literary Theory. Sarah Huckabee Sanders, a most prominent exponents of Foucault and Lacan.

Nick Gillespie: Yeah.

Steven Pinker: Literally unlike – oh, Donald Trump for that matter who really does – if you change the wording, it really could sound like a lot of post-modernist. I don't think that it's – there's a direct chain of influence but what it has done has left the university defenseless in counter-acting that with...

Nick Gillespie: Well, is it coming within the university? I mean one of the arguments about political correctness when it started becoming a thing, was that it was something that the right-wing imposed. You know they kind – it was almost like they were saying that people in the universities were acting like witches. It was something kind of forced on the university. But isn't it true? I mean it's not the people who were questioning truth at Harvard or in Harvard departments and they're in certain types of disciplines and things like that. So, I mean are they the ones who were saying, "No, the university is not a place for truth because truth doesn't exist. It's actually a way of..."?

Steven Pinker: You know some of them are and I say this from the first-person experience that... In fact, my statement of the mission of the universities is not actually stated as the mission of the universities by the universities. It's actually very hard to pin down administrators or professors to make statements along the lines that I just did. So I actually was being somewhat presumptuous. I was part of a curriculum review at Harvard about 15 years ago and for bizarre reasons the whole – the world pays a lot of attention Harvard. And so the curriculum reform at Harvard got a lot of press outside the walls.

And so to start off, what's the point of education? And a lot of my colleagues will say things like, "Well, I see college education as a soulcraft, as building a self." And frankly, I don't know how to build a self. I don't know how to develop soulcraft. So thank goodness I have tenure so I can actually say that and I won't – don't – won't get fired. I think I do know how to teach you know linguistics and cognitive science and... But, so it is true the universities haven't – despite what I – the words that I think I put into my colleagues' mouths have not really dedicated themselves to that, probably partly because of the influence of I think of post-modernist thinking.

Nick Gillespie: And isn't the motto of Harvard is Veritas, right?

Steven Pinker: It is indeed.

Nick Gillespie: That's something about truth.

Steven Pinker: When we think.

Nick Gillespie: But that's actually is... I mean so maybe if we're interested in the vision of the university, Steve but for which I know I am is that that's actually an argument that needs to be won that the...

Steven Pinker: Yes, that's true.

Nick Gillespie: The University is a place of production of truthful knowledge. Because a lot of people would say no, it's not that. It's something else.

Steven Pinker: Yeah, that's right.

Nick Gillespie: Do you find within the university campus setting, is it professors or is it students who are the fomenters of you know a turn away from the rational discourse, away from truth or approaching objective truth?

Steven Pinker: You know I think among professors who, obviously, I'm more acquaintance with, it's – I think there is some pluralistic ignorance that I think in private, many professors will say things that are completely by our lengths reasonable that is acknowledging the value of objectivity, truth, knowledge, all that stuff. But then when it comes to public arenas, they're all afraid to do it because they're all afraid they'll get – they won't be able to defend it if forced to.

And among students, you know I think that the – there are, again, I'm hesitant to say without a good sampling of the privately stated opinions of students and hesitant to generalize from my own experience because I don't know what kind of students gravitate to me that come to my office hours. In general, the – I don't find among the students that I speak to in dinners, in-office hours have these intolerant beliefs. But I may be getting a bias sample and maybe it's a biased sample that is making headlines. I don't know which of those is right.

Nick Gillespie: What do you think is the role and Harvard and many kind of Research I schools or flagship state schools are in different situations than many other universities where there is a sense of you talk to the professoriat, I mean tenure lines are being shut down you know – or in decline compared to where they were a few years ago. How much of this is or is conceivably that the resources are dwindling so the stakes get higher actually and then people are fighting not for the future that they might inhabit but they just want to be able to be the last ones who get to turn the lights off at the university?

