A CADRE Webinar
The Mediator's Mind: Insights from Psychology and Neuroscience
Richard Birke
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Transcript

MARSHALL PETER: Hi, I am Marshall Peter, the director of the Center on Appropriate Dispute Resolution in Special Education, more commonly know as CADRE. I want to thank you for joining CADRE's webinar on The Mediator's Mind: Insights from Psychology and Neuroscience. Today's Webinar is one in a continuing series of CADRE Webinars. You'll notice on your screen we posted a couple of poll questions we'd like for you to answer as we're getting started here. There will also be a few questions at the end of the webinar. We'd appreciate you taking the time to answer those as well.

So our presenter today is Professor Rich Birke. Professor Birke has taught dispute resolution for more than 15 years, starting his career at Stanford University, and coming to Willamette University College of Law in 1993 to teach and direct the Center for Dispute Resolution, CDR. Under his leadership, the CDR has enjoyed high national ranking among academic dispute resolution centers in the United Sates. He is an award-winning author in the field of dispute resolution and has been deeply involved in the practice of ADR. Professor Birke was a member of the quality assurance team for the largest civil rights settlement in United States history, Glickman versus Pigman and has mediated many multi-party complex cases. Professor Birke has trained hundreds of professionals from the fields of business, law, medicine and other disciplines in negotiation, mediation, dispute resolution, trial practice, risk analysis, and related fields. He has lectured and taught in family law, criminal law, environmental law, commercial law, and banking law. He's trained individuals from a prestigious list of firms and organizations including the 9th Circuit Court of Appeals, Nike, Mentor Graphics, Hewlett-Packard, Texaco, Intel, the Oregon Department of Justice, and the Attorneys General's offices of Washington and Texas. In short, Rich has been a very busy man and we're really delighted that he's joining us today to share his wisdom and insight. So with that, I'm going to turn it over to you, Rich.

RICHARD BIRKE: Thank you very much, Marshall. And I wanted to thank Noella, Phil Moses and everybody at CADRE for thinking of me, inviting me. I also want to thank my associate director here at the Center for Dispute Resolution, Sukhsimranjit Singh. I understand he did a wonderfully well-received webinar before and he also brought us together. The, the introduction would have been one that my mother would have been very proud to hear and one that makes me realize I'm getting old because now, instead of more than 15 years, I can say more than 20. So I'll have to -- I'll have to update that. I'd also like to thank Willamette University College of Law and the Center for Dispute Resolution. We are a wonderful organization. I really appreciate all the support that I get here.

And with that, let's start the webinar. All right, now, unfortunately, I'm not I'm not -- oh, there. I see how to advance the slide. Okay. The Mediator's Mind: Insights from Psychology and Neuroscience, there we go. Okay. So first, the very first thing I wanted to do is offer a disclaimer to everybody. I am not a neuroscientist. I am not formally trained in the sciences. However, I, as an academic, have the luxury of being able to get involved with almost whatever I want to get involved with. And for more than a decade, I've been involved in studying neuroscience and for more than two, I've been involved in studying psychology. But I come to this really as a mediator. I come to this as a lawyer, but I realize that my interest in dispute resolution and in the human aspects of it, the psychology and the neurosciences, started much earlier.

And so I'm going to -- I'm going to start by talking a little about what it meant for me to be a student of the mind before it manifested in mediation. So looking back, I mean, one of the most formative experiences in my life was my tennis game. And playing tennis as kid meant that some days things went smoothly and some days things went badly and some days, you know, the self-talk about just, you know, "Hit the ball over there," or "Oh, this is an important point," some days it seemed to be helpful and some days it didn't seem to be helpful. I was privileged to work with the -- one of the assistants of a man named Tim Gallwey and he wrote this book called The Inner Game of Tennis. He's written several other books, The Inner Game of Golf, The Inner Game of Business. But, you know, The Inner Game of Tennis was the big thing. And in the '70s the idea behind The Inner Game of Tennis was he talked about these two selves,

self one and self two. And self one was the talking self and self was two was the body self. And the thesis, according to Gallwey, is if you ever stood at the service line and you hit a great serve, if you ever did it once, your body already knows how to do it. So it's not a question of teaching it; it's a question of getting it to be able to do it consistently. And Gallwey said self one, the talking self, often gets in the way of self two. And so there's this clear disconnection for what I thought, at the time, was the mind and the body. And you kind of had to let the body do its own thing and the mind had to get out of the way.

Now, the aspiration we were told and none of us, you know, young newbies on the tennis court, reached this; the aspiration was to get where the pros got, where we were told that self one actually enhanced self two, where the inner coaching about what to do did not become a distraction. We were told, in fact, that the distinction between the body and the mind -- I will later call them something else -- but between self one and self two, was so distinct that if somebody was playing well, in other words, we used to call playing out of their head, one of the ways to get them to screw up was to compliment them on something they were doing particularly well and ask them how they were doing it. And this would basically ruin their flow. You know, you say, "Oh, you're serving so well today. What's going on?" And now, all of a sudden, the movements that were automatic and simple became difficult and labored. Okay.

Well, so now we switch to the next slide. This is, in some ways, a fortunate and unfortunate slide. It's Michael Jordan playing basketball. I'm a Bostonian. I mean, it should be a picture of the Larry Bird Celtics years, but -- and more than that, it should be somebody taking a free throw. Why? Well, because one of the other early influences in my life was this idea of visualization, that people would say you want to be able to picture hitting the free throw and so just lay with your eyes closed and imagine hitting the free throw. And what they would say, these coaches, was that your mind doesn't know the difference between the real free throw and the imagined free throw, and so the imagined free throw is practice. And so I thought once again there seems to be this disconnect where, you know, one part of the mind is sort of fooling some other part of the mind, and there's, you know, something going on here. But again, I was a teenager; I was more interested in the parties that came after the basketball games than in neuroscience, at this point.

Now, of course, like all children, I was fascinated with my dreams and I had no idea what they meant and, you know, the Freudian theories about dream interpretations seems to me to be, you know, fantastical. But I knew I had a very rich inner life in my dreams. And in part, it was based on things that I had seen and experienced and in part, I didn't know where it came from, and I certainly knew that I wasn't in the driver's seat. And so it felt like while I was asleep, some essential part of me gave the reins to the ship over to some other part of me that I didn't have control over quite so much. All right. Meditation. I didn't get into mediation until much later in my life, you know, until I was in college. But what I had heard that fascinated me as kid was the idea that there were Yogis who were so practiced in the art of meditation that they could slow their heart rate and their respiration down and be essentially buried alive for periods of time that would kill a normal person. And then they could be unearthed and they were fine. Now, I don't know whether these were fantastic tales or not, but as a kid, the idea fascinated me that somehow you could talk to your body. And, once again, I always thought about it as the body. You know, you could talk to your body and you could actively take control of things that usually were automatic.

