**RedZone Podcast Episode #112: Trust Factor: The Science of Creating High-Performance Companies with Paul Zak**

Bill Murphy: 00:01 Hello, and you are listening to Bill Murphy's RedZone Podcast. I interview leaders who inspire me in the areas of exponential technologies, business innovation, entrepreneurship, thought leadership, enterprise IT security, neuroscience, philosophy, personal development, and more. Welcome to the show.

Bill Murphy: 00:36 Welcome back to the show everyone. This is Bill Murphy, your host of the RedZone Podcast. Today, I have Paul Zak, scientist, prolific author and public speaker. Paul is - what I just love, he wrote the book, The Moral Molecule: The Source of Love and Prosperity in 2012, and literally, he discovered oxytocin. Now what is oxytocin? This was a landmark neurochemical that he discovered was the driver of trust, love and morality. That was a key differentiation for our humanity, and so this made him very popular and he's gotten the nickname “Dr. Love”. Now, what does this mean for his latest book called, Trust Factor: The Science of Creating High-Performance Companies?

Bill Murphy: 01:22 As a scientist, his decades of research have taken him from the Pentagon, to research with the three-letter agencies, to the rain forests of Papua New Guinea - all in the quest to understand the neuroscience of human connection, human happiness and effective teamwork. It's through his lab and testing that he's developed and deployed neuroscience technologies to solve real world problems experienced by people, especially in this today's times of exponential technologies. What I love is that those things that we had a hunch about now, he's validating through technologies.

Bill Murphy: 01:59 Now, what's this about trust? Because there's a big thing going on now that this is the most disengaged workforce in a long time. Much of it is because of the lack of trust.

So, what is oxytocin? Experiments have shown that when you have a higher sense of purpose stimulates oxytocin production, as does trust. Trust and purpose, then mutually reinforce each other, providing a mechanism for extended oxytocin release, which produces happiness. So joy on the job comes from doing purpose-driven work with a trusted team.

Bill Murphy: 02:36 I could go on and on, but I want to let Dr. Paul Zak do most of the talking related to this. Because I think that for leaders, that this is super important. Leadership now, especially for many of the CIOs and technology and digital transformation leaders, the imperative for leaders today is to create this engagement within their teams and within their people. I've had a pattern now with a couple of different podcast interviews – talking with people that are top in their field. Here is one of the top scientists in the this field that is talking about how to do this.

One of it is creating this peak immersion. Creating an immersion can be contagious and leaders; of course can’t just bestow immersion on people. Leaders must embody it, they must be plugged into it themselves. This creates this factor, which allows an organization to take on this resonance, which differentiates you and your organization and your teams within the business and within the marketplace.

Bill Murphy: 03:38 It does come down to some of the softer factors like the whole-person approach. But it doesn't sacrifice high expectations, striving for results, going all in, competing, or focusing. It's just the ability to take on the whole person, then knowing that there's a stress part of the equation, but then there's a de-stress part. Not distress, but destress.

This all builds culture. This is a common thing that keeps coming up thematically is culture.

Bill Murphy: 04:10 Well, I want to bring you Paul today because Paul is going to give you practical examples, practical tools and really get you thinking about this topic deeply. So with that, I want to introduce you to my conversation with Dr. Paul Zak.

Bill Murphy: 04:30 Paul, I want to welcome you to the show today.

Paul Zak: 04:33 Thank you so much, Bill. Glad to be on.

Bill Murphy: 04:36 I'm very excited about our conversation because in my CIO Innovation community with IT leadership, with organizations we've talked about the impact of – that we can scale technologies, that we can scale - there's a lot of exponential technologies that are allowing companies to grow quite quickly. But the human beings don't quite scale as quickly as their machine counterparts. From an organizational behavior, I'd like to talk a little bit about what some of the basis for you writing your latest book and how leaders can embrace some of the concepts from it that could help them be better leaders within their organizations.