Steven Pinker: Yeah, it wouldn't – I don't think it would explain the – what's coming up among the students. I suspect institutionally, a big factor maybe the massive expansion of the student life bureaucracy of the deans at various levels. And we just know from academic economics that they are absorbing a larger and larger proportion of university resources. They are at least partly responsible for the hyperinflation of tuition. It is in their interests to foment as much discontent an outrage as possible.

And because universities have – are kind of feudalistic in the sense that there are a lot of semi-autonomous fiefs that aren't really responsible to anyone, so the people at the top of the academic chain of command for whom the buck stops, the presidents, the provosts often are just

kind of – are titular heads of vast organization that have a number of self-replicating bodies, the Title IX bureaucracy, the Affirmative Action bureaucracy, the human subjects protection bureaucracy where they have their own culture that spreads beyond the walls of any particular institutions. They're hired from similar positions at other universities.

It's very – it's convenient for a top-level administrator like a provost or a dean to hire someone and just give them responsibility for running that aspect of the university. It takes them out of – it takes that out of their hair and it's a thankless job, there's a lot of pain and nuisance. And if you can just outsource it to some professional, then it makes your life as a provost easier and no one criticizes you for having a – this bureaucracy that often runs counter to the mission of the university. So I think there's something more distributed in the structure of the university in the chain of command. It's not – we don't have the equivalent of a military being under civilian control.

Nick Gillespie: Right. Do you – final question then we'll have time for some questions from the audience, yes? Yeah. So, what – you know what is a model of in some of the stuff you're talking about, what is a model that faculty can do to show how to settle disputes in a rational kind of way? I mean is – and as part of the problem here that in the past and kind of not in the distant past necessarily either, people who spoke with – about Truth with a capital T oftentimes were very inflexible where they were later revealed to be wrong or to be kind of fakers.

Or you mentioned Hans Eysenck who is just a fascinating character in this where not only did he have a lot of odd beliefs that he started pushing for parapsychology and astrology at the end of his life, but then it was revealed that he took – he was very outspoken that smoking does not cause cancer and it turned out he was paid by tobacco companies as well. How much of the epistemological humility that we want out of students or out of faculty or out of society needs to be modeled better within the university?

Steven Pinker: You know, absolutely. And the lessons of the cognitive psychology of irrationality from Tversky and Kahneman and so on have not widely penetrated even with the university they're starting to because of books like *Thinking Fast and Slow* and Dan Ariely's *Predictably Irrational* and been picked up by columnists like David Brooks and others. But still, a lot of – I think a lot of intellectuals are – in many fields put too much stock in their own sense of personal rectitude and fallibility based on just sheer erudition and we know that erudition among other things is not a reliable cue to being right.

Nick Gillespie: Well, this is my pitch for post-modernism. I use Jean Francois Lyotard's short definition which is incredulity toward metanarratives. It doesn't mean they don't exist. It doesn't mean we don't use them and need them. But we are always kicking the tires on the car in the model.

Steven Pinker: Well, it's a good thing. Yeah.

Nick Gillespie: Let's open it up for some questions. We have a microphone that's rotating around. OK. So how about the gentleman over there in the shadows and...

Participant: Thank you for coming. I'm Alex Goodwin. I work at MIT. I wanted to ask how can we lower the stakes for confronting... OK, it turned up – confronting pluralistic ignorance and if not if there's no way to lower the stakes on confronting that as in like the repercussions for confronting it, how do we stop it and the destructive effects?

Steven Pinker: Well, the study that I cited by Michael Macy and his collaborator, Damon Centola show that if they are open channels of communication if there aren't self-contained communities where the interactions are tightly knit but that there are long-distance connections so that people from outside a community are – their opinions can be sampled rather than just the people you rub shoulders with, if there is more openness and more little boys pointing out the state of dress of the emperor, those are ways of deflating these bubbles.

But another big factor, this goes also to something that Nick was asking. I think the huge danger in combating the intolerance, the repression, and so on is to and make it seemed like it's a right-wing issue because that will only stoke it that if you're a respectable member of the left or even the non-right, then if you will – if you react or recoil from a movement that you see as aligned with you know ultimately, Donald Trump or the alt-right, then that can just push people even farther along become – make them even more entrenched in resistance.

