

CReST BOLD IDEAS SEMINAR

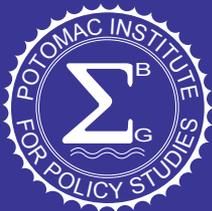


FUTURE THOUGHTS ON DATA PRIVACY, TRIBALISM, AND FAIR PLAY



**FEATURING
DAVID BRIN**

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**POTOMAC INSTITUTE FOR
POLICY STUDIES
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The Speaker's remarks and audience discussion
have been edited for flow and clarity.

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EXECUTIVE SUMMARY

Washington, DC – David Brin, a world-renowned science fiction author and futurist, spoke at the Potomac Institute as part of the CReST Bold Ideas seminar series. Dr. Brin brings a novel perspective when looking towards the future, and addressed several topics of current debate including data privacy, tribalism, regulation and fair play. His writings on these topics, both essays and fiction, have been pivotal in shaping public discussions on transparency and individual rights. His wide-ranging discussion is summarized below.

Dr. Brin discussed his concepts of transparency and sousveillance – “watching the watcher” – as the solution to current debates over digital privacy rights. He argued that the only way to thwart cheating, ensure individual rights, and even preserve a little privacy is to break up power by democratizing technology. As the pace of technology development accelerates, he argues that we should not try to constrain it, because elites will always be able to find loopholes to get around these constraints. He criticized the European approach to data privacy as paternalistic in structure and therefore insufficient to fully protect individual rights that citizens should be empowered to defend themselves, the way that cell phone cameras are transforming police behavior, on the streets. These concepts are described in his seminal nonfiction book, *The Transparent Society*, his recent book *Chasing Shadows*, and in his essays and speeches.

Brin discussed his concept of disputation arenas, in which there are five major accountability arenas (markets, science, democracy, justice courts, and sports). Brin embraces Adam Smith’s notion of regulated and flat-fair competition within certain bounds, and notes that, “across all of human history the only time we’ve ever received the full benefits of competition has been when it was regulated (as Adam Smith demanded) in order to ensure that flat-fairness.” To Brin, that includes not only prevention of cheating, but also regulation to end injustices like racism and sexism, whose chief effects

were to “waste talent.” In contrast, a fairly regulated arena is responsible for harnessing creative competition, and that competition is the greatest creative force in the universe. But this potential is only achieved when all (or most) children get all they need, in order to join the fun.

Brin also touched on Hollywood themes, tribalism in politics, great power competition with China, and the need for every individual to be a critical thinker and contrarian.

David Brin is a scientist, tech-pundit, forecaster, NASA adviser, and best-selling author. He is best-known for shining light — plausibly and entertainingly — on technology, society, and countless challenges confronting our rambunctious civilization. His best-selling novels include The Postman (filmed in 1997) plus explorations of our near-future in Earth and Existence. His short stories explore vividly speculative ideas. Brin’s nonfiction book The Transparent Society won the American Library Association’s Freedom of Speech Award for exploring 21st Century concerns about security, secrecy, accountability and privacy. As a scientist, tech-consultant and world-known author, he speaks, advises, and writes widely on topics from national defense and homeland security to astronomy and space exploration, SETI and nanotechnology, future/prediction, creativity, and philanthropy. Urban Developer Magazine named him one of four World’s Best Futurists, and he was cited as one of the top 10 writers the AI elite follow. David Brin’s website: <http://davidbrin.com/>.

SEMINAR TRANSCRIPT

Kathryn Schiller: It is with great pleasure that I welcome you to another seminar in the “Bold Ideas” series here at the Potomac Institute for Policy Studies. The Potomac Institute is a think tank specializing in science and technology policy issues, bringing together business and government in independent, thoughtful discussions of technology issues facing our society. We are well known at the Potomac Institute for a number of things, including the study of emerging technology trends and national security; under that light we try very hard to invent new, revolutionary, and hopefully inspiring ideas that address how science and technology is changing our world. Dr. David Brin has been associated with the Potomac Institute for almost two decades. We first worked together on some advisory committees where we brought together a group of science fiction writers, and he’s worked with us on several projects since then. Part of our philosophy here in CREST is that we read science fiction to inspire us to look toward the future and figure out what the world might look like when some of these new technologies that we talk about become real. Philosophically, we share with Dr. Brin a contrarian nature and a desire to shape the future for the better. Dr. Brin has thought a lot about the future of privacy in the digital age, and has influenced CREST’s thinking on emerging technologies and the future of democratic governance. We’d like to explore some of those concepts with him here today.