Paul Zak: 05:14 Thank you. When we run businesses or build businesses, we think about optimization, optimizing the supply chain, optimizing inbound marketing, optimizing all these factors, but we don't think a lot about optimizing how we organize human beings. At its core, we still have humans who are creating value. We haven't automated everything. So, how do we actually organize those individuals, so that they give high discretionary effort, they are enthused about what they're doing?

Paul Zak: 05:45 You know, culture is a big word in business today, but culture is so big that it just means too many things. So, some years ago, we started thinking about what aspects of culture provide the most leverage to improve performance. After lots of study, we identified organizational trust as a key component of culture that drives performance. That's the work we've been doing for about the past 10 years.

Bill Murphy: 06:12 Well, in reading your latest book and listening to you also, and some of your videos on YouTube, one of the questions that you launched the book was, why isn't work an adventure? Of course, the thesis for your book was The Trust Factor. But I was curious about that question and then where that leads with culture.

Paul Zak: 06:30 Right. That would be the best case scenario where for you and me because we are absorbed in what we're doing, we're highly immersed in our jobs. It is an adventure. When I show up for work every day, as I'm sure you do, too; and I’ve got cool things happening and I’ve got great people to work with. Hell, I'm doing something that I think is important for the world. But not everybody gets that privilege to have either found that kind of position or found the organization that allows them to have a real adventure.

Paul Zak: 06:57 What do we know about adventure? When we go on outside-of-work adventures, the unexpected can happen. We're going to have to pivot, we're going to have to draw on resources maybe we didn't know we had. We'll do things that make us uncomfortable.

Well, that sounds like a highly innovative company to me if I just put those labels on it. So once we identified trust as a key component of high performance organizations, then we went backwards and identified the factors through which trust is created and sustained. We also identified some tools, which I'll share with your audience today, that they can use to measure and manage cultures for high trust so that you create an adventure at work, if not every day, a lot of days.

Bill Murphy: 07:42 That's interesting there, and I'm looking forward to hearing about some of the tools. I wrote down three words from listening to you and you were talking about – that a high-trust culture has, I think, three parts. One was empowerment, innovation, and growth. I think those were the three. Am I getting that wrong? I'm just curious, so how ... Trust is a big word, these are all big concepts. So what do those three words mean and how they impact us? Because I'm an entrepreneur within the security space. We're growing and we certainly have to innovate; but the word empowerment, I'm not sure. I guess I was missing it. What do you mean by empowerment?

Paul Zak: 08:20 I have no idea where you got those words, so let's start from the basics.

Bill Murphy: 08:24 Okay.

Paul Zak: 08:25 You flummoxed me. We started running experiments in the laboratory, and then took those experiments to businesses. Some were very nice to let us actually put their name in the research we've done and in the books I've written. Putting down names like, Herman Miller and Zappos, where we actually took blood from employees while they worked, measured brain activity multiple ways, measured their productivity. Through this work, identified eight core components that are the foundations for organizational trust. You know, but the audience may not know that I'm semi-famous because I was the first scientist to identify the behavioral effects of this neurochemical, oxytocin, and the eight factors that create organizational trust have the acronym oxytocin.

Paul Zak: 09:06 Once we can measure those factors, then we identify leverage points for leaders of organizations to intervene, to push on one or more of those factors, create greater trust and gain the performance benefits of a high-trust organization, so you can think of trust as a leading indicator for performance. If I increase trust, then I will capture that extra discretionary effort by employees and that will produce higher productivity, greater profits…

Paul Zak: 09:38 We measure this a couple of dozen different ways: less turnover, more enjoyment at work, more innovation, just go down the list. So it's really taking a very systematic approach to culture just like you would optimize any other process at work. It's measuring and managing for higher performance.

Bill Murphy: 09:56 Now just for the listeners, oxytocin would be essentially a chemical that increases empathy. Maybe you can give the science explanation of the oxytocin that you're ultimately measuring.