One of the things that was, you know, sort of got me put into the permanent nerd class in my grade school was one day when I was sitting in class and I would focus -- and you can try this at home -- focus on your finger in front of your face. Just hold your finger up about a foot in front of your face and focus on it until it comes into focus, and then remove the finger and try to retain the focus on the spot in midair so that when you put your finger back, you don't feel an adjustment. It's, in my experience, impossible to do. You know, I can't control my eyes. I can make them focus on the thing I want them to focus on, but when I remove the thing, I can't retain that focus on nothing. When I put my finger back, I realized it was an illusion and an adjustment. So, there's parts of my body I'm clearly not in control of in the way that the Yogis seemed to be in more control of.

Now, my parents were immigrants and they, like classic immigrants, had a store and they were very busy which meant that we were latchkey kids. And so one day, a formative experience in my life was to have burnt my hand on the stove and to call my mother, and have my mother be too busy to really stop what she was doing. But she had to asses over the phone

whether she needed to, you know, get me to the hospital or send, you know, send somebody for me. And so she was asking questions and I was, you know, walking through holding ice in my hand and putting my hand under the faucet, and I realized that the way she talked to me controlled how much pain I had. And then I had some -- I did have some ability to think through the pain and make it less by thinking about it.

I also heard, when I was studying martial arts, about this legendary guy at our school who had came to visit. And, you know, when he was bowing in, a student that he was going to spar with kicked him right in a place where no man wants to be kicked. And apparently, you know, the story goes that this guy, you know, continued on with an hour and a half lesson, and then at the end, went into the back and collapsed in the locker room, but basically held onto his pain for an hour and a half and then let it out. And so I thought that was pretty amazing. So, later, you know, I started finding that Novocaine didn't work for me in the dentist's office. When I was having dental work, I would get a terrible needle and I would still feel the drill. And so, I really disliked the feeling of being done with my dental appointment and having the Novocaine and, you know, that feeling for three or four hours later. And so one day I asked if I could do the dentistry without the Novocaine and the dentist said, "The only woman who has ever been able to do this was a woman who had given birth." So, if you twitch once, you're getting Novocaine. And when I found I could sit in the dentist's chair and unpack the pain at the various sensations. And so I could actually talk to my, you know, I could kind of -- not quite at the level of the Yogis, but I could talk to my body and say, "Oh, that's a buzzing. Oh, I feel some heat. I feel something." And I deconstructed it and found that if I deconstructed the sensations, none of them amounted to pain. And I later found out that that actually is what is recommended, in some respects, for people who have chronic pain is to, you know, figure out how to tackle it in the mind.

Okay. Getting close. This is the Ninkasi Brewing Company symbol. This is a great brewery in Eugene, Oregon where CADRE is located. It's on here in part because one of -- one of the things that I noticed when I was in college in New Orleans and a lot of people around me were drinking quite a bit and me a little bit but not so much. One of the things that I noticed was that people would engage in behavior that they wouldn't engage in when they were sober.

And some of this behavior was fighting. And I realized, you know, the people that I hung out with would drink and they never had the impulse to fight and so I didn't think that drinking made you fight. And later it was told to me that drinking dis-inhibits the impulse to fight. And I thought, okay, so basically they all, you know, so these people who are fighting already had the impulse. I didn't have that impulse but there was a part of their mind that was actively holding that impulse back, and they could drug that part of the mind. I later learned that was the ventral tegmental area. We'll come to that a little later in the -- in the talk. But, you know, intoxication both internally and observed intoxication was clearly a sign to me that there was a conflict between parts of the mind because when one got taken out, another took over.

Okay. So, our last sort of precursory thing or actually close to the last. I did a bunch of theater when I was in college, and one of the theater exercises they would tell you is, you know, that, jeez, maybe, you know, this character, the thing that's making them angry wouldn't make you angry. But you need to be angry onstage and so think about something that makes you angry and, in fact, just start yelling. And so we would do these theater exercises where we would just start yelling and then we'd realize, it's like, "Boy, you know, if I may -- if I just pretend to be angry, I become angry." And the same as true now we see with laughing yoga, that if you fake laugh for long enough, it has this effect on your happiness. All right. So, you know, generally speaking, I thought like, you know, I also have a very busy mind. I was like most people growing up where I was making decisions. I had all kinds of conflicts. I was trying to sort out the world. And so it was clear to me that sometimes the most important mediations I was ever going to do were between different parts of my personality. And, you know, while I didn't want to classify myself as being Sybil-like, like 16 different people or 14 living in one body, I realized that different impulses in my mind pulled me in very different directions and it almost felt, at times, like I was more than one person.

This next slide, I can't stop bad thoughts. You know, one of my -- one of my great heroes is Jimmy Carter and, you know, he's a phenomenal mediator. He's an incredible peacemaker. He was a terrific president and I think he's one of the best ex-presidents that we've ever had. And when he was president, he did an interview. It was kind of surprising given how, you know, devout he is. He did an interview with Playboy magazine. And in that

interview, he said something like I've committed adultery in my heart, you know, and, you know, I know the Lord will forgive me. And as a kid, I thought to myself, "Am I not supposed to think bad thoughts?" Because like most kids, I mean, I had some bad thoughts. You know, I had, you know, everything from, you know, I'm not going to finish my peas to, you know, I'm going to run away from home. I mean, I certainly had my share of bad thoughts and I thought I'm not really sure if I will ever get to the place where I don't have bad thoughts. And so, I was very worried about that and I realized there was this -- there was this place where bad thoughts seemed to come from my head and there was this other part of me that didn't want to associate with it, you know. In some -- in some manifestation, it was like the little devil and the angel on your shoulder, and I wondered whether the devil would ever disappear. And I thought when Jimmy Carter says,, you know, jeez, that's the goal, I wondered if I was ever going to be worthy, whether I could ever reach that goal.

Okay. Well, you know, all this -- all this time spent playing tennis and watching basketball and philosophizing and doing theater, eventually, I had to make a living. And so I went to law school and so that was that. There wasn't a whole lot of room for philosophy there. I then became a district attorney in the Middlesex Country District Attorney's Office in Massachusetts. And for those of you who may be old enough to remember the Michael Dukakis presidential campaign, he started his campaign based on the idea that Massachusetts had the best economy in the country. At the time, it did. And my office had about 300 lawyers in it and we were very busy. And then the -- like many bubbles, Massachusetts fell apart while Dukakis was on the campaign trail and crime went way up, and we ended up with close to 200 lawyers. So that's a huge reduction in staff when case loads are flying up. And so we ended up with, you know, newbies in the office having, like, literally three or four hundred cases. You know, simple drunk driving and small assaults, you know, little drug stuff, tons and tons and tons of it. I mean, 400 active cases and so you learn to negotiate quite a bit in that office and you didn't really, you know, you had to learn by experience. You didn't have time to stop and think. Well, my inclination was to want to stop and think, and so I decided, you know, my career was going to move me in a different direction and I decided I would try to become a professor.