David Brin: Thank you. Quick summary of where things stand in that regard: I’ve lived in Europe and I deal with a lot of Europeans, and right now they are the ones fighting the hardest—along with the American Civil Liberties Union (ACLU) and the Electronic Frontier Foundation—to protect privacy, and I have to respect the fact they are right about the problem. They are right about the *problem*, they’re right about their concern, they are right to be working hard on it, and absolutely everything they recommend is diametrically *opposite* to effective. The ACLU folks and the Electronic Frontier folks are able to grasp what I’ve been saying, but I have yet to meet a European privacy activist who can grasp even theoretical-

ly what I am saying. Because their assumption is that the only way you can protect privacy and freedom is by paternalistically banning the practices that might threaten it.

...Back to science fiction. Science fiction's highest form is what's called the *self-preventing prophecy*, and we can all think of examples: *Dr. Strangelove*, *On the Beach*, *Failsafe*. Retired officers later admitted that each of these had very powerful effects on altering our procedures and helping to prevent nuclear war. *Soylent Green* recruited tens of millions of environmentalists and may have helped considerably in that respect. The granddaddy, of course, is *1984* by George Orwell, which girded hundreds of millions of people with metaphors making them determined to prevent the collapse of our diamond-shaped society into the very worst kind of obligate pyramid, empowered by technology to stomp on the human face forever.

China's social credit system seems to be determined to create an obligate, unidirectional pyramid of power, though officially they claim to want to be Confucian and therefore be very nice and good rulers, but coalesced in a centralized structure. There is a recent article by Feng Xiao at Tsinghua that really expresses the rationalizations, and some very clever ones, for why at the end of the 21st century, things really have to coalesce under a single-party guided, paramount hierarchical state. He uses AI as an example. Only such a state could control AI, or care for the need for the proletariat to be taken care of once automation eliminates jobs and the working class loses its bargaining power. Of course, Feng ignores any argument for how a looser structure could accomplish the same goals, with less coercion and conformity.

Let me surprise you, again. If you haven't read or understood Marx, it's seriously important that you do. People thought he was dead, killed-off 20 years ago, but he's been asleep. Our job is to *keep* him asleep by continuing what my parents' "greatest" generation did, which is turning the working class into an empowered and confident middle class so that Marx doesn't get that many readers. Alas, oligarchic fools have sent wealth disparities skyrocketing till that re-

sentful proletariat is taking form, again. In the first half of the 20th century we saw how that can lead either to populist socialism or populist fascism, and it can veer from one to the other! Right now Marx is flying off the shelves on university campuses everywhere because many of his failure modes are now being seen to be rising back up again. And it's guaranteed, as we enter an era when Marx's enemies seem all powerful.

...Now, Hollywood propaganda is all about warning about suspicion of authority or SoA. You can't name a film you've enjoyed that didn't have suspicion of authority as a central theme, from alien invaders to terrorists to overbearing agencies or conspiring companies, even if it's a gossipy mother. Some authority figure has to be stomping around for you to bond with the protagonist.

Other Hollywood themes include tolerance, diversity, and eccentricity. You'll notice that in a lot of films the protagonist exhibits some eccentric trait, and it doesn't have to be the audience's eccentric trait, it's the fact that this *is* a fellow eccentric and we're all eccentrics. This is the memetic underpinning of the diamond-shaped society, and it's the reason why the Europeans are wrong in prescribing paternalistic rules in order to safeguard freedom and privacy, because there is no example across human history of paternalistic privacy protections curbing the power of elites to see, over any kind of extended period.

Sometimes in *this* society, you can ban an institution from looking in certain ways, but always ten years later we find out that they've found some way around it. The fundamental basis upon which we got our freedom was not *hiding* from elites, it was stripping elites *naked*, and you can only do that when you've done the first thing – the principle embedded in the US Constitution – and that is you've broken them up. That's what this town (Washington D.C.) is for, it was designed to break up power. And that's the only way you prevent cheating. Every other renaissance in human history was destroyed by cheating. You might have some fair, enterprising competition for a brief glimmering period, but those who win then have resources with which to cheat.

...In my paper about disputation arenas, I talk about how there are five accountability arenas – it's about how disputation in a flat, fair arena is responsible for harnessing creative competition. Adam Smith was right, competition is the greatest creative force in the universe, but only when it's fair! Some people on the left have a reflex to be suspicious toward the word "competition", on the right it is religious catechism that the word "regulation" is evil, when across all of human history the only time we've ever gotten the benefits of competition has been the combination: regulated competition. And we see this in markets, science, democracy, justice courts, and the fifth, which I only really realized about ten years ago, sports. And sports is the great example. Can you imagine if a sporting league took down all rules, including rules against murder. How long would that league last? One Saturday.

You have to have regulated competition for sports to work, and it turns out cheating prevention is a major part of the other four arenas as well. Science is largely self-regulated but we all know anecdotal cases in which the peer review system didn't work.

Again, the greatest insight that propels it all – the fecundity of all five arenas – is simple. The way you do this is you break up power.