Paul Zak: 10:11 Right. It's both a neurochemical, a chemical in the brain, as well as a hormone. But it's really known as a hormone to facilitate in mammals' birth and care for offspring. What we showed 20 years or so ago, is that humans seldom make this neurochemical outside of the reproductive realm, but it facilitates trusting strangers, as you said, increases our sense of empathy, and makes us more effective team members.

Paul Zak: 10:37 If we were working on a project together, Bill, and you treat me in a nice way… Almost any positive social interaction causes the brain to make oxytocin. So, that reduces my physiologic stress, which we always have when we're around other people. Again, I have this increased sense of empathy. Now, not only can I cognitively forecast, ‘Why is Bill doing this, how do we understand that?’, but I get a sense of why you care about this thing. Now that's the emotional component, so it really gives us an extra tool to be effective team members.

Paul Zak: 11:08 If we take that back one step, if I created a culture in which employees were consistently causing each other's brains to make oxytocin, then I'm going to get all these benefits that is reduced physiologic stress, more effective teamwork, greater empathy at work, and those translate into substantial performance gains. So in the brain, oxytocin is a key signaling molecule that says that the person or people around me is or are safe. They appear trustworthy, they are someone I want to interact with.

Paul Zak: 11:40 So again, from a sort of evolutionary perspective, humans are really unique in that we not only tolerate being around strangers, we often enjoy it. So if you're in New York or LA or Chicago, it's fun to live downtown in a big city, it's fun to walk around and meet new people. But almost no other animals do that, even chimpanzees, our closest relatives. You put chimps in a room, and very rapidly, you'd have fur and blood flying around. They do not tolerate strangers, but we do it all the time and it's because we have this very particular brain that's essentially hypersensitive to social signals. One of those internal social signal mechanisms or processing mechanisms is oxytocin.

Bill Murphy: 12:24 For the listeners, I'm going to put this on the post that supports this episode. I’ll have a link to your previous book breakthrough where you became famous with The Moral Molecule: The Source of Love and Prosperity, is what you're referring to, correct?

Paul Zak: 12:37 Right.

Bill Murphy: 12:37 Okay, so as a leader of an organization, essentially, you can become more self-aware to teamwork. Because it seems like from a lot of the talks with the leaders that I'm working with that if they can have highly functional teams, it's one way of working more collaboratively to deal with a lot of the disruption that's happening in organizations. Do you find that your work is helping people become more self-aware of their impact in their ability to lead and be a team member and be a leader of a team?

Paul Zak: 13:09 Absolutely. As you know, in the book I give a lot of examples of companies I've worked with, and companies that just sort of understood that in the old school version, I don't know even who does this old school version with the sort of dictatorial boss who's screaming at people.. with unemployment at 3.5%. I'm at Claremont Graduate University where I'm a professor, and I overlapped for 10 years with Peter Drucker. Peter wrote in the 1960s, "If you're a knowledge worker, you have to be your own CEO." In other words, if you have a big skill set, you can go wherever you want to go. So, if you're a high performer, I'd rather have you work for me than for my competition. How will I do that?

Paul Zak: 13:50 Yeah, I can try to bribe you with money. But actually, money is a pretty weak motivator, we know. So why not to create an environment where you can really flourish professionally, personally, where you are appreciated, where you can take risk, where you can grow? All those things happen when we trust employees. We're giving them the freedom to execute as they see fit, once they're trained. We're given the opportunity to try new things, to innovate without having being screamed at if this innovation doesn't work right.

Paul Zak: 14:19 Bill, you've probably worked for screaming bosses, I certainly have. I don't respond well to screaming. I just think I'm just going to do the minimum and then look for a new job. Watch that clock hit five o'clock and get the hell out. Where in high trust organizations, now I really care about the people and the purpose of the organization and putting in a lot of discretionary effort. As you said, the topic of the podcast, when you do that, you really have work-life integration.