So one – just as with climate change, the worst thing that happened to that movement was when it became a left-wing issue when some people, they did to Al Gore producing inconvenient truth being a Democratic presidential candidate or a former vice president. He kind of stamped it with left-wing aroma leading to greater polarization. If that happens to free speech heterodoxy open inquiry, then it's going to get worse.

Nick Gillespie: Over here in the front row, Sir, wait for the microphone, please.

Participant: I recently... Yes. Yeah. Well, I recently read a book by Roger McNamee who argued that fake news had a huge influence on the election and you said that it didn't appear and most people didn't [1:08:57] [*Indiscernible*] to that. And I was wondering if you are worried about the influence of it in the next election.

Steven Pinker: Hmm. And also, I'm not aware of that book. Maybe afterwards, you want to tell me about it. So this is based on the work of Brendan Nyhan. It was a paper, not a book. Well, I'm worried about it just because whenever you have the proliferation of disinformation, it can't be a good thing. At best it can be ineffective but at worst, it can be pernicious. So yeah, I would worry about it. I think obviously the social media companies and conventional news organizations ought to combat it. It's not that it's innocuous but it's not as if we should surrender to the idea that it's proliferating so much that the battle is lost.

The – by the way, it isn't – Nyhan points out that it isn't that – in general, it's not so easy to shift people's political opinions with messages even campaign ads don't make a big difference for all the money that gets lavished on them. But there are some things that do have a provable effect such as cable news networks. So Fox News, for example, really does move the needle. It does push people to the right in a way that fake news does not. But anyway, yes, I am. I think we should be concerned. Yeah.

Nick Gillespie: Sir, up front. I'm sorry to make the mic holders get a workout here.

Participant: Steve, you said that it was the interest of – it was in the interest of bureaucracies to or the bureaucracies to foment disagreement and maybe that was obvious too but it wasn't – I think I see what you mean but can you expand on them? Well, how is it in their interest to foment discord?

Steven Pinker: Well, it proves the need for more bureaucrats. And in fact, the comfortable reply of any chain of command university administrator by which I mean deans, provosts, presidents. Whenever there's trouble, they hire more staff. If there's an accusation of racism, if there's a student who is questioned by a police officer and the student is African-American, it makes the papers, then the president hires more diversity officers.

So when things are blown up, then it tends to expand the range of these bureaucrats. And each one of them, not only gets a salary but they also get a staff. They have administrative assistants. They have high-level assistance. So this can increase the burden and bloat in the university. And because they often don't really report to someone who's in – has the fiduciary duty to advance the truth-enhancing mission of the university but act pretty much autonomously and are convenient ways of deflecting the controversies.

They offer presidents with the safe passage across the minefield of academic life just hire more diversity officers or – then the unstoppable dynamic within the structure of a university, something, there probably are people in organizational behavior and who study the dynamics of organizations who might be able to shed light on what I see as something of a pathology in the organization of the university.

Participant: Let's count to the interest of the organization, can the faculty do stuff about it?

Steven Pinker: So can the faculty do stuff about it? So this is an interesting question. The faculty, in general, not directly and that it isn't, the faculty don't choose the dean or that the president. They certainly don't choose say the director of admissions or the various – you know Title IX in diversity and other bureaucracies. They can make a nuisance of themselves and you know they can make a fuss, they can force presidents to resign if they – if the president loses the confidence of the faculty, depending actually on how the trustees or the governors or the corporation of the university reacts to them.

But it's often quite opaque what the chain of command is in the university. And I know this just from my own experience in the last few days. When I wrote to a number of my colleagues at Harvard about the case of Kyle Kashuv, the – many of you have probably read about him, the young man who was a survivor of the Parkland High School shooting and then became a conservative advocate of gun rights but also of school safety not involving gun control, very intelligent and mature man who was accepted to Harvard.