And so I went back to law school to get an LLM and work with Roger Fisher. In fact, my first mediation ever, Roger Fisher was a party. That's a whole other story. But I met Bob Manoukian and Bruce Patton and a bunch of folks, and I ended up getting a job at Stanford University thinking I was on the road to being a professor. And what I started as basically a very glorified errand boy for an all-star cast of professors. Now, these professors were -- a few of them from the law school, Bob Manoukian, Ian Ayres, Janet Alexander, some really good folks. There was a game theorist, a guy named Bob Wilson from the business school; a Nobel Prize-winning economist, Ken Arrow. But importantly, there were two psychologists in the group and these were the people who, unbeknownst to me at the time, would end up changing my life and my career and being the source of much of what we're going to talk about today. The first of those is this fuzzy picture, unfortunately fuzzy and pixilated, is Amos Tversky. And Amos was one of the most brilliant psychologists who has ever lived. In fact, when he died of cancer prior to reaching age of 60, he was the most cited living social psychologist. He and his research partner, Danny Kahneman, did enormously important work. Danny is still alive and went on to win the Nobel Prize in Economics for work that he states in his most recent book was clearly a collaboration between Amos and him. And so, you know, Amos was on of the folks who was, you know, sending me on errands. And basically, my errands were to prevent stupid questions from graduate students reaching the professors.

And so I had to figure out what a good question from the bad question was and I had to learn an awful lot of psychology in order to be able to do that, but I was taught by peers my own age who were the graduate students, the fifth year PhD students for Amos. The second man in the Stanford Center on Conflict and Negotiation was Lee Ross, another amazing psychologist. Has, you know, had a brilliant career. And the two of them really introduced me to a whole new field and to colleagues around the country and a whole new discipline that, for me, turned out to be far more explanatory of my negotiations in the District Attorney's Office than anything I had read in the legal literature. And so I knew that just by bringing the insights from psychology over to law and mediation, that I was going to be doing important missionary work. Now that field -- and this is a sort of a slightly blurry and distorted vision of a book cover that's probably out of print. But if you can find it and if you don't mind really hard reading, the

field in the book are called Heuristics and Biases. And this is the idea of the psychology of intuitive judgment. And Danny Kahneman, you can see, is third author. But there are very important chapters in there by Amos and Lee Ross. So, what are some of the ideas that were of particular moment to me? Well, let's look at those.

One that Lee Ross is associated with is his idea of reactive devaluation. There are two aspects of reactive devaluation. The first aspect is that we tend -- people tend to devalue offers based on who made the offer and sometimes who made the offer is more important than how good the offer is. So the study that's most poignant in the world of reactive devaluation was one that Lee Ross did when Reagan and Gorbachev were negotiating the START 2 Treaty for nuclear arms reduction. And there was no internet back then and so in order to get reports from what was happening, you had to, you know, either read the newspaper which was, you know, a chore given that Reykjavik, Iceland was many hours time delayed from what was happening in the US. And so, you know, you got your news but a half-day late. Well, and that gave Lee Ross the opportunity to put together studies. And one of the studies that he did was to gather people in the Stanford campus and ask them whether or not the proposals met US security interests. Did people think we should accept or reject them?

Well, on one particular day, a colleague who was forwarding the proposals, calling Lee Ross from Iceland to California, you know, with the ten-hour time difference, would call and say, "Lee, there's an offer on the table today, and here's what it is." You know, "We're going to move some nuclear missiles out of this part of the country and they're going to move some from someplace else," and et cetera, et cetera. Well, Ross asked groups of people on the Stanford Campus whether we should accept or reject this proposal. The difference between the people that he asked is that one group was asked about something called the Reagan Plan; a second group was asked about something called the UN Plan; and the third group was asked about something called the Gorbachev Plan. Now, all three plans were the same plan. It turned out they were, in fact, the Gorbachev Plan. And people were asked, you know, do you like them? What do you think? And here's, here's about what the numbers came out with. You know, 90% of the people said in the Reagan -- you know, looking at this, thinking this orig -- originated with Reagan said take it. Eighty percent of the people with the UN said take it and

more than half of the people who knew it was from Gorbachev said reject it. And so you see, you know, from what would have been an overwhelming super majority of people willing to accept this to a majority rejecting it, the only difference was the source of the offer. And so people thought, well, gosh, if it's Reagan, it must be good for us, bad for them, let's take it. If it's Gorbachev, it must be good for them, bad for us, reject it. And if it's the UN, well, you know, maybe during the Reagan years, you know, we even thought the UN was more like the US than it is. But it still was a lot closer. I heard this study and I thought, well, jeez, this an explanation for why mediators who do caucus mediation have great success because you could take the offers of Gorbachev and you can turn them into a success rate -- an acceptance rate at the UN. If you're clever, you can make Reagan think he thought of it himself.

So this idea, you know, my negotiating opponent is my enemy, it must -- if -- their proposals must be good for them and bad for me and, therefore, if it's good for them and bad for me, I should reject them. Well, that's, you know, a tendency called reactive devaluation part one. Now, part two is this idea that we react badly to the act of offering, you know, that things that -- you know, and this is a face of a person who just got a gift and they're not so sure that they love -- like that gift. And I think the idea is very important that Lee Ross has demonstrated that once you offer something, it's not as desirable as when it's not offered. And so we know from our own experiences that, like, that boy or girl in high school who was unattainable became, you know, a matter of an obsession. Right? What we can't have, we really want. And, you know, what we can have, maybe we take for granted. Well, Lee Ross did some studies where he was giving people options and he would say, you know, here's option one or option two, choose your favorite. And then they would choose an option and whichever one they offered, he would say, "Oh, your adversary has said that they are going to offer you that. Would you like to change your preferences?" And a lot of times people said, "Yes, I would like to change my preferences because if my adversary is offering it, there must be something about it that's bad."

I experienced this with my son when he was just two years old. And one time, in order to buy a little time when I was making dinner, I offered him a popsicle before dinner. And rather than have him be just purely, you know, grateful, he looked at me suspiciously, like,

wondering, did you drop this popsicle on the floor? Is there a [inaudible] that you're hiding? You never give me the good thing first. And so why would you give me the good thing right away right now? So it was kind of an interesting moment. And I learned from the work of Lee Ross that what you really want to do is give people choices. They don't like you to order their lunch for them.

He did some studies where students were asked whether they thought the university should divest from doing business in South Africa all at once or over a period of time -- and this is back in the Apartheid days -- or whether they should send letters to companies doing business in South Africa and tell them we're not going to buy your stock until you cease and desist. Well, that third idea was crazy, and Lee Ross made that up, but the other two ideas were quite serious and the trustees were talking about these. And so Lee Ross did a survey asking students, what do you think we ought to do? Should we sell all at once then we have no political sort of leverage? Should we sell a little at a time in a consortium? And, you know, that keeps us having leverage but we still own stock, doing -- with companies doing business in South Africa during Apartheid. Or should we do this third thing? And the students, pretty much to a person, choose the two sane options as the top two, and some preferred option one, and some preferred option two. And the third option everybody recognized was crazy. Now on the day that the trustees were going to announce that they had a policy, Lee Ross contacted the students who had filled out the surveys and said the trustees have said that they're going to announce the policy today at noon, but they're looking for some last minute input. And for every student, you know--if you were the student and you preferred option one over option two and you found option three to be crazy, you were told, "The trustees are going with this option one. Do you have any last minute input?" and again, almost to a person, when the students found out that the trustees of the university were going to do the thing that they originally thought was the right thing to do, the students reversed their preferences. If they liked option one, they thought option two was better. You know, instead of selling out all at once, I now see the wisdom in selling out over time and, in fact, I think that the selling out all at once is a terrible idea, move it down below the third crazy option. And so, once people found

out that the thing that they wanted was readily and easily available from their adversary, they didn't want it so much.

Lawyers have seen this, mediators have seen this. In one room, they say, you know, "I'll settle this case. If I can get $20,000, I'll be, you know, just overjoyed." And the other side, you know, says, oh, you know, without even hearing their offer, "I'll give you $20,000." And you bring back that offer back into the other room, ultimately, what we find is that people are not so overjoyed. They say, "Huh, they offered me the 20? Ask for 30." The very fact that they offered it makes it less valuable. So reactive devaluation part two summed up, things offered are less valuable than things not offered. Well, what are some cures for these, you know, horrific effects that we see in, you know, in our lives? Well, one might be that we mediate. Because as we saw in the Reagan Gorbachev example, you may not be -- you may not be able to have the person think of the idea themselves but at least you can introduce a neutral.

The second picture with, you know, sort of crazy-looking Charlie Sheen and much more sedate-looking Ashton Kutcher, you know, on the sitcom, I guess, Two and a Half Man, I guess when Charlie Sheen was acting up, he was the highest paid actor on television and the show was doing very well, but they couldn't live with Charlie Sheen so they had to replace him. And they just replaced him with a nicer character and I guess I don't know how the show is doing now, but the idea here is that if you have a bad relationship with somebody, if you are the Gorbachev, then maybe what you want to do is just send somebody else from your team. I've been thinking about this phrase, good cop/bad cop and I realize, no, the phrase should be neutral cop who becomes bad cop and then switch to good cop, right? So it's not good cop/bad cop, bad cop/good cop. The third piece is educate yourself, right? And so, now, let's switch. All right. The ideas here are that you want to make them think that they came up with the idea themselves if you can. And the other cure here is to offer menus, right? So if somebody's going to reject your idea then, you know, as soon as you offer it, then what you probably ought to do is instead of -- as I said earlier, ordering their lunch for them, you probably ought to let them order themselves.

So now, for example, with the great popsicle, if I'm going to try to, you know, win my children's affection by offering them something, I make it part of the package that they pick. So I say, okay, so this is going to be one those nights where we have dessert first or we have -- it's going to be a while till dinner. And so, you know, your options are to have a saltine cracker, that half an apple you didn't finish at lunch, or dessert first. Which would you like? And, you know, when they get to choose dessert first, they no longer wonder whether it was, you know, I'm holding something good back or whether there's something defective about my offer. Okay. That's reactive devaluation.

We're now going to move on to a second important Lee Ross discovery, something called confirmation bias. This idea of confirmation bias, you know, we started with people who came into a room and said whether they were pro or con with respect to the death penalty. Some people said they were pro death penalty, some people said they were against the death penalty, and everybody was shown two studies. And the two studies had one that was a pro deterrent study and what it said, essentially, was that of 14 states that enacted the death penalty, the murder rate went down in 11 of them. And so people thought, okay, that looks like, you know, the death penalty works. The other study was an anti-deterrent study that said in 28 states, 14 contiguous pairs, one with the death penalty and one without, in 13 of the 14 pairs, the murder rate is lower in the state without the death penalty. And so that made it look the death penalty does nothing to deter murder. Well, people were asked to rate the two studies, and what you found -- what Lee Ross found was that people who were pro death penalty said this death -- this one that says the death penalty is a deterrent, this study, this is a really good study and I really believe it and I think these are great scientists. This other one, not so good. We think these scientists are shabby and this report is poorly written, and I am more convinced than ever now that the death penalty is a good thing. The folks who were against the death penalty had just exactly the opposite reaction where, you know, they thought that the deterrent study was clearly, you know, well-written, well-researched, done by competent people, and the other one was done by people with a paid political agenda. They came out more convinced than ever that the death penalty was a bad thing.

So people exposed to new data, equal proportions of good and bad data, supporting and un-supporting, they over weighted the evidence that supported what they already believed and they under weighted the evidence that dis-confirmed what they believed. It's a very important idea, this idea of confirmation bias. We've seen this with respect to global warming. There was a recent study that was reported in the Oregonian, our, you know, large paper in the biggest city in our state, where people who thought that global warming was caused by human activity or climate change was caused by human activity looked at a study -- at two studies, one that said it was and it was conclusive, and one that said it's not yet conclusive. And they said the one that says it's conclusive is right, this other one is, you know, politically biased. And the folks on the other side of the fence who said it wasn't conclusive yet had just the opposite reaction. So, in other words, they didn't learn anything new, they learned what they already knew.

This isn't Dartmouth and Princeton playing but, you know, somebody pointed that out. But these are, you know -- but during a Dartmouth-Princeton football game, students from each school thought that the refs were biased in favor of the other team because that's the way all sports fans are. They think that the refs want your team to lose and that your team has to over-- you know, overcome superior opposition including the refs playing for the other side. So students, a random selection of students from Dartmouth and Princeton were brought together and watched the game and -- on, you know, a video. And on the video, they counted the number of times, you know, that they said the refs made biased calls. And each team, if you would believe each team, you know, each team, the students thought the refs were biased against them. So the hypothesis, the refs are against us and then you sit down and watch a video, it doesn't matter whether you're side by side watching the same video, each person came out more convinced than ever the refs were against us. Israelis and Palestinians were shown a documentary. They were asked was it biased one way or the other and -- or was it neutral. The Israelis said it was biased toward the Arabs, the Arabs thought it was biased toward the Israelis, and you can see the percentages on the screen of what the Arabs and Israelis each thought was the proportion of pro and anti-Israel content. So watching the same video, their hypothesis was more important than the education that they got.

Exceptionalism is another, you know, we see this in a lot of realms, another manifestation of confirmation bias, the idea, you know, you're not like most mediators, let's just say. And usually, what they mean is that, you know, I don't like your group and I like you, but I don't know what to do about that because I have a theory about your group and you don't fit my theory. So, I can either revisit my theory which is very painful and difficult and I don't want to do that, or instead what I'll do is I can discount you with the data. And so that's what they do, they turn you into an exception and that's the way of holding on to your theory and not learning anything new when you meet somebody who doesn't fit your stereotype. So some important implications for negotiators and mediators are we tend to uncritically accept evidence supporting our own positions. We also tend to discount equally probative evidence that runs counter to our positions. Very important that it's -- we -- and we recognize equally probative evidence. All right.

Now I'm going to -- moving on to something that Amos Tversky taught me and this is the idea of framing. It has very little to do with picture framing but as mediators, you understand the idea of framing. But framing in the context of the Nobel Prize winning work that Amos did is very particular. So let's take a little jump into that. Large groups of doctors were asked to answer in a hypothetical situation where there are 600 people in a village who are infected with a disease, the entire population of the village. You only have time to airlift one out of two vaccines. You have vaccine -- one vaccine, you only have 200 doses and it's a cure-all, everybody who gets it will live and other people will die. And you have this other vaccine where you have enough for everybody but it's only a one-third chance of it working. You can do the math and you can say 200 lives saved for sure versus a one-third chance of saving 600 lives is 200 lives, so you would think doctors might be indifferent as to which vaccine they would send, but they weren't. When it was described as, you know, lives saved, they said, 72% of them, let's send vaccine A. Okay. Well, so maybe doctors know something about, you know, demographics and how to save a village better than I do and they weren't indifferent, so 72%. Well, other doctors were told that they could send this vaccine where there's 200 shots and that means it's going to be 400 deaths for sure or we could send this vaccine with enough for everybody, 600 shots, there's a two-thirds chance of dying after the vaccine and everybody else

with live. And in this situation, the doctor said, well, let's send 600 shots, give everybody a chance, 78% of doctors send vaccine D. Now, what's puzzling though is that vaccine A is the same as C and B is the same as D. So preferring A and D makes no sense. All that's changed in the question is whether you're thinking about lives saved or lives lost, because 200 lives saved and 400 lives lost is the same when you're talking about this population of 600, it's just the framing of the question.

So what Tversky and Kahneman learned was that people tend to be risk averse in the face of gain. When you're up, you don't gamble. Right? So, we know from long history back to the 1700s that ultimately, people who are in Vegas who are winning tend to be more conservative with their bets than people who are losing. Because when you're losing, people tend to be risk-seeking when faced with the prospect of a certain loss. They'll take bad gambles if the alternative is to admit that they lost and, in fact, losses loom much larger than gains feel good. I mean, think about it. You know, which, which -- did it balance out your last raise and your last raise in taxes? You know, if your property taxes go up, you remember it for a long time. If you get a little hike at work, you know, you say, "Oh, that feels good," for about a minute. Importantly, what Kahneman and Tversky said was that whether something is a gain or a loss is often an illusion.

And so you can look at these, you know, this optical illusion and, you know, I -- when I look at this, and I've looked at this, you know, now hundreds of times, the lines look like they skew kind of up and down as they move across the page. But I also know that when I look at the edge of the page, that the blocks are the same height. And, you know, when I look at the edges, I know these lines are straight and yet, I have this incredible optical illusion. Well, the same is true with cognitive illusions. I mean, there are really important cognitive illusions, and whether something is a gain or a loss is an illusion because let's, you know, for example, if you bought your house in 1990 for $100,000, and in 2006 it was worth $200,000, and in 2007, it dropped in value to a hundred-fifty. You paid a hundred and now it's worth one-fifty. Are you up 50 or are you down 50? Most people are going to be much more sensitive to the loss. Even quickly imaginary losses, you buy a stock on Monday for a hundred dollars, you come home on Friday and you find it's gone to $200 and you're feeling really good because you made a

hundred bucks. And someone tells you on Wednesday it was 300 and now you might feel a little bit depressed, because now you can feel more sensitized to the loss of the hundred than the gain of the hundred. So, in my business, we think about this in terms of lawsuits and say, okay, so two years ago somebody, you know, took advantage of you to the tune of a hundred thousand dollars, and now, two years of litigation later, there's a $50,000 offer on the table. If you accept it, is that a gain or a loss? Well, it's certainly easy to imagine it being a gain because you say, look, whatever you have in your bank account, you put that check in, you're going to have $50,000 more and that's sort of the definition of a gain. And you know, phrased another way, you can think in terms of, well, gosh, you know, I had a hundred thousand dollar loss and if I accept 50, it's a loss. But we know is that whether -- if you think of it as a gain, you're not going to want to gamble and go to trial. If you think of it as a loss, you're more likely to want to go to trial. And we know that losses sting worse than gains feel good so it's going to take a lot to overcome loss aversion. It's going to take a lot in the way of trades.

A little bit of advice I like to give is to aggregate losses and segregate gains because losses sting a lot and so if you're going to get 10 bee stings, I think you'd rather have them all at once and not once a day for 10 days. And at the same time, if you're going to have somebody enjoy 10 pieces of chocolate, they'll probably get more pleasure if you give them a piece of chocolate a day than if you give them all ten and they ate them all at once. And so we know that aggregating losses and segregating gains is some really great wisdom for mediators that emerges out of Kahneman and Tversky. So, these are some of the principles that I think are associated, you know, with mediation, some of the psychological principles. We talked about one that's associated with evaluation. That's the idea of confirmation bias. How do we assess new evidence? And then there are some associated with persuasion like, you know, sort of the reactive devaluation piece is, you know, an important one. How do you persuade somebody? Well, a good relationship or menus help. I put these slides up there not because you're supposed to read them but just to have a sense that, you know, we're just scratching the surface in this talk, talking about two of the principles that are, you know, of the--of the 40 that are on the slides.

There's a great new book out for those of you who are lawyers. Jennifer Robbennolt and Jean Sternlight. Jennifer is a PhD psychologist and a law professor, and Jean is a really great author and law professor. They put together a book called Psychology for Lawyers. I highly recommend it. It contains a lot of -- in the world of heuristics and biases and it translates it over to lawyers in a very skillful way. Well, what I found eventually was there so many psychological principles to study and you saw that list went by pretty quickly, and there are hundreds more in the Sternlight and Robbennolt book. You know, it became a confusing mass where I felt like there was psychology that could point in almost any direction. People would ask me questions like "Should I make the first offer or not?" And I'd say, "Well, the anchoring principle says you should and split the different principle says that you should wait." And so, you know, I became a little bit confused and dismayed.

Well, along came neuroscience and I was hoping that there was going to be some light shed there, and I actually think that there--that there is. And so, let's take a look at what neuroscience has to offer in then next segment of our program. Well, early days, the Egyptians didn't think that the brain had a whole lot to do with anything important. And we know this because when they mummified important personages, they would be very careful to preserve certain organs but one of the organs that they were not very careful to preserve, in fact, that they immediately removed and discarded, was the brain. They used a hook. They would, you know, sort of use a hook to pull it out through the nasal cavity and they would immediately throw it away. But other things like your pancreas, oh, my gosh, I mean, your pancreas got like, you know, a gold sarcophagus of its own but not the brain. Well, we move forward a little bit to phrenology where, you know, people would, in England and around Europe, and -- touch your head and sort of feel your head and the spaces would say oh, my gosh, well, you have a large capacity for empathy. You know, so if you had a large sort of occipital area, maybe you're going to become a mediator later and, you know. So, they would try to touch the outside of your head. Now, this was not, you know, much better than the Egyptians but I give them a lot of credit as being a step forward because at least the folks in phrenology thought that the brain had something to do with behavior. So, we're moving ahead, I think. But still not at, not at a place where neuroscience helps very much. Well, now, we make a big leap forward with the

industrial revolution. And actually, some cruel things had happened in Napoleonic France as well, but for the moment, we'll talk about the industrial revolution. People had all kinds of jobs that caused injuries to their brains. They would get hit in different parts of the head and it would change their behavior.

And so there started to be this idea that maybe the brain was not just this, you know, undifferentiated mass of gray. Maybe different parts of the brain had different functions. And so what we saw is, you know, this guy Phineas Gage whose job was in helping set charges and there was supposed to be about a foot of sand on top. But one day, somebody forgot to set the sand and Phineas Gage tapped the charge directly. It ignited. The steel rod blew through from just under his cheek bone out the top of his head and flew about 50 feet. Amazingly, Gage just stood up and didn't realize that -- what had happened and walked over calmly, picked his tool up, and had to be taken by co-workers and sat down. Said, "Phineas, you just had a trauma." And he didn't believe people. And a doctor showed up on the scene also didn't believe it until literally one point when Phineas Gage bent over and a piece of his brain fell out of the top of his head. Well, it was pretty remarkable. Phineas Gage lost the use of one of his eyes and -- but he didn't die and he didn't need to be hospitalized for the rest of his life. But what was really interesting was that Phineas Gage who had been a really polite guy now, all of a sudden, was one of the rudest people anyone ever knew. He was not a womanizer but he became one. He was not a gambler, but he became one. He never swore but then he swore profusely and all the time. And so people speculated later, you know, confirmed that maybe that rod took out a piece of Phineas' brain that was involved in inhibiting impulses. And it turns out that's exactly what happened. And so as a result of accidents like Phineas Gage's and many, many other unfortunately souls, what we saw was correlations between injury to a particular part of the brain and changes in behavior. And so that led to hypotheses about localization within the brain. We now know that, you know, it's not purely local, there's not a single piece of the brain that does anything. But we know that there are particular pieces of the brain that, if they are damaged, certain functions disappear. So we see them as not necessarily sufficient, but necessary. Well, now we do less invasive things than industrial accidents.

And so we look at like the electroencephalogram, and one of the things we find in the electroencephalogram is which part of the brain is active when you're engaged in different activities. And so, you can see by attaching electrodes to the outside of somebody's head and then having them do various things, we can see which parts of the brain, from the outside, aren't doing much. And so we see here that while generating words, you see what's called Broca's area, kind of quite alive. While listening, not so much, but still working. Reading, nothing at all in that area, and speaking, almost as much activity as generating words in your mind. So we can learn a lot from EEG. There's also something called a PET Scan and that's a positron emission tomography. What do you do is you can inject, you know, a chemical, a radioactive isotope into somebody's body and you can kind of track where it goes. There's this notion that we -- that we have that by the time you're aware that you're afraid, your blood has already flowed to your legs for a freeze, flight-or-flee response. And it's true. By PET scan, we can see that following from the eye back that a radioactive isotope that we track will go to the optical cortex and then it will go back to the part of the brain that ignites the body, and only later will it send a signal to the part of the brain that makes you aware of the reason for your fear. And so that's the sort of kind of thing that a PET scan can illuminate.

But the big gun here, I mean, you know, the big change has been this functional magnetic resonance imager where, as a result of looking at the oxygen patterns in somebody's brain in particular, by tuning a really intense magnet to the frequency of oxygen, you can cause the oxygen atoms to flip the way you can flip a compass by putting it on a magnet. And then you can see which parts of the brain are using oxygen and which are not, and then you can make correlations associated with what we've learned from Phineas Gage and the EEG and from various other places. We say, wow, when that part of the brain is active, we know that the following activities are going on. So with the FMRI, we can now look at pictures of oxygenated, you know, magnetized oxygen. These are what some pictures -- color enhanced pictures of FMRI activity look like. You know, the one is a static view where you're just looking at one picture and you can see things. The other is -- this is over time and so we see activity starting at the top left picture, moving across, and then we see that same activity dissipate. And so what we can learn a lot through the FMRI is about location, intensity, and duration of

reactions to stimuli. And the stimuli that I care about usually are the way people phrase questions, you know, and the way people think about things. So here, we have location, duration, intensity. I couldn't find, you know, location and duration. I could find, you know, a map and a clock. Intensity, I just, you know, whatever, this bright blue light.

So we look at these pictures and, you know, unfortunately, the pictures, you know, can cause us to make too great of a leap of faith. People sometimes shut off critical thinking when they see FMRI pictures. There was one study that said, you know, watching Barney -- I don't think it was Barney. But watching shows like Barney improves your kids' math skills, but they have to watch it at least four hours a day. And some people looked at that study and they said, that's garbage, that's crazy, and I just don't believe it, that's a piece of bad science. A second group of people were shown the exact same study and there was an MRI picture inserted with a caption that said this is the part of the brain that is illuminated, you know, that's correlated with math and -- while watching Barney. And people said, "Wow, look at that. It must be true." And so, you know, this idea that if you see something in the brain that you know something about behavior, people are too ready to make that leap, and so I want, you know, I want to just issue a word of caution. This says the part of the brain that shuts off critical analysis when it sees pretty pictures of the brain, that's a proven scientific fact. So don't get too enamored by MRI photos. Love them the way I love them but not too much, right? Not enough that you say, you know, that you don't want to suspend all judgment.

So what's the relationship between mediation and neuroscience? Well, you know, there's really about six big fields. We're only going to cover a little bit today and they're going to based on the psychology we talked about. One is this idea of fear. This next is this piece of new brain, old brain. Another is the work of Paul Ekman and Marco Iacaboni on mirror neurons and facial recognition. We have some work on reactive devaluation with Spy vs. Spy, friends or enemies. There's some good work being done on the perception of gain and loss in charity, and then there's work on risks and gambles. So there's, you know, some clear relationships. I'll just talk a little bit about a few.

One -- now, we talked about of loss aversion. And so there's been some work in loss aversion in the functional magnetic residence imager. And in this study that was done at UCLA, the hypothesis was that if you can put people in a game frame where they're winning more than they should, that we're going to see reaction in the part of the brain that is about reward, the anterior cingulate cortex, right? That's the same part that lights up if you have an orgasm, eat chocolate, win in poker, all kinds of things that's, you know, rewarding. And they thought that they were going to see fear in the MRI when you're in the loss frame, when you were losing more than you should. So they did these games where people were supposed to be calling a coin flip and they would win real money if they called it correctly. And in the game frame, they were winning more than they should. They just thought they were really good at flipping coins, you know, calling, you know, heads. Oh good, I'm so good at this. And so when they were coming forward to gambling, there was a lot of activity in the anterior cingulate cortex. In the loss frame, when people were losing more than they should, they expected, the scientists, to see amygdale reactions and they did not see amygdala reactions. What they saw was suppression of activity in the ACC.

Now, what that means is that when somebody is in a loss frame, they can't imagine a positive future. Their reward structures are shut down but they're not afraid. So threats in mediation, I think are really important. A threat is not likely to cause somebody to run from fear; it's likely to cause somebody not to imagine a good tomorrow. So I'm being very circumspect about allowing threats in litigation to impede the mediation's progress. With respect to reactive devaluation, confirmation bias, we also have some FMRI studies, and these are some really important things I'd like to talk about for a moment. We have Drew Westen, who is in the middle, did some studies with Republicans and Democrats in the Bush/Kerry election. And what he did was he told Kerry supporters good things about John Kerry and bad things about George Bush. And then he told Bush supporters good things about George Bush and bad things about George -- about Kerry. And so what's happening there is you see a little small lighting up in the neo cortex, what I call the I-knew-that moment. Then he switched information. He told the democrats good things about George Bush and bad things about John Kerry. And he told the Republicans good things about Kerry and bad things about Bush. And

what we saw there was long duration hot flashes in much older parts of the brain that are more associated with survival than with philosophy, politics and intellect.

Now, what could explain this? Well, we'll get into this idea. It seems that, you know, we share a little bit of our brain with a lizard, right? A tiny a little bit, the same part that regulates respiration, that regulates the size of our pupils in response to light, and also jumps effectively out of the way of an oncoming object, you know, so we share that with a lizard. Well, we also share a very old part of our brain with a puppy. And the puppy brain is very different than the lizard brain. The puppy will not eat its young. The lizard would be happy to do that. The puppy has the same serotonin, dopamine neurotransmitters that we have. A lizard, not so much. The puppy would miss you if you passed away. The lizard, again, if you have a pet iguana, I'm sorry, but it doesn't love you the same way as a mammal loves you. It doesn't have the brain capacity. Well, we're more like puppies but it's a good thing that we have the lizard brain because the lizard gets us out of the way of the bus. A lizard does a lot of work with respect to heart rate and respiration. The puppy does a lot of emotional-social work and helps us connect with others. But then we have this vast other thing that, you know, while a puppy has a little cortex, we have this vast cortex. It's not the biggest; that's the elephant. It's not the most wrinkled; that's the dolphin. But ours is the most electrically potent. And we have, you know, it's -- in the myelination, we can conduct more electricity than any other animal in our brain and so we have an enormous capacity.

Well, these brains, the puppy and the lizard, are kind of the old brains and they do a lot of work for us. But the new brain is the one where language lives, where mediation lives, where philosophy and all the stuff we think of, and where, in fact, the person you think you are tends to live in the cortex. Well, what happens when there's disconfirmation? When you're told you don't know something, right? When you have this situation where now you're in the MRI and you're hearing that the political candidate you like is not the good candidate; in fact, the opposing candidate is a good candidate, you become a little bit like a, you know, a trapped animal. Well, this French philosopher, Jacques Lacan, looked at that and said, well, it makes perfect sense because as infants, we're just a jumble of diverse biological processes over which -- over which we have no authority and our first task in life is to develop a coherent identity

which pulls together the fragmented confusion of life. And the identity may give the appearance of a unified personality but it's really a physiological illusion that hides our essential human vulnerability and weakness.

When anything or anyone threatens us with the truth of that fragmentation, the quickest, easiest and most common defense available to hide the truth of our weakness and give the illusion that we posses power is to become aggressive. What's happening, what Lacan described, is basically what we would find out many years later in Drew Westen's experiment. When the old brain lights up with respect to disconfirmation, the reason that it's active, the reason it believes you survival is threatened is it's saying I'm not worried about the facts that you've told me, I'm worried that you have attacked the way I know the world. If my world is a series of if-then propositions -- you know, if I'm hungry, I put my mother's breast in my mouth and the hunger goes away, if it starts in infancy and moves forward, and we think, oh, now I quenched my thirst with the stuff that comes out of the faucet -- when you tell me that some essential fact in my mediation is wrong, you are not attacking just my way of knowing this mediation. You are attacking the way I know everything, and my body reacts to that. The puppy and the lizard are scared to death by that idea. And so, you know, I think the MRI has added an awful lot to reactive devaluation and confirmation bias.

We used to know quite clearly, it's like, okay, you know, an offer from an enemy is not going to be treated as well as an offer from a friend. But I also used to think that when somebody admits that they were wrong about something, it's a time -- it's a good time to get an offer from them because you say, "Oh, you're right. I didn't appreciate the value of that fact." I say, "You're right. Now up your offer to the other side." And I now realize it's a terrible time to do that because you are working with your old brain at that point. You are thinking more about survival than -- and you can't tap into the newer brain concepts of creativity and thinking about a positive future. So confirming evidence or evidence from a trusted source leads to rational new brain executive thinking. Disconfirming evidence or evidence from an opponent triggers emotional old brain instinctual and protective thinking.

Well, now, we return back to the beginning. This explains dreams, right? Because the conscious part of your mind, the new brain, the cortex, is kind of going to sleep and the old parts of the brain are kind of playing images trying to sort them out, and the new brain is still partially awake, watching it happen. When you become intoxicated and you sort of dis-inhibit, you actually have taken some of the new brain and shut it down, and the old brain speaks a little bit louder. The Inner Game of Tennis, clearly, self one and self two, those are the new brain and the old brain. The old brain was the puppy that learned to hit a tennis ball and didn't have to think about it. Puppies are really good at catching Frisbees, they don't think about it quite so much. They don't say, "Oh, I need to tilt a little to the left," or, you know, "The wind is this way," they just do it. So clearly, it's a new mind, the new brain and the old brain. Sports visualization is the new brain fooling the old brain into thinking it did something it didn't actually do like hitting a free throw. The yogis are clearly having a conversation between their new brain telling the old brain they're going to take control of some functions that the old brain typically has control over. And this busy mind is really an inevitability.

So with that, I want to just let you know I think that this is an incredibly important and growing field. It's getting more and more exciting as time goes by, not less. There are about 12,000 new MRI studies a year and it takes some patience to figure out which ones are relevant to mediators. And so I hope you'll join me in that work. And in addition, I hope that you'll support the President's initiative to map the brain so we'll discover more about this. So with that, I'd like to say thank you in every language that this slide can project and open this up to questions.

MARSHALL: So Richard, that was absolutely fascinating. You know, and I'm not remotely surprised, having had the chance to talk with you a little bit ahead of time. It was a very, very interesting and provocative presentation. For those of you who wish to ask a question, if you press pound six, you can unmute or you're also welcome to type a question into the box. We have just a few minutes. Before we press in to someone else, I -- in thinking about all of this and also thinking about the tremendous body of experience that you have, Rich, in trying to see if I can't in some way synthesize this information. I'm wondering, is there -- are there one or

two kind of takeaway lessons or rules or sort of behavioral commendations that you would give to folks about how -- what they can learn from this that they might very specifically apply?

RICHARD: Sure. Well, I think, you know, the first for me is recognizing the power of this concept, that basically you have two simultaneous conversations going on in your mind that you have -- that you have more than one brain. And I think if you recognize that, what you're going to have to grapple with is the idea that the old brain has a lot of wisdom that the new brain doesn't respect. And so, you know, for example, I am much more tolerant of shows of emotion because I think that those are the old brain doing something that's really important for it to do. And, you know, you kind of have to -- you have to let it play out before you can sort of talk to the new brain. You know, I know with respect to my children when they're in a certain mood, words don't work. And I'm not saying, you know, you go to, you know, go to something -- you don't -- you don't torque up the conflict. It's a good time to walk away, you know, and give them 15 minutes to sort of calm down or give them something to eat rather than talk to them in the heat of the moment. I think, you know, that, you know, in terms of -- in terms of like what are -- what are the big, powerful pieces of advice I would give to, you know, an audience of mediators that I've learned from this slide show, I would say aggregate losses and segregate gains is huge. That impacts, you know, patterns of concessions. I would say understanding the idea behind reactive devaluation of maybe switching parties using a neutral or offering menus. I think those are enormously important ideas. And so I guess, here's my five: old brain, new brain; offer menus; insert a neutral. Gosh, I -- what did -- I already forgot the…

MARSHALL: Aggregate losses…

RICHARD: Right. Aggregate losses, segregate gains. And there was one other related to reactive evaluation. Let's see. Menus, neutrals, oh, yes, you know, the idea of framing, framing gains or losses is an art. You can, you know, if you frame as a gain, people become risk-seeking if you -- risk averse. If you frame as a loss, they tend to become risk seeking. And how you frame is kind of up to you.

MARSHALL: Terrific. Are there other questions? You'll also notice we've put a poll up. If you have a minute to give us some feedback, that would be great. Other questions for Rich? Press the…

RICHARD: Hello, anybody out there?

MARSHALL: …wish to ask a question, press pound six to unmute your phone and then star six to remute.

MALE: I have a question.

RICHARD: Hello.

MALE: Yes. Can you speak to how the findings in neuroplasticity may apply to a mediator?

RICHARD: Gosh, you know, more, more for the mediator than for the parties because, you know, the idea of neuroplasticity for those of you that aren't familiar with it, it's the idea that the brain actually changes itself. You know, it will -- it will reorient based on experience and behavior. You kind of train your brain to be different. And this -- it's a very complex area. There's a great book by a guy named -- his last name is Doidge, D-O-I-D-G-E, on the brain that changes itself. Now, it's a process that takes time and that's why I say it's more of a concept, I think, for the mediator than for the parties because I don't think I have sufficient time with parties to do more than suggest to them ways that will be helpful for them to think about events. I know that you can train yourself, you know, you -- much like when we see studies of monks that if they meditate, you know, Buddhist monks meditate for many hours a day for many, many years. Turns out, you know, they are -- their brain functioning is different, you know, their -- the parts of their brain that activate under stimuli are really quite different and the parts that can, you know, there's just much more capacity there.

So, you know, I think neuroplasticity is a big, huge important concept and very important clearly for trauma survivors. And I mean that both emotional and physical trauma because we know, for example, that when there have been studies where there have been a lesion applied to a monkey's brain or when there's been a physical severing of nerve connections between the brain and a monkey's hand and a wire is run from a random part of

the brain to the hand, the brain and the monkey starts to pick up which piece of -- you know, it can start to control the hand through a wire. And so we know that the brain is adaptable enough to be able to sort of use other, you know, parallel, you know, things that are not optimized for that function will start to act functionally in a way that takes over. Like I said, I think that the neuroplasticity piece, you know, at least -- I'm not sure that there's a technique or a tactic I could use in a single day mediation that would make use of the wonders of our changing brain, not in that way. So…

MARSHALL: Well, with that -- with that, we're going to go ahead and wrap up. Rich, that was absolutely terrific. I really appreciate you joining us and I also appreciate all of you who joined us for today's webinar. CADRE is in the process of confirming the speaker and date for our next webinar. If you'll please watch the CADRE website and if you haven't already subscribed to the CADRE Caucus, we'll provide you details about the next webinar as soon as they are available. So again, thank you all very much. And Rich, I'll look forward to talking and working with you in the future. This was just a, a real treat. Thank you very much.

RICHARD: Thank you very much for everybody for listening, for inviting me, and for having patience. Thanks. Bye-bye.

FEMALE: Thank you very much.