Andy Luttrell:
As a grad student, I helped coach the Ohio State University Speech & Debate team. I had done public speaking competitions in college, so I could pitch in on that side of things, but I really had no business advising the debate side of the operation. I judged a handful of debate tournaments, and the whole thing was very intimidating. Arguments flying back and forth, appeals to arcane debate rules, and kids talking so fast I could barely keep up.

But it's pretty crazy, right? Like someone tells you that you need to defend some random position and then a few minutes later, you're defending it like your life depends on it. And is it all just a game or do people actually start to buy into it?

Sounds like a question for the psychology of persuasion! A little while ago, I talked with Richard Petty. He was my PhD advisor, and he's like the guy in the psychology of persuasion. He came up with a big influential model of persuasion years ago—I'm working on an episode about it, but it'll be a while.

Anyway, as it turned out Rich's fascination with persuasion really started with this exact question.

Richard Petty:
In high school, I was on the debate team. And so the topic of what are you doing preparation for something was really interesting, right? And so in preparation for a debate, you really have to marshal all of your arguments together and so on and so forth. And based on things like role-playing research, which was known at the time, right? Janis and King. People moved in the direction of their preparation.

Andy Luttrell:
By preparing to argue some side of a debate, we nudge our own opinions in whatever direction we're getting ready for.

And there's a fascinating new study that puts this to the test in a modern context. Peter Schwardmann and his colleagues actually went to debate tournaments in Munich and Rotterdam, and they surveyed debate competitors after they learned what they'd be arguing but before they actually started to debate.

And the thing about this is that whether you argue for or against some proposal is a total coin flip. So like if the debate topic is funding geo-engineering projects, you might have argue in favor or you might need to argue against. Your fate is randomized. So when they gave debaters some factual statements related to their debate topic and asked how much they believed these statements, these debaters tended to believe a statement more if it was aligned with the case they were about to make…even when they were incentivized to give their absolutely honest beliefs.

And when they asked debaters how much they'd donate to a charity, they donated more to a charity that was aligned with their position in the debate. And they asked debaters: of all the other debates in the tournament on this same topic, how often do you think the people arguing your side are going to win? In other words, basically, how confident are you that the side you're about to argue is the right side? Here again debaters tended to think their side—which was randomly determined just a few minutes ago—is actually probably the objectively correct side.

Now of course there are plenty of debaters who argue a position that they patently disagree with, and sometimes they even win! But nevertheless, the exercise of debating random sides of an issue can instill a genuine appreciation for perspectives you might not have given a second thought to otherwise.

You're listening to Opinion Science, the show about our opinions, where they come from, and how they change. I'm Andy Luttrell. In the last episode I told the story of IBM's Project Debater—an artificial intelligence system that can engage in live debates. It's an amazing story—go back and listen if you haven't already. But in reporting that story, I talked to three human debaters who have faced off against Project Debater in live debate demos. They are Harish Natarajan, Dan Zafrir, and Noa Ovadia. And even though I talked to them mostly to get their thoughts and experiences on IBM's AI system, I also had the chance to get a glimpse into the world of debate and the various life skills it can build.

So this week, we're going to dig back into my interviews with these accomplished debaters to gain some insight on what debate is, how it works, and why it's such an important exercise. A quick note first—these interviews were originally in the service of pulling soundbites for the Project Debater episode, so the audio quality bounces around a bit and I've edited around some of the AI talk…which isn't always that graceful. Nevertheless I think you'll be interested in what these folks have to say. So let's get to it!

Harish Natarajan:
So, I'm Harish Natarajan. I was the first person to participate in a public debate against IBM's Project Debater back in February 2019. For me, debating was a bit like a drug, but there were two things which I loved about it. There was the performance element of it, which is you're standing in front of an audience explaining and expressing yourself. And the other part of it, which I think over time I loved more and more, was the logical aspect of it, which in the forms of debating which I did were short preparation, that you would get as little as 15 minutes to prepare your case. And while that meant you can have a large amount of empirical evidence, it meant that you had to think very quickly, logically, to construct your arguments.

And that's what brought me into debating to begin with, and over my years at university, I would do more and more of it. I would participate at both the European Championships, which I won in 2012, the World Championships, and multiple other events. And it always kept me engaged because you just kept having to learn more, work out what the best techniques are in a short period of time to persuade an audience, and that was the first part of my debating journey.