...Now, I was speaking of self-preventing prophecies, and the memetic effects of Orwell's novel *1984*. It's so imbued in us that, when we're not in a phase of our civil war, the natural political habit is for the decent Republican to be concerned that Big Brother is coalescing among snooty academics and faceless government bureaucrats. A decent Democrat is concerned that Big Brother is taking shape among conniving aristocrats and faceless corporations. Well when you put it that way, the proper answer is "duh." I mean, cheaters will try to cheat from any angle that they can find and we should be suspicious of all of them!

But that takes some maturity. Enough to say: "I might be wrong." Or else the proper perspective is, "I'm 90% sure that *your* elites are the dangerous ones. I suppose there's a chance *mine might be*... So you go ahead and keep your eye on them, you guard my back and

I'll guard yours." That's how this synergy of liberalism and conservatism is supposed to work. But do any of you see that happening now? No, it's phase eight of the American civil war.

In any event, we keep veering away from privacy matters. (I'll wander all over, if you let me. And you've been letting me!) But let's get back on topic. Recall that the European approach to data privacy is essentially paternalistic, and it says "we can ban certain abuses by elites." I've said the Europeans are more serious about addressing these matters, but always they try for paternalistic protections that cannot work. There are no examples in all of history of them ever working. Every time they are attempted, ten years later we find out that they have not worked, there were horrendous leaks. But, they keep going back to the same well over, and over, and over, and over again, and American liberals are tempted by that. If our aim is to succeed at this difficult task by using what's worked pretty well for 200 years: break up power and sic the mighty against each other! Try to set up synergistic systems by which, instead, people are able to apply reciprocal accountability, finding each other's mistakes. Remember I mentioned we're all delusional? Well, you see, the saving grace is that there's a solution. The tragedy, however, is that we *hate* the solution – we're all allergic to the one thing that enables us to pierce our delusions.

It's called *criticism*. I am filled with delusions and you are, too, but you don't have exactly the same ones. And therefore, you can spot my delusions and I can spot yours. What's the best thing we can do for each other? Point them out, so we each get better. Well, here's an amazing realization: your *enemies* will point out your errors and your delusions for you! And here's the great thing that proves Marx wrong – it's a gift economy. Your enemies will point out your mistakes for free. They'll do you this favor. Alas, you're almost guaranteed not to look at it as a favor, which is a damn shame. But boy, are you eager to return their favor, the genuine favor, of criticizing *them*.

Your allies can point them out too, if you have a fairly mature system. But, if you are creating little Nuremburg rallies – and I predicted this back in 1989 in my novel *Earth* – the Internet would result

in people sectoring themselves off into groups where their comfort is reinforced. They would have the same delusions. And in my novel – and this was three years before the web – the Internet had webpages. In addition to having all of that, it suggested that the equivalent of what would be called hackers might break into these Nuremberg rallies. I was consulting at Facebook about a year and a half ago. They were in a blind panic – which they deserve. I made some suggestions about how they might try to pierce this without losing their customers. But the thing is that you must have is *reciprocity* of criticism.

...The pre-frontal lobes that let us peer into the future are also the seat of empathy – putting ourselves into other people’s shoes. “What would it be like to be that person?” And empathy is what you need in war. Empathy is not the same as sympathy. The tiger is very empathic, imagining what the deer is thinking, but has no sympathy for her. It is only when empathy is modulated by satiation– you have everything you need – and by sanity, which includes satiability – it’s only under those circumstances that empathy widely becomes sympathy.

Which is why, when you have fearful societies, the horizons that they are concerned about are very close in. You’re worried about your child’s next meal. And when you’re worried about your child’s next meal, you would kill somebody you grew up with to feed your children. We’ve documented this. Droughts on the Great American Plains, very few buffalo. Sioux families would kill each other over an emaciated carcass. Now the rains come, five years later, there’s buffalo everywhere. The families gather into septs, the septs into clans, the clans into tribes, and the whole Sioux nation gathers by a river and invites the Cheyenne over for a barbecue, so they can plan their war against the Crow. We’re still bastards, but what happens is that when you’re no longer worried about your child’s next meal, you worry about the next harvest and you make alliances of people across the valley against those over the mountain.

How many of you are worried about the next harvest? As fear levels go down, you don’t stop worrying, you worry about your grandchild-

dren having enough topsoil. The volume of worry is the same, but as the fear levels go down, you start thinking about different horizons – including horizons of inclusion. Who gets to stand with the talking stick by the council fire and argue with the chiefs and the elders? Well, it certainly wasn't women then, but it is now. It ought to be much more. This is progression of inclusion on the inclusion horizon. There's also the worry horizon, the opportunity horizon, the exogamy horizon – these horizons move off, the more rich and confident we become, till now citizens identify with and sympathize with abstractions like *ecosystems*! In art, the denizens of these horizons are typified, metaphorized in fiction by aliens. So our fiction really pushes out that envelope.