Paul Zak: 14:42 So I'm in the shower, I'm having coffee at five in the morning, and I'm thinking about the cool stuff I get to do today at work, how can I help my team members. If I have the screaming boss, I'm doing the eight to five, I'm going to do the minimum. So I think leaders out there have to decide what world they want to be in. And the modern world is the war for talent is over. Talent has won, and I want the best talent here. I've got to create an environment in which they can really flourish. To do that, I've got to give them some freedom. Absolutely hold them accountable, as you know from the book. There's nothing that says, I'm giving people blind trust.

Paul Zak: 15:19 On the contrary, I'm a big believer in the daily huddle. I love the daily check in, I love having clear milestones, so I can't trust my team members unless they know where we're going, I'm open on what our goals are and I really work to help them meet those goals. The high trust organization has very much a servant-leader model, where the leader is really working to make the people who are on the front lines creating value, successful. So you need lots of clarity and cutting people lose who can't flourish in that environment. But for the most part, because it's based on these deep evolutionarily evolved brain structures that allow humans, again almost uniquely, to cooperate with each other at a very great degree.

Paul Zak: 16:03 Then why not tap into that by creating this high-trust culture, so that I'm getting the best of both worlds? A high degree of discretionary effort, and as we've shown in lots of studies, the ability to shed that stress of work very rapidly when the workday is over. As I said, the work-life integration, where I'm really thinking about this, the projects I'm working on and the people I'm working with, outside those work hours, and I come in focused on this.

Paul Zak: 16:30 One of the nice things we found is that those who work in high trust organizations not only are more productive, they're more satisfied with their jobs, and they take fewer sick days. Now that's an interesting little data point, right? So much less turnover in high trust organizations. But fewer sick days? That's a really nice, objective measure. You might say you love your job on a survey, but if you're taking fewer sick days, I can think of two reasons why that's going to happen.

Paul Zak: 16:55 One is that if you're in a low trust culture and I'm just beating the crap out of you at work, then that impacts your immune system. You're going to get sick more often. Or you're calling in with a sick day because you're interviewing for another job somewhere else. Either one is not a good sign that my culture is being effective. So yeah, people in high trust cultures are more satisfied with their jobs, but also more satisfied with their lives outside of work. They're healthier and happier, so these are people who in short term, but also in long term are going to continue to create value for the organization.

Bill Murphy: 17:28 I love the word work-life integration. I hadn't heard it stated that way, and I certainly like it better than work-life balance. I think that term for entrepreneurs is definitely off the table. But I think work-life balance is a dangerous word just in general. I think it's somewhat of a setup. It's a setup that puts a lot of stress on whether or not someone's always in a perpetual state of balance.

Bill Murphy: 17:52 But I love the ‘integration’ part because I know you had a story that I would love for you to tell about Papa New Guinea and some of the research you did there. I'm not sure the early farmers in the United States when we were mostly agrarian, they woke up and said, am I balanced today? There was something to do every single day, and it was integrating it into their whole life. What are your thoughts on that?

Paul Zak: 18:12 You're exactly right. Again, I mentioned job satisfaction, so let's go back. In a very real sense, the brain is like a muscle. We enjoy things like sports and work often because they give us challenges and we like challenges. We call that challenge stress. So I don’t want you not to be stressed at work, and I do not want you to carry that stress home to chronic stress that generates heart disease and diabetes and all those things. But when you're at work, I want you to be totally on, 100% in, and then when you get off work, shed that stress, go see your family, have a meal, workout, whatever you're doing. But that doesn't mean I don't want you to be happy at work.

Paul Zak: 18:47 I do want you to be satisfied that you're doing something important, with a reliable team, but happiness is a result. Happiness is really also a complicated word, but I want you to be satisfied. Satisfied is a much better indicator... Satisfaction is better than happiness, so I want you to stress - and then relax. Part of building a high trust culture is giving people these challenges. We call that expectation. I want to have high expectations for you, so that you're striving to get better at what you're doing and you have a chance to reach new goals. If I'm just doing the same old, same old, then my brain is just going to work at quarter speed, and I'm not going to reach high performance. I want to have this group of elite individuals who want to be fully ‘in’.