And from that, there were plenty of other things which came out of it, which is I started enjoying judging debates, trying to work out what arguments are the strongest, which is partially trying to do it as best you can when it's a competitive format in a way which doesn't reveal your own biases. But at the same time, asking yourself how do you persuade an audience in a non-formal competitive debate setting. And then doing more formal debate coaching, and over the last few years, that's become more of my passion in debating, that I spend my time coaching the Hong Kong team, for instance, that participates at the World Schools Championships, which has been a different but also very rewarding and fascinating challenge.

Andy Luttrell:
You know, one of my questions about debate is what is the mark of a good debate, and in some ways that comes to the metrics that were used in the Project Debater event that you were involved in, right? Like what is it that you would look at and go, "This is debate success," right? What are we striving for? And does that look different as a coach, versus a judge, versus an audience with no prior experience?

Harish Natarajan:
I think we'll just start with a caveat to that, which is competitive debating isn't what many people normally consider to be a run of the mill debate. The kinds of arguments we have with our friends are very different, the ways you would have an argument in competitive debating. On the simplest level, all debates, competitive or not, are proving that on balance, your side is correct. But how do you do that and who are you doing that for? Ideally, in an optimal world, what we say in competitive debating is you are trying to persuade an informed global citizen, but someone who doesn't have strong views on this topic and is very susceptible and will listen carefully to logic. That's what I think we're looking for in competitive debating. There's lots of nuances around each and every part of that which I'm sure we can talk about, but that's of course a little bit different than the way we look at debating in other contexts.

But as a speaker, what I'm trying to do is just look at a topic and go, "There are gonna be arguments which are going to win." There are arguments on my side. There are arguments on your side. Any real topic in the real world is complicated enough that no side has a monopoly over all the right arguments. So, the question then is, which I think we all get instinctively, but we don't necessarily think about when we think about debates, is you're gonna be right about some things. I'm gonna be right about some things. If it's a decision in a boardroom, there are reasons not to invest in a company, there are reasons to invest in a company. The question just in the end is do the reasons to do something outweigh the reasons not to. And that's the way I always look at things as a speaker because that makes it just much easier to say, "I don't need to win every single argument. I can concede ground. I can agree with my opponent or the person I'm talking to and yet I can still in the end try and convince you that on the margin, my idea is correct." And that's what I'm looking for as a speaker, and as a judge I'm looking for the team which is best able to do that.

As a coach, it's always a little bit different. And for me, most of the coaching I've done, or at least the extensive coaching I've done has been of high school students. And one of the things which I found very interesting is when you do a lot of anything, lots of the questions and lots of the processes become intuitive, but what does that actually mean? And to me, that means that there's subconscious pattern recognition, that I can see a debate, I can hear arguments, and I know how to respond, how to structure a response, or whether I might just need to concede an argument or agree with an argument. But when you're coaching, you're almost stepping back and going, "What's going on in my brain," to try and construct the best possible case for my side. And then you're breaking it down a lot more.

And as a coach, you're then breaking down into what do you do stylistically. What kind of rhetoric are you going to use? When are you going to vary your tone? That's one part of it. When it comes to your actual arguments, when is it a good idea to respond directly to the argument of another team, and in other cases, when do you just want to say that maybe that is true, but it is unimportant for these reasons? And then when you're making an argument, how much factual information do you need? How much logic do you need? And how much rhetoric do you need? And all of that, I think, almost becomes compartmentalized when you're coaching because they're all slightly separate elements, but they all speak towards the same overarching goal of persuading the audience that on balance, your side is correct.

Andy Luttrell:
So, as I understand it, you have to be ready to argue either side, right? Like you're prepared, and wherever the cards fall is where you have to argue. And so, there's a version of that where you go, "Well, one side just has better arguments than the other, and so whoever gets the lucky side of the coin is gonna win," right? But of course, I imagine that's not your perspective, and so the question is what can you do to sort of enhance your advantage? Or not advantage, but enhance those arguments as a way to ultimately win over the audience?