What I find fascinating is that this process of the next inclusion is the biggest demarcation among folks on what we call the left, right, and liberal center. Today's left-right thing does not parse onto the French Assembly of 1789, where this terminology came from. It doesn't parse that well onto capitalism or socialism. Indeed, the only place where Adam Smith is actively being discussed nowadays is on liberal websites like Economics and by liberal economists.

So what *is* the crucial difference? What we call the left is patriotic in a powerful way – the way that we used to give to flags, to the process of expansion, to the next inclusion. The “left” cares *only* about horizon expansion; it is what they give their patriotic and tribal devotion to.

What we call the right – their horizons haven't gone out as far. They like their old patriotisms. They like their old tribes. And they feel nagged to expand inclusion in ways that seem senseless to them.

There's a third group and that is probably the largest in America, positive-sum liberals. And they see no reason why they have to choose between two good things. Some feel that there is a zero-sum choice between expanding the horizon or your old loyalties. Positive sum people don't think there's a conflict. I like my old loyalties, I'll die for this country. But I see no reason why this country can't continue to expand its notions of inclusion.

...Now, is this crackpot telling you that all of this stuff is true? No, my job here is to, very briefly and informally, expand the suite of horizons that you're willing to poke at. Because the worst thing you can do as young Alphas is to get trapped in metaphors that serve simplistic failure modes, and that's what's happening right now to this country in phase eight of the Civil War. Now, am I being very successful? I mean, I sell a fair number of books. *Transparent Society* sells more every year. People send me messages all the time saying, "What the heck?" and saying "page 206, page 206" where I (in 1997) appear to predict the collapse of the World Trade Center towers. Lately it's been page 160, about cop-cams and such.

...2013 was the best year for American civil liberties in this century so far. And almost no one in the news media pointed it out. That's the year that the Obama administration and the courts both declared that citizens have a right – a universal right – when not impeding, to record their interactions with authority on the street. There's no more important potential confrontation between citizen and authority. Because that's the one that can break your head. That's the one where you get your habit of being able to record and question in the face of authority.

DISCUSSION WITH AUDIENCE MEMBERS

Audience Member: You mentioned you were in Shenzhen, was there anything that surprised you on this trip out to China?

David Brin: Well it's always amazing to see what they've done, I mean, Shenzhen was a sleepy village forty years ago. Fifteen years ago it was a minor city. It is now gigantic. Its GDP is greater than Hong Kong's. Another thing that surprised me was how hostile Hong Kongese are to China. They won't accept renminbis on the street. I got some renminbis in advance and they won't even accept them in the shops. They'll take dollars.

In addition to paying us, our hosts gave us foreign speakers new P20 phones. They're worth \$1,000, you can't even get them here. Great camera, that's all I'm using it for.

Lots of things have surprised me. I am surprised that the Union side of this phase of the civil war is behaving so foolishly and not recognizing something called Goldfinger's rule. I'm talking about the Bond movie. Bond shows up a third time and Goldfinger says "Once Mr. Bond, is happenstance. Twice is coincidence. Three times is enemy action." Let me illustrate by taking you back two decades. If you had looked at America in the 1990s, how high we were riding, the American pacts seemed completely invulnerable and people like Francis Fukuyama were talking about the end of history, that liberal democracy was permanently entrenched.

Suppose you were an enemy back then wanting a long-term plan to end the American Pax. You would ask: what failure modes almost brought America down in the past? If you look through American history you would see two wretched mistakes that almost killed us, *civil war* and *foreign quagmires*. Crank forward a decade and voila! Very rapidly we found ourselves diving into both.

If you take a look at the systemic strengths that won us the cold war, every single one is being systematically demolished. Our alliances, for example, our science. I was at the CIA and I pointed out to them, even when they had less good spy craft than the KGB during the cold war and when we had an open society and their agents could roam around, we still had one huge advantage. That was *defections*. What were defections based upon? Well, if you could promise *safety*, *good prospects*, and the *moral high ground* we got defections and it made a crucial difference. So now they are demolishing our ability to offer those three things. Putin wants it to become known he is assassinating defectors. Their prospects in the west are undermined.¹

1. See <https://www.nytimes.com/2018/09/13/us/politics/russian-informants-cia-protection.html>.

...We used to skim the top ten percent off of the foreign students that we trained at our universities and simply make them Americans. What a deal! Send the rest home infected with our values. Now they have these Confucian Centers next to our universities whose job it is to indoctrinate Chinese students here, making damn sure they come home. We're not doing counter indoctrination. It would be really easy to require that all foreign students at all our universities take *one civics class*. Then they would go home infected with liberal values. Right now, it's Hollywood that makes them unreliable when they go home and it works to some degree, but their prospects for being defectors or agents for us are not good. And the moral high ground? I think we still have it in any practical sense, but in a polemical sense you can see it dissipating right before you.

So the question is, is this sci fi author trying to feed you a conspiracy theory? No, I'm trying to feed you the notion that you should every now and then step back and joke about what your trip is, like I just did. Anybody else?