Paul Zak: 19:34 One way that companies have done this is, and maybe you guys do this at your company RedZone, is to have what's called a Tight-40. I want you to be in at five and at 5:15, I want that parking lot to be emptying out. I've worked for companies where the bosses don't go home till nine or 10 at night, everyone feels obligated to stay. What happens is you take a 2-hour lunch, you do some online shopping, you do this and that because you have no life after work time. I want you to be totally focused, completely focused on what's going on here.

Paul Zak: 20:06 We've done a lot of work in my lab with US military. In the military, they call this violence of action. If you're going to go in, you’ve got to go in 100%. You don't go into that room where it has potential ISIS fighters and pussyfoot in.

Bill Murphy: 20:18 Sure.

Paul Zak: 20:18 You got to go in hard, all the way. I want you to do the same thing at work, I want you to go hard. I want you to think about, holy crap, this goal is going to be tough to make in the next month, but I think we can do it. Let's marshal all those resources. When I go home I left nothing on the table, it's all burnt that day. I did everything I could today, I knocked it hard and then I'm going to take some relaxation time and come back tomorrow and hit it hard again. That's both a selection issue, but truly a culture issue.

Bill Murphy: 20:47 I like that.

Paul Zak: 20:48 Doing it the ... like you, I'm sure you do, Bill. I always do the grossest thing first. We do a lot of very invasive experiments with blood and drugs and animals, and I'm the first person to say I'm going to do that. I will be the phlebotomist on this experiment that's got to involve 50 blood draws. The first session, I'm going to be there drawing blood from these particular individuals, just processing that blood. I'm not going to pawn that off on some hourly worker. They're going to see me in the trenches. If I'm not in the trenches then we're not all pulling together.

Bill Murphy: 21:20 The first thing you called it was a ... Did you call it a Tight-40? The one where your ... was that the-

Paul Zak: 21:24 Yeah.

Bill Murphy: 21:25 Okay.

Bill Murphy: 21:26 I haven't heard that before. That's an awesome ... You're answering for me a major question I had, which is really interesting is, ‘how you build internal agency within people, even though you have the external goal of a culture or mission of high trust’, and this cultured impact that you want them to have.

I was curious how you teach internal agency of people taking responsibility for, I know I hate the word happiness too, but their own satisfaction. What I'm hearing you say is that you're coaching people through your culture about going hard for the objective, but then we have this off switch. You're just teaching people how to have an off and on switch where it's not always on.

Paul Zak: 22:11 Right. One of the key parts of that off switch, which feeds back into these challenge goals is something we call ovation. So really, recognizing the high performers, doing it close in time to when an end goal is met, creating a feedback loop in the brain that says, in our community of individuals, which every organization has a community, we value these high performers and we want to give you personalized, tangible, public recognition of how important you are, and set aspirations for everybody else. Then, as part of this process, do a lot of job crafting.

Paul Zak: 22:44 Think about having individuals focusing their cognition, their energy, their passion, on the things that they dig the most. Again, sometimes we all have to do things that are just not that pleasant, and that's why they still call it work and not play. But to the extent that you're doing stuff that is challenging for you, is fun for you, is super engaging, then you're going to give much more effort to that. So it's really finding out what you're great at, and some of that is job rotation. I'm a big believer in having people try new things.

Paul Zak: 23:18 We created something we call the whole person review, which is a forward looking review. In these high trust cultures, I'm giving you feedback absolutely daily and weekly, so waiting a year to do a performance review is just that's old school. Nobody does that anymore. GE doesn't do it and Google doesn't do it. By constant feedback, that's how we learn. We could spend once a year on a forward looking review and talk about your professional goals, your personal goals, even your spiritual goals for the lack of a better word. Besides work and family, what gives you energy? What's important to you? Let's make sure you have time to do that. If you're a high performer, I want to keep you here long term. I want to take in account all those goals.