Harish Natarajan:
So, I think there are two things which are worth noting. Can you persuade an audience against something they currently very strongly believe? And I suspect the answer for many people, though not all people, is no, and assuming you'll struggle to do so in a short period of time. I think it's just worth mentioning that in that I do not think that even the most coherent and well-made argument in the space of 10 minutes would convince someone who supports Donald Trump that he should have voted for Joe Biden. I think that's just worth saying because there is clearly a limit here to how much we can persuade individuals. However, I actually think the majority of views people have and would say they have haven't actually been views they've thought carefully about, which is to say that I have opinions on many things, but if you actually really push me and really give me lots of arguments for one side or another, or strong arguments for one side or another, I would be open to reconsidering my opinion.

To give you one example of that, and perhaps a useful one in this context, relates to the debate which I did in San Francisco against Project Debater, which was this house would subsidize preschool education. Now, being from Europe, when I heard that motion, I'm speaking in opposition, I was mortified. I had no idea why this was gonna be controversial and why this was

plausibly a controversial topic. But one thing which struck me, though, I don't imagine 90% of the audience or more had ever really thought about the arguments for subsidizing preschool education or not. It just seems, sounds like a good idea. You intuitively think it's a good idea. And sure, if you're pushed, you would come up with some arguments for it, but you haven't carefully thought about it.

And that's actually the space where I think debating works very well. People do have opinions, but they're not necessarily very carefully thought out. You can partially justify it, but that's when someone can say, "Sure. What you're saying might be reasonable, but here are the other things which you can think about." And that's where I find it to be very powerful, so that midground area where you have an opinion, but it isn't necessarily a very well thought out one, and not an opinion so core to your belief that you are unwilling to shift it. And trivially then, if someone doesn't have an opinion on something at all, again, debating can be useful. But I really find that middle ground of having a belief but not having thought through it very carefully is actually where debating has its greatest advantage.

What that means for me, though, just to go back to how I think you then make yourself more persuasive, you can be on the wrong side but that isn't necessarily a disadvantage. But in those cases, I actually find it to be beneficial to be on the side I don't believe in or find to be counterintuitive. And the reason I think that is if I believe something, I almost feel I don't need to explain it as carefully. If I walk into a debate arguing something which I don't believe, nothing is obvious and nothing is intuitive. Everything needs to be done step by step by step. And while I'm less persuasive to myself, and maybe an audience will find it less likely to be correct than the intuitive side, it's almost certainly going to be much more logically robust, and in some ways this is what debating has taught me, which is step back and really think about the logic of what you are saying, going step by step, because the real world's complicated enough. Having very strong opinions about many things is unjustified because we haven't really thought about it. We haven't really carefully considered the arguments and the facts behind it. But that's something which can change as a result of thinking through things with a debating mindset.

The caveat, of course, to all of this is when you could be on either side of the debate, and particularly when you don't have much time to prepare, one of the negatives of debating is that it will not be empirically robust. But that's almost… That's a feature of it. It's also a bug of it in that we would love to have lots of evidence but often I do think there's almost a tradeoff. Can you make very logical arguments? Maybe you won't then have lots of evidence, but often if you present the evidence, you won't construct the logic as carefully as you need to.

I think in an optimal world, they'll both be synergistic, but I don't feel we have many spaces where we can do that and indeed where we can keep people's attention to do all of that.

Andy Luttrell:
It's interesting. A lot of what you're saying sort of is consistent with the psychology literature, so the work that I do is on attitude strength mostly, and we find these things, where when people are confident, they have moral convictions, this issue is very important to them, they become less likely, much less likely to budge even in the face of what others would call strong arguments. And there's also just as a curiosity, there's this concept that we call the illusion of explanatory depth. I

don't know if you've heard of that before, but it reminds me of kind of what you're saying, which is that when I already have my beliefs and opinions, it feels like I know a lot more than I actually do, and so I take for granted the arguments on my side. Whereas if I'm coming in fresh, I have to start that reasoning process from scratch, which is an interesting take, I think, that you have on that. That that's an advantage, right?

And I was gonna ask, have you ever won a debate that at the end of it you still privately on your own said, "No, I actually personally believe that the other side is the right way to look at this issue?"