Audience Member: I have a question about the process of imagination. You alluded earlier that in science fiction there's usually some sort of jeopardy and conflict that drives the plot, which often means finding some sort of technology or social policy that has gone wrong or that is causing some sort of conflict. On the flip side, do you have any advice for trying to find possible utopias in technology in science fiction, trying to see what the positive path of technology could be?

David Brin: Well, it's very rare to see positive situations in Hollywood films. As I mentioned, generally you need to put your hero in jeopardy for ninety minutes. Or six hundred pages of a novel. Authority figures to oppose and as I said, your political proclivities may control, to some degree, which authority figure. Hollywood tends, a little more often but not totally, to lean towards corporate shenanigans or skulduggerous elites but very often its some government agency.

Kathryn Schiller: Can you talk about *The Circle*? We read *The Circle* and watched the movie.

David Brin: In fact, magnificent propaganda. You'll notice various places in it in which he is glancingly referring to me! He takes some of my own lines and puts them in the mouths of the villains. But what's brilliant about *The Circle*, as an art of propaganda, is the knowledge that people don't like to be lectured. Remember *Die Hard*? What a wonderful bad guy Alan Rickman was? We loved him, we wanted him to die, but we loved his smarmy lectures because they made us hate him even more. The job of the hero is to say yip-pee-ki-yay.

So, Eggers puts lectures in the voices of what are clearly the villains. Lectures about how transparency is *good*, while making them hypocrites because they aren't living by their own standards. Sneering-smarmy-bullying lectures about how *privacy is bad*, so the audience will assume the opposite. The result is an intensely overbearing but effective propaganda rant against transparency.

And yet, here's the hilarious part. At the end of the movie what's the solution to their hypocrisy? Transparency. Only when light finally shines on the villains do things improve, exactly as I describe in *The Transparent Society*. So his whole argument is completely undermined.

Do you remember the scene in the movie where the shy guy is arguing with his former girlfriend, "please just leave me alone," and her co-workers are coming around with their cell-cameras bullying him. Now, this is the archetype of what could easily happen in China under "social credit," crushing any sign of non-conformity. It could happen here.

But what's actually likely to happen here? Envision that scene. Now step back ten feet. What do you see? *Everybody* that we see in that scene is being shot. By whom?

Audience Member: Each other.

David Brin: By others who *aren't bullies!* By folks who are more grown up and have any kind of class. Those who are responding to that scene, the way director wants you to respond.

Think about it. People in the audience loathe what's being done to to the poor, shy fellow. Right? The whole intent of that scene is to get you to loathe the people who are bullying him. What would *you* do? Well you might use your own cell-cam to zoom in upon *them!* "Look at these assholes! That poor guy just wants to be left alone! All right, maybe he's a little flakey but oh, oh, back off you hurtful bullies! I'm going to tell your moms!"

You don't see that in the film, even though that's the intended audience response that they are trying to invoke. You don't see that because it would totally destroy the argument. Because it would mean that transparency can conceivably be a tool for getting people to leave each other alone.

In fact, it is likely the *only* way we will have privacy in the future. The Moore's Law of cameras is relentless, they are getting more numerous, better, faster, cheaper, more mobile every single year. Do you honestly believe that people who keep coming up with these notions of banning facial recognition systems – are they out of their freaking minds?! If you ban them it will guarantee that *only* elites will have them and we won't. But it won't even accomplish that. There will be underground, cheap facial recognition systems from a hundred thousand sources. We are going to live in the village. The only question is, will it be the village of ninety-nine percent of our ancestors dominated by the lord on the hill and bullied by the local gossip busy body? Or will it be the image that Hollywood gave us of the village of Andy Hardy movies.

Audience Member: We are planning this year to write on data privacy, so while you're here I need your input. If the EU attempting to use paternalistic control and bans will not work, the only solution is breaking up power, right?

David Brin: And stripping it naked.

Audience Member: And stripping it naked. So we've been discussing recently whether the government should break up Google's monopoly, etc. Can we hear your thoughts on what US policy you believe would be best?

David Brin: Remind me to send over the Fact Act.² There's nothing more important than a restoration of our ability to argue over what's true or not. For instance, I challenge you to name one fact-using profession that's not being warred upon at this point, including the so-called "deep state." I think that it's important to try to remember the fundamental of breaking up the power of elites, and not be focused politically on one set of elites. And that is what it's all about. It's hard for me to believe that after 40 years of the decline of the American labor union and the rise of huge wealth disparities, that large numbers of our citizens can still be talked into spittle-spewing rage at unions. When one potential elite has been plummeting in influence and another has been rising in influence, one's reflex should be to turn our skepticism towards the one that's gaining power, and it will. I don't understand what they think the end game is. If you take all the fact-using professions and all the professions that know how to do stuff and make them enemies, where is that supposed to end? I really don't understand that. You think I have a theory for everything, but I don't understand where this is supposed to go. When wealth disparities reach the same levels as just before French Revolution?

Anyway, my Fact Act has some things having to do with that. And the one single thing I think would make the biggest difference on the planet, and you won't be surprised to hear it comes from me, is an international treaty saying "if you own it, say so."

Audience Member: We look at the power that Facebook and Google are attaining. We have that automatic reflex to say "that's bad." What are examples of elites that we see still as beneficial to us?

2. FACT ACT. <http://davidbrin.com/nonfiction/factact.html>.

David Brin: One of the greatest inventions of the late 20th century was the NGO. Groups like the ACLU or Sierra Club or... yes, the NRA... they take the membership dues from hundreds of thousands of members and pool them to hire the kind of top lawyers and lobbyists that used to be available only to corporations or the rich.

As to which elites are beneficial? It partly is determined by where you are on the political spectrum. Now, liberals have a tendency to be less fixated on one particular direction and you can see this by the failure of MSNBC to benefit when they tried to imitate the Fox economic model. They tried to recreate a liberal rant central and they almost went bankrupt because people on that side of the spectrum wandered away. Fox happens to be successful. We could spend an hour talking about why.

But, I don't want to give you the impression I'm terribly partisan. One of my heroes is Adam Smith. Look up the site "Economics." I had a piece there about micropayments. I mean, I believe that a micropayments system would help save us because of the advertising. Twenty years ago you would have never imagined that advertising would carry the financial rate of the Internet this long. And it's obviously not working and it's turning, it's metastasizing, it's gone cancerous, and it's killing news media and the ability to have a simple micropayment system. How many of you when you see that you hit your pay limit for the *New York Times* articles, you go find the same articles somewhere else? It's not because you'd be unwilling to pay 20 cents for that article. The amount of time you're going to spend reading that article is certainly worth 20 cents. What's the problem? Rigmarole – having to sign in. You don't want your surfing slowed down. A fluid micropayment system that doesn't slow people down; I believe people would be willing to pay 20 cents if it was just a 20 cent button.

Audience Member: This might be a bit in the weeds, but what do you think of the current resurgence or rise of people being interested in technology like blockchain?

David Brin: I'm on the boards of advisors of 4 different ICOs and they're so zealous and, I've seen 29-year-olds think they're going to be billionaires. I have the pleasure of being the grouch on these boards and I keep plenty ways for them to stay out of jail. The whole initial coin offering (ICO) thing is worth an hour or more, the self-enforcing contracts. For instance the fact that Blockchain's self-enforcing contracts algorithms can run loose and they can buy companies, they can buy services, they can hire people, and nobody is controlling them. The ICOs are based on World of Warcraft, which is where Steve Bannon got his money originally, by hiring poor Chinese to spend 16 hours a day playing World of Warcraft and then selling their magic swords. And yet that had nothing to do with blockchain. That had to do with an interutility world versus an outer world where you can sell the tokens and that, more than Blockchain, is what the ICO world is about. The implementation, yeah. But we don't have time for that.

Audience Member: I just had a question about when you were talking about criticism. I feel like today in the world of transparency, and living on the Internet, there's a lot of criticism in these little echo chambers. There needs to be a hacker that comes in and disrupts that. How do you facilitate effective criticism and make people responsive. How do we circumvent the human instinct to react negatively?

David Brin: Well, God I wish I knew. In *Earth* (1989) I have an early version of "hackers" breaking into these Nuremberg Rallies. At Facebook I suggested that intermittently if their system determined that this was a highly politically-relevant posting, a small exclamation point and question mark would show up with different colors, thermometer levels, and degrees of throbbing to call attention to whether or not this was questionable, and offering people a choice to click if their curiosity would like to see either discussion of the issue or a rebuttal. And this goes away and comes back a minute or two later. I think people would be willing to put up with that. Anything more than that and you're going to have accusations of

“Ministry of Truth” – attempts to control. Which is of course exactly what this is trying to stop, but you see how the accusations that uses the very same meme that is rightfully used against the accuser – fake news. Fake news is used by people, by what I call a conspiracy, that it uses fake news. You cauterize the ability of the other side to use polemic. I think that when it comes to China, there is nothing more important than developing proper polemic – and nobody does. For example, they are going to do predatory mercantilism and, to an extent, it’s right and proper.

I wrote to *Time Magazine* in 1999, “how could you choose anybody but George Marshall?” He and Acheson and Truman set up a counter mercantilist system. We were the first Pax empire in the world to not go mercantilist and impoverish the world by bringing all the gold in. Instead, making a counter-mercantilist system in which the greatest accomplishment of America was to uplift most of the world by buying 10 trillion dollar’s worth of crap we never needed. And getting some credit for that, moral credit for that, is something we should be fiercely aggressive about because what China’s doing right now is they are justifying the predatory mercantilism by saying it proves “We’re smart. Americans are decadent.” And by the way, the “Americans are decadent” thing is something that’s going to happen with enemies every 20 years. It was behind 9/11. Hitler said it. Stalin said it. The Confederacy said it. The British said it. And we got out of it cheaply on 9/11 with 40 brave passengers aboard UA93.

But the Chinese idea that they are “getting even for colonialism” is something we have to address strongly. Because for them to have a morally indignant justification, instead of a pragmatic justification for stealing hand over fist, that’s a different thing because that can lead to war. And the fact of the matter is that somebody at the right moment is going to have to ask them “across 4,000 years of glorious Chinese history, when did you ever have a friend? An equal friend, who came to your aid when you called and wasn’t afraid of you.”

As it happens, there was one. China – across its long history – has only had one consistent friend. There’s only been one. Ever hear of the city Burlingame? It’s named after Abraham Lincoln’s envoy to China, who made life hell for the British, the French, the Russians, the Japanese, endlessly hectoring them to *get out*. To give up their colonies and “concessions” and bully rights. Sun Yat-sen based his repeated efforts at revolution out of the U.S., and when he finally succeeded he sent 5,000 students to America to free scholarships. Who came in and helped China against the Japanese empire? And who has spent trillions buying their crap and making cities like Shenzhen possible? There is no basis, none, for anger at us. If you want to take our money, you want to take our inventions, we can negotiate over that. But don’t you dare treat us as if you have a *moral* reason to justify hating us. That’s the sort of thing that we’re not responding to, and it could really lead to war.

It’s an example of why we need a lot more off-axis thinking.

To wrap up, the one thing that I really emphasize here is watch out for *reflexes*. Okay? You should have an itch if you are around only co-partisans of a point of view, even one that you’re 90% sure is 90% right. It should bother you a little. That doesn’t mean that the party you are hanging with is wrong, but you should be the pest who says “we’re at most 90% right.” You see, you can break away from your own point of view. Good luck to you guys. Good luck to us all.

SPEAKER BIOGRAPHIES

DAVID BRIN*Scientist, Futurist, Author*

David Brin is a scientist, speaker, technical consultant and world-known author. His novels have been New York Times Bestsellers, winning multiple Hugo, Nebula and other awards. At least a dozen have been translated into more than twenty languages.

His 1989 ecological thriller, *Earth*, foreshadowed global warming, cyberwarfare and near-future trends such as the World Wide Web. His 2012 novel *Existence* extends this type of daring, near future extrapolation by

exploring bio-engineering, intelligence and how to maintain an open-creative civilization. A 1998 movie, directed by Kevin Costner, was loosely based on *The Postman*.

Brin serves on advisory committees dealing with subjects as diverse as national defense and homeland security, astronomy and space exploration, SETI and nanotechnology, future/prediction and philanthropy. He has served since 2010 on the council of external advisers for NASA's Innovative and Advanced Concepts group (NIAC), which supports the most inventive and potentially groundbreaking new endeavors. In 2013 David Brin helped to establish the Arthur C. Clarke Center for Human Imagination at UCSD, where he was honored as a "distinguished alumnus" and where he was thereafter a Visiting Scholar in Residence. Other HONORS include the American Library Association's Obeler Freedom of Speech Award, the California Library Association's Zoia Horn Intellectual Freedom Award, The Potomac Institute's 2015 Navigator Award

for public service, and the first annual National Endowment for the Humanities/Hannah Arendt Center Distinguished Visiting Fellow at Bard College. 2015. His non-fiction book — *The Transparent Society: Will Technology Force Us to Choose Between Freedom and Privacy?* — deals with secrecy in the modern world. It won the Freedom of Speech Prize from the American Library Association.

As a public “scientist/futurist” David appears frequently on TV, including, most recently, on many episodes of “The Universe” and on the History Channel’s best-watched show (ever) “Life After People.” He also was a regular cast member on “The ArciTECHS.” (For others, see “Media and Punditry,” below).

Brin’s scientific work covers an eclectic range of topics, from astrophysics, astronomy, and optics to alternative dispute resolution and the role of neoteny in human evolution. His Ph.D in Physics from UCSD — the University of California at San Diego (the lab of nobelist Hannes Alfvén) — followed a masters in optics and an undergraduate degree in astrophysics from Caltech. He was a postdoctoral fellow at the California Space Institute and the Jet Propulsion Laboratory. His patents directly confront some of the faults of old-fashioned screen-based interaction, aiming to improve the way human beings converse online.

David’s novel *Kiln People* has been called a book of ideas disguised as a fast-moving and fun noir detective story, set in a future when new technology enables people to physically be in more than two places at once.

A hardcover graphic novel *The Life Eaters* explored alternate outcomes to WWII, winning nominations and high praise in the nation that most loves and respects the graphic novel.

David’s science fictional *Uplift Universe* explores a future when humans genetically engineer higher animals like dolphins to become equal members of our civilization. He also recently tied up the loose ends left behind by the late Isaac Asimov. *Foundation’s Triumph* brings to a grand finale Asimov’s famed *Foundation Universe*.

As a speaker and on television, David Brin shares unique insights — serious and humorous — about ways that changing technology may affect our future lives. Brin lives in San Diego County with his wife, three children, and a hundred very demanding trees. For more information, visit: <http://www.davidbrin.com>.

KATHRYN SCHILLER WURSTER

Chief Policy Officer & Director, Center for Revolutionary Scientific Thought (CRoST), Potomac Institute for Policy Studies



Kathryn Schiller Wurster is an experienced non-profit leader with deep knowledge of the science and technology, government contractor, R&D, and think tank industries. She serves as the Chief Policy Officer at the Potomac Institute for Policy Studies, a not-for-profit, non-partisan science and technology policy think tank serving the U.S. government. Her nearly 13 years of experience includes working on complex science, technology, and national security policy issues, ranging from microelectronics to neurotechnology to space strategy. Kathryn also serves as Director of CRoST, where she has developed a training curriculum to teach strategic thinking and policy skills for S&T PhD's transitioning to policy careers. CRoST serves as the Institute's IR&D and futures group, generating new ideas that seed new projects and centers focusing on emerging technology policy issues. She has provided strategic and technical analysis studies support for government customers in Congress, the White House, DOD, DOE, NASA, and the Intelligence Community. Kathryn attended the University of Virginia as an Echols Scholar and graduated in 2002 with a Bachelor of Arts in Political and Social Thought.

ABOUT CReST AND PIPS

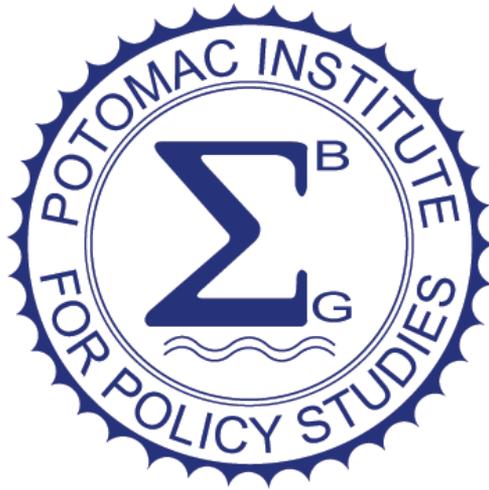
CReST BOLD IDEAS SEMINARS

The Center for Revolutionary Scientific Thought (CReST) at the Potomac Institute for Policy Studies is an eclectic group of researchers and fellows dedicated to the study of novel and emergent ideas that could drive revolutionary changes in society. In addition to other studies and projects, CReST hosts seminars and conferences designed to find and foster bold ideas in science and technology that address the most trying challenges facing our society. A bold idea is more than just a good scientific discovery, and more than an innovative idea. A bold idea is one that can influence the future in terms of human endeavors and can profoundly change how societies live and work. It can impact communications, learning, conflicts, or our lives. Bold ideas transform how we view the world and interact with one another and with systems. Notable scientists and technology thought leaders discuss their concepts in Bold Ideas forum series to an invited audience of science and technology decision makers in agencies and departments across the US Government, industry, and academia.

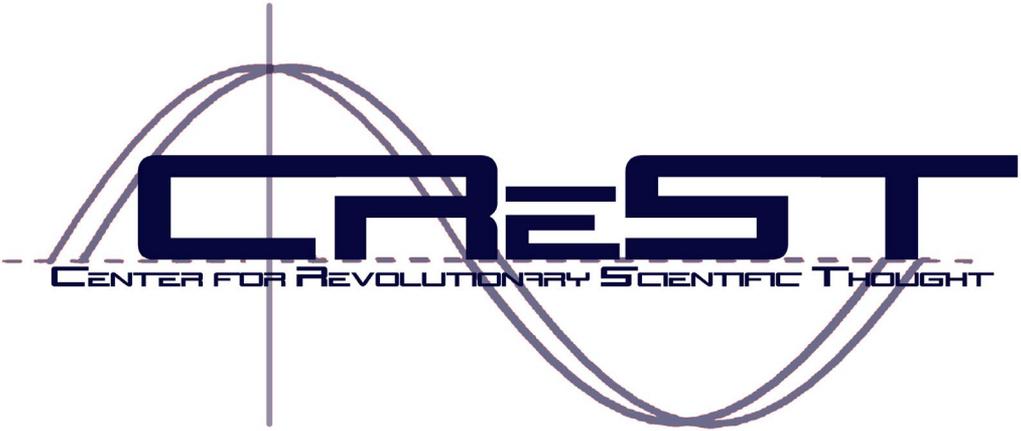


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