Then when he was – it was outed that he had contributed to a kind of a chatroom like document several years ago in which he had made some – used some racist language, he was – his

acceptance was withdrawn from Harvard. And I wrote to the president, I wrote to the Dean of the Harvard College, I wrote to the Director of Admissions and I kind of got a bit of a runaround as to who actually could defend this because the president said, “Well, this is up to the Director of Admissions. I have a policy of not commenting on the Director of Admissions as well as I have a policy of not commenting on individual cases.” So who actually – would actually defend this decision? And there was no one that could be iden– no one was on the hook and...

Nick Gillespie: So maybe he should just show up. *[Laughter]* Let’s have one more question. We have time for one more, please.

Participant: Thank you. You spoke to why universities should care about rationality. What kind of case do you make to students for why they should care about rationality, especially in a climate where it’s not politically or socially rewarded?

Steven Pinker: Yes, we’ll do the same case. I mean I believe that... My policy is always to treat students as peers, to make the same argument that I do to my colleagues as I do to the students. So I mean I would like to think that the kind of considerations that come up in this discussion would be as pertinent and as intelligently received by students as by anyone else.

Nick Gillespie: Do you think part of the problem here and I realize you know what – we talk about the university or the academy and you know there’s something like 4400 I think four-year, two or four – two and four-year schools, very different, but as part of this with the university is now focused so much on education and some people will say it’s – you know now it’s – you know we’ve taken scholarship too far.

But it seems to me over the past 20 or 30 years, the student experience is foregrounded so much. And then if you take it with Jon and Greg’s work you know we just want to keep the you know the middle school or the nursery school element of their childhood alive for four more years and that we should be focusing more on the university as a place that produces truth, you know provisional truth for sure. But, and that’s really what’s driving a lot of this.

Steven Pinker: It’s funny because the argument could go both ways because we’ve also seen arguments that students get neglected that universities just reward star researchers that can be you know bumbling teachers in the classroom.

Nick Gillespie: Although that, by the way, is a weird linkage too because it’s you know, I know a lot of bad researchers who were like, “Well, I’m a good teacher.” And it wasn’t really that there were good teachers, it’s just they sucked at research. So like, oh, that’ll be good. And if you’re so busy doing research, you can’t be a good teacher. But my best teachers both as an undergrad and grad student were inevitably, people who were really interested in doing good research.

Steven Pinker: Yeah. You know I think that is true. And I do believe in the particular bundling of education research that we see in the American University. I think certainly, for all the criticism that I and many people in this room level at American University, it is on the whole, a fantastically successful institution, one that the envy of many other countries. And I think the

bundling of teaching and research is one of them. But for one thing, why are we developing all this knowledge, why are we doing all this research, you know in a few decades, we're going to be dead?

Nick Gillespie: Mm-hmm.

Steven Pinker: The whole value is that it gets transmitted, it gets perpetuated. And also, we all know, any researcher knows that you have an undergraduate as one of your collaborators and they'll you know point out problems, they'll suggest hypotheses, they'll – because you know they're smart people and they know less but they're smarter in that kind of diversity of generations, diversity of experience. I'm not – I'm sure I'm not the only professor who learns a lot of tech from students, learns a lot of statistics from my students, so.

And what many students identified as the most valuable part of their education is working with professors on research. So I think it is a successful model. But it is also true that a lot of the student experience is not necessarily oriented toward that part of the portfolio namely of classes and lab work but of the extracurriculars which to my shock are enormous even at a Top Echelon brand name universities like Harvard, I find that the – with the encouragement of the administration, education is just one of many activities at this luxury resort. It's like they got...

Yeah, there's the – just like when you go to some of the best resort, there's the sailing and then there's the buffet table and there's the entertainment. You know classes are one perk of being in a university and for many students, not that you flunk, it's like the...

Nick Gillespie: Well, we will leave it there. Thank you so much, Steven. Thank you.

[Applause]

[End of transcript]