Paul Zak: 23:57 If your family is not happy, your spouse is not happy, eventually, you're not going to perform well or you're going to quit, so let's have that discussion. How are the kids doing? How's the spouse doing? Even from professional goals, I like to ask people what they want their next job to be. Let's have that discussion. Maybe your next job is here, maybe it's not here. I had a woman who worked for me for a number of years who really wanted to work for Facebook. I said, great,” I know some people at Facebook”, let's get you an interview there and move to Facebook. Why would I do that? Now I've got a good person at Facebook.

Bill Murphy: 24:29 It's a fearless culture. You're creating a fearlessness to your culture where you're not afraid of the people leaving because that's completely the opposite of what most employers would be afraid of, a high performer leaving.

Paul Zak: 24:42 Well, I wouldn't mind doing a project with Facebook or another project with Facebook. Also, if Facebook invests in training this person for the next couple of years and she comes back to me, she's got more training she can bring back to our group. So yes, I'm investing in the person, not in the position and I think that's the difference. For high performers you've got to be invested in that person. If the best thing for that person is to move somewhere else, I'm the first person to say I'm going to support that because we're in a small network of people of high performers. I'm going to keep you in my circle.

Bill Murphy: 25:13 So, we talked about it up front prior to getting on the show was the job crafting. Is that what you're alluding to is when you're actually taking interest in what really ‘lights people up’ that are on your teams? Is that part of the job crafting?

Paul Zak: 25:29 It is, right. It's really finding out what, where and when you perform best. As you know, particularly in this technology world, a lot of these programmers whatever reason they love working nights. They like to work three to midnight. And I don't care, if that's when you're most productive and that fits your lifestyle. As long as your project is moving forward and your team can talk to you, why am I getting involved of when you work? What's special about eight to five? This is meaningless to me. Why do you have to be here? Why do you have to be in the office?

Paul Zak: 26:01 We're all distributed teams now, so grab a co-working space when you need it. Work from the beach, I don't really care. If that facilitates your work-life integration, so that you can give again, that full effort for the time you're working with us, let's do that. Then going back one more step, why are you in this job? Is this a job that still fits you now? So let's start working on that.

Paul Zak: 26:23 For my new company Immersion Neuroscience, we've created technologies using wearable neuro sensor and cloud computing that allow us to do what we call neural job crafting. Employees wear this and they and their supervisor, get feedback on which tasks really turn them on at work from a neurologic perspective, which tasks frustrate them, when they feel psychologically safe with a team, which means they'll perform better. We measure something called grit, which is the ability to overcome obstacles. We use these data to do things like predict absenteeism and reduced job turnover, identify the need for training and readiness for promotion. So we're really taking a very active task measuring - sometimes things that are really surprising to the employees themselves. So if I just say, Bill, what are the three best things you like about your job? Maybe you could tick those off, but sometimes you don't know, and so of have to try it.

Paul Zak: 27:24 Gosh, I remember three months ago I was working on this project and I had to do this ... I don't know, I started doing some baby machine learning. And gosh, that was super fun. If I could learn more about machine learning and do more of that in my job, that would be awesome. So something for example, Facebook does is they have this ability for coders to spend one day a month in a different group, a group that they're not assigned to. Again, why would Facebook do that? They've got to fill that spot. That person will be less productive in a new group, at least initially. Because these are high performers.

Paul Zak: 27:57 They want to make sure that you're slotted into the right place. How will you know that? Well, maybe you want to work on the Oculus Rift and you think programming in VR would be the coolest thing ever, so you're going to spend a day over there this month and see what that's like, see what the team's like. Then, if it fits you well, you can apply for a transfer. I think it's really customizing employment opportunities, so that we get the best out of individuals. So that, again, you're going full out for those eight hours or nine hours and then you feel really satisfied that you've accomplished something important.