Harish Natarajan:
Oh, all the time. So, the IBM one is actually another good illustration of that, which is for all the arguments I made, I would struggle to believe anything. I wouldn't struggle to believe anything I said. I would struggle to believe that a reasonable person with all the evidence presented to them would fall on the side opposed to subsidies for preschool education. And part of this issue is gonna be that's not an indictment of an audience in a debate at all, because they are looking at the arguments made by both sides and what side they find to be stronger, but of course the way I look at it is if I'm in the other side, what would I say in response to what I'm saying? Or how would I construct the other side? And the second you think for that way, it's pretty easy for you to say, "I won this debate for whatever reason," I might be more experienced than the person I'm against. I may have known more about this topic than the person I'm against. But I know more about this topic irrespective of what side of this debate I'm on and I fall on the opposite side from what I am arguing.

Andy Luttrell:
Would you say that persuasion is a fundamentally human activity? Or whether we don't need to think of it that way?

Harish Natarajan:
There are multiple different elements of persuasion, some of which currently artificial intelligence or machines will seem to struggle at. Whether that is inherent to a machine, instead because of the way humans respond to a machine, is something I'm agnostic about or definitely want to learn more about and think more about. But I don't actually think that persuasion is something which a machine can't do very well. There may be aspects of it where it will lag behind human beings for the foreseeable future, but persuasion is so multidimensional. If you are able to have the best arguments, have the best responses, make it very clear and easy for someone to follow, that is gonna be really very persuasive at least in some context to at least some people, and potentially more persuasive than a human being.

If you see persuasion about evoking emotion and people believing you have that emotion, and that's part of it, if it's about some of the softer skills, if it's gonna be about are you carefully using your language to agree, maybe that's something which machines will struggle at for a little while longer. But there's nothing inherent about persuasion, which I do think is multifaceted, which means that a machine can't do it.

Andy Luttrell:

Yeah. In some ways, we've had debate since ancient Greece, and we've had a long time to develop it. Project Debater has had, what, six years or whatever?

Harish Natarajan:
Two. Yeah.

Andy Luttrell:
Two years? And it's already this. So, yeah, maybe lags behind humans, but humans have had a pretty hefty head start.

Harish Natarajan:
And I guess it's always just worth saying. It lags behind humans, but it sometimes should also depend what the context is. Project Debater is indeed in some ways very persuasive and very good at making arguments. It may not be able currently to win top level debating tournaments, but that really isn't the aim here. I imagine it's not really the aim here. That probably isn't the major purpose of artificial intelligence or IBM. It's instead can it do something which is really valuable, and probably the valuable thing is can it make humans make better decisions? Can it facilitate us making better decisions? And that is similarly something I find to be very plausible and part of that is because it can present persuasive material and at least excel in some of the elements that we find to be constitutive of what it means to be persuasive.

Dan Zafrir:
My name is Dan Zafrir. I'm originally from Israel. Studied international relations and diplomacy. I then worked in the Israeli Ministry of Foreign Affairs for four and a half years working in our mission to the U.N. and the embassy in London and did my Master's in International Peace and Security with a focus on strategic communications, which is the field I work in now conducting communications interventions across the globe for an international development company.

So, growing up, I didn't get to do debate in high school. We didn't have a debating team or anything like that. And it's something that I really grew into. I was a rather shy and quiet kid, surprisingly, because I'm very loud now, so I don't know how that came about. And I got into it when I started university, studying for my BA in IDC Herzliya, and I was studying in the International School. It has a debate society and a [unintelligible] just as a way to kind of improve my own public speaking skills and be able to construct an argument, and make speeches, and it ended up being an incredible experience. Met amazing people and I really fell in love with debate and ended up becoming the president of the debate society, which I did for two years, and I competed in several international competitions, did training to the different junior members of the society, managed our budget, et cetera. And that's actually how I got involved with Project Debater, as well.

Andy Luttrell:
So, the debate society, this was a university debate society? Or this was extra? That was university. So, it was straight of university that you got roped into the IBM thing.

Dan Zafrir:

It was in university when I got involved in it. I was a student. I think it was my third year and that's how it started really through my debate coach.

Basically, that's what you do in debate, only in debate it's not really a question of audiences. It's because you know who your audience is, it's always going to be the judges who are going to be judging you based on specific things and you just want to score well and you want to get enough points, and it's really more about which arguments are the most persuasive here, which argument do I use here or there. What piece of evidence do I have to support this or that? Is this more of a moral case or is it more of a logical case? So, that's really how you approach it when you get the motion.

Usually in debate, I don't know if you really know how debate works, or if Noa spoke about it really, or Harish.

Andy Luttrell:
Yeah, so my background a bit, so I did some speech and debate in college, and coached as a grad student, so I never did debate, but I was around it, so I did a bunch of like public address type things. But I've judged debate rounds and seen the practice, so I have at least some sense of the mechanics of it.

Dan Zafrir:
Right. Okay. Yeah, yeah. You know, you get a motion, you go for seven minutes, for 15 minutes, and you really talk about the motion, break it down. What does this mean? Who are the actors? What can I say about this? And then you kind of build your speech around it, you use the time that everybody else is speaking to build your speech more because you probably don't have that much written down, and yeah, and then you go up there and you pray for God that you have something that's good enough.

Andy Luttrell:
Yeah. You know, when I started this, I think I sort of naively assumed that persuasion… Well, that the kind of persuasion that comes from debate is the kind of persuasion I'm usually talking about, which is trying to change an audience's mind, but more and more I kind of get the feeling that debate is really more of a game or a sport where no one's really changing their mind, but we're evaluating how strong your case was. But we all go shake hands, we agree, this was a game, we were competing with each other. So, do you find debate to actually be in the interest of persuasion as the outcome? Or is it a game of deploying different skills that aren't really about persuasion at the end of the day?

Dan Zafrir:
Well, I think debate is a game insofar as everybody you've spoken to as debaters do it as a game. I mean, it's a competition. It's a sport. And you know the rules and you play to win. But I can say as a debater, debating has made me change my mind on a lot of topics and listening to debates has made me form an opinion about topics that I had never really considered. And in that respect, definitely debate can persuade you. I think it's more persuasive when you have to be the one to actually make those arguments, because then you're really forced to consider both sides of the coin.

When you're a passive listener to a speech, you come with your biases, you don't really have to challenge them, and you're sort of daring the person in front of you to change my mind. You know that famous meme?

Andy Luttrell:
Yeah.

Dan Zafrir:
This is my opinion. Change my mind. And when you're a debater, you don't have that luxury. You have to consider the other side and you always come into it with the knowledge that both sides are equally valid, because in debate you don't use emotional provocative arguments that are not founded in fact and reason. It's always gonna be a rational thing that the people actually believe or that actually works, that sells. I won't go up there and lie and I won't go up there and manipulate the information in a way that's unfair, because that's not gonna win me the debate eventually.

So, yeah, I think debate is very persuasive. I think it's even more persuasive when you have to do it.

Andy Luttrell:
Yeah. In persuasion, we often talk about the old model of persuasion from like the '50s was just give the arguments, people are gonna learn them, and then they'll change their mind because they've learned the information. But then into the '60s and '70s, researchers were like, "No, it's persuasion is really an active process. The audience is involved in it. Me, the recipient, I bring a bunch of thoughts to the table and persuasion happens in my head, right? Your arguments come to me, but I'm the one chewing on them and engaging with them," which seems like that. And it's kind of based on the premise that self-persuasion is really the only way persuasion works, right? If I can't convince myself that you're right, you'll never persuade me. I don't just sort of let your arguments wash over me and magically I change my mind.

Dan Zafrir:
Yeah. I think there is no such thing really as a passive listener. If you're listening, then you're not passive, because you're listening to what I have to say, and you're taking it in, and you're forming an opinion about it, and that's exactly how I experienced debating, and watching all the debates that I've watched in my life. I mean, and the speeches, and the countless of public speaking roles that I've had, and speech-making classes, and presidential addresses, and all these things that you're watching, and eventually you realize that if people come with their own opinions and thoughts, it's so, so much harder to get through sometimes.

And the stronger they've made their opinion, then the harder it's going to be to persuade them because they're actively resisting having their mind changed. I think we see it nowadays and everybody's talking about social media and what it's doing to public discourse and why it is the way that it is, and it's because people are not challenged on social media to listen to a diversity of views. They're given the views that they want to hear because that's what's going to keep them longer on the platform, and see more ads, et cetera, et cetera. And I think that's where debate really

is so amazing, because you're forced to listen to both sides of the argument all the time, either if you're debating it or if you're listening in the audience.

Andy Luttrell:
And each side gets equal time, right? It's not like, "Oh, and by the way, some people think this."

Dan Zafrir:
Each side gets equal time, and each side has people who you respect because you know that they know what they're talking about, they've spent time thinking about it, and a lot of times the person that you really like as a debater and you really respect is going to be on the side of the argument that you thought you don't actually support. And that actually makes you listen even more and you're like, "Hm. Wow. I never thought of it that way."

Noa Ovadia:
My name is Noa Ovadia, and I am currently a high school civics teacher, but for a few years I was a university debater at Ben-Gurion University in Beersheba in Israel. I debated in high school, as well. I grew up in the United States, so I went to high school in the States, and I was on debate team there, and then I moved to Israel after high school. I went to the army. Did some unrelated things for about three years and then I went to go do my undergrad at Ben-Gurion University, and one of my first intro classes, my first week of college, some students from the debate team came to introduce themselves and invite people to join the debate club, and I remembered having done it in high school, and then I got hooked. I went to their very first meeting and did it throughout all my years of undergrad. Stayed involved. I still coach debate sometimes.

Andy Luttrell:
So, what was it about it that works for you?

Noa Ovadia:
Well, okay. So, something unrelated to the sport itself, which I also really love, but first of all the people who are part of the Israeli Debating League and part of specifically the Ben-Gurion Debating Society are fantastic. I think just very interesting people are drawn to debating. There's not necessarily a typecast or anything, just people who are either looking to improve their public speaking skills, or people who just love arguing, or people who love public speaking already and love talking about interesting topics, so I had a really great time. A lot of my closest friends still from college are from there.

But what I love about debating itself is the intellectual challenge. I love it. I love approaching new topics and thinking just really… You have to really analyze a topic from a lot of different perspectives, put yourself into the shoes of a topic, or a side, or an individual you might not necessarily agree with, and it's all fueled by kind of a competitive nature that I also have, so you've got this through this motivation to win, and do well, and succeed in debating, you have to really develop skills that I think are really important, like critical thinking skills, and public speaking skills, and all of it. I love all of it.

Andy Luttrell:

Debate is not necessarily about persuasion. It just feels like a real game, right? You referred to it as a sport, right? And so, how much do you think debate is really just an exercise, like an intellectual exercise, versus the goal is to truly persuade?

Noa Ovadia:
I think it's some of both, for sure. I think what draws me to it more and what kept me there was more the intellectual exercise, for sure, was just learning new topics. Analyzing them critically. You know, creativity too is a part of it, right? The way the game is formed you constantly have to think of new arguments and new angles, so it's definitely that, and when you look at persuasion, it's at the end of the day you have to persuade the judge in a classic debating format, but with all the other people that are involved, you're really… It is more of the intellectual exercise, right? It is really just learning from each other and bouncing arguments off of each other and developing that aspect, as well.

I think what a lot of debaters get out of it is they become more persuasive then in their personal lives, right? So, we take the things that we learn from the game, the sport as it were, and then take it to whether it's academics, whether it's friends and family, you become a little bit of a sharper thinker and hopefully more persuasive, as well.

Andy Luttrell:
So, to be explicit about it, what are the things, the skills from debate that you can take into your life to be more persuasive?

Noa Ovadia:
So, I think the number one thing is analyzing a conflict or a disagreement, right? Analyzing where exactly the disagreement between two people may lie. So, a lot of times you can hear kind of a conversation going and you realize that the two people are simply not arguing on the same point at all. One's trying to convince them that something is immoral and the other one is trying to tell them it's not gonna be a practical solution to the issue and those two arguments are never gonna really engage with each other. And to be able to come in from the outside and identify that or to be able to be in a discussion with someone that you may disagree with, or are in a conflict with, or simply trying to solve a problem together with, and to more quickly identify where the heart of the disagreement really is, is one of the strongest skills I think that debating has given me.

Andy Luttrell:
That'll do it for another episode of Opinion Science. Thanks to Harish, Dan, and Noa again for talking with me about debate and sharing their insights. For more on them and the episode about IBM's Project Debater, check out the show notes for info and links.

Subscribe to Opinion Science on all the major podcast places. And hey this is exciting, head on over to OpinionSciencePodcast.com for a fresh, slick website. Last month I ran into a gnarly issue with the website, and I decided to cut losses and rebuild the thing from the ground up. Fingers crossed I won't have to do that again. But it looks very nice, I think! OpinionSciencePodcast.com. Take a photo of the site to show your grandma. Okay, that's it from me. Thanks for being here. And I'll see you in a couple weeks for more Opinion Science. Buh-bye…