Bill Murphy: 28:32 It seems almost the organizations will need an internal LinkedIn profile for people's special interests and special likes, passion projects, and such because they might love podcasting on the side, but they're an engineer during the day. But they might be totally geeked out on the technology and the marketing department could really use them once in a while. You would never know that if they were just in a coding position. So I'm curious using some of these advanced tools, how you would cultivate this whole person review of an organization.

Paul Zak: 29:04 Yeah, that's a great question. The Nobel Prize winner, Danny Kahneman?  
Bill Murphy: 29:08 Sure.

Paul Zak: 29:08 Who is the founder of behavioral economics. Danny published a paper in the 70’s, a thousand years ago, showing that people have very poorly defined preferences over things they have not experienced. So, if I ask you how much you like... just making something up, Ethiopia? You've never been to Ethiopia. You can guess, you've read about it, you're aware of that. But if you go there and you have that experience, then you can articulate that much more clearly, so I think it's the same thing at work. So as we start doing job crafting, sure, ask people what they think they'd like to do, give them a chance to do some job rotations, get some cross training, and I think being - from a leadership perspective, being flexible on how we slot people and understand that we like challenges.

Paul Zak: 29:52 If I'm putting you in a challenging situation, that may not always be challenging, so either that I've got to find new challenges within the position you're in, or I've got to find a new position that will continue to challenge you.

Paul Zak: 30:03 I've talked to Tim Brown, who was the CEO of IDEO, this a very famous design company in the Bay Area. Tim was the CEO there for going on 20 years. I said, how did you survive so long as CEO? He said, because every five years, I just redefined my job. I would do an inventory and look at the stuff that I'm just tired of doing, and then I would get someone else to pick that up for me, and I pick up a bunch of new tasks The guys who own IDEO were really cool to let me do that as long as the ship keeps moving forward. He said, yeah, basically, every five years, I just create a new job for myself. Wow. Isn't that amazing?

(Note: Tim Brown stepped down as CEO this past April, and is now Chair of IDEO.)

Bill Murphy: 30:42 Yeah, I love that. That's quite a vision and I'm sure that bleeds through to the organization. Just picking up on the science of this, it's from a business leader going into a team room. How would you measure as a leader… You obviously, have the tools to measure the science of the impact the human body is kicking off related to oxytocin, or just the brainwaves or their adrenals. But how would you measure the before and after of some of this? Are you looking at some of the other chemicals as well, or are you trying to pick out oxytocin because that's a known one? Or you're actually looking at a spiking of adrenaline as well in people?

Paul Zak: 31:23 That's a great question and I'll try to do it briefly. This is work that we have done over about 15 years. It got funded from the US military, from the CIA and a bunch of other places that are interested in creating extraordinary experiences. If I create an extraordinary experience in your brain, you'll remember it, you'll act on it, and you can communicate effectively. Anyway, thank you to the U.S. taxpayers who funded a lot of the early work on this, because we had really good funding from the U.S. government, we measured, essentially every brain signal that you can measure simultaneously.

Paul Zak: 31:58 So we measured EEG, we measured neurochemicals in blood, we measured cardiac responses and the peripheral nervous system, sweat in the palms. For example, we would run eight hour experiments where we're collecting data at a millisecond frequency, so you get terabytes of data out of people. Some of these experiments, we had one experiment with about ten blood draws over eight hours. We're getting a ton of data from these individuals. The question is, what motivates people to take a particular action, and can we use these neurologic measures? After all this work, we identified two key components that motivate you to take an action. I'll tell you what those are and say why they should matter for this conversation.

Paul Zak: 32:39 One is you've got to pay attention, so if you're looking out the window and sleeping, nothing happens. But the more important thing is you have to be emotionally resonant with this experience. One of our clients from Immersion Neuroscience, I apologize to the listeners for using one bad word here, but he recalled recently, it's just such a great description of this. He goes, "Oh, that's the give-a-shit measure." So yeah, you have to give a shit about what's going on around you, what you're doing at work. If I can capture that, that emotional component, then your brain tags that experience as important. If it's tagged as important, you remember it much later, you're willing to act on it, you'll share. This is like the birth of a child or 911. Anything that's truly emotionally compelling, it's actually saved in the brain in a very particular way.

Paul Zak: 33:25 What we did in all of this work is essentially find a value mechanism in the brain. So we can identify what you subjectively value and we call that neurologic state immersion. It's almost like flow where you're so sucked in to the experience that you just are ‘all in’. We can measure that second by second in real time at scale. We have clients that have hundreds of employees. Simultaneously, we're measuring immersion second by second, and then we identify what generates peak immersion and what frustrates you. Frustration is when you're paying attention to something, but you just don't care about it. It's not interesting to your brain. Again, we can use these data then to do this neural job crafting to identify when you need a different kind of job, when you need new challenges, when you need more training.

Paul Zak: 34:13 So there is an internal mechanism that allows us to value things that all animals have. Unless you can value the experience around you, you don't know how to spend energy on something. Anyway, we have that same thing too. What's different for humans is that part of that valuation mechanism captures the other humans around us, so now we get right into the work setting. It's not just that I like coding, but I'm working with a super cool group of people who are all coding and we're coding something that's hard to do, so that's what we're capturing, that entire cultural environment, social cultural environment.

Bill Murphy: 34:49 Oh, I see. So if you pay attention and then you're emotionally resonant with it, so it sticks in your brain, then you can have an impact on others around you. Is that essentially what you were able to measure?

Paul Zak: 35:00 Exactly, right. Immersion is contagious and here's a concrete example of that. We had a client who was a luxury clothing seller with a number of stores. Because this flow immersion experience is contagious, we had sales people where whenever our sensor shot that data up to the cloud, and we were able to predict which clients would purchase clothing with 85% accuracy. Because when the client's having a great time shopping, guess what, so is the salesperson. It's the same thing in a regular workplace. If I'm having a great time, if I'm pulling on all those social resources around me, then that immersion state is really contagious. That's essentially what you're creating, a culture of high performance because we're all in on this. It doesn't mean I can't chit chat, I can't do all this and that.

Paul Zak: 35:55 In fact IDEO, who I mentioned earlier, did a very nice steady showing that their most productive designers are those that help other people more. So that is if I'm a good helper, I myself am more productive. Why? Because everyone's helping me too. So it's really creating that underlying culture of connection, of group work, of empathy for others, compassion. Let's get this thing done, let's take out some hard challenges and do it all together. What could be more fun than that?

Bill Murphy: 36:24 This is the unlock that you offer that the leaders I think, have known, they haven't had the science to back it up. But the leader has to be plugged in. If the organizational leaders and the department leaders if they're not plugged in, it's going to be very difficult to have a resonant group around you. It's almost what you're emphasizing and you can rebut this if it's not true, but I'm excited because I've had this internal like, ‘I know if I don't show up at my work, how can I expect others around me to resonate with everybody else in the company if I myself I'm not plugged in?’

Paul Zak: 36:56 Mm-hmm (affirmative).

Bill Murphy: 36:57 Do you seem to find this too much?

Paul Zak: 36:59 No, it's exactly right, and it's got to come from the top. We have created trust interventions at lots of organizations. By the way, nonprofits and we worked with police departments recently. Police departments have big trust issues. The senior leadership has got to buy into this. If they say, this is fine for you plebeians down the line, but I don't have time to think about culture. It's a big mistake and it really clearly sends a signal. We're still herd creatures, we know who the leaders are. If the leader is not doing this I have a big incentive not to do it either.

Paul Zak: 37:36 I think a lot of the great leaders I talk about in my book, they create opportunities for the rank and file to connect to them. One of my favorites is a guy who ran a number of tech companies called Jerre Stead, and Jerre is a super healthy guy. So, he created this thing called Juice with Jerre. Once a month, he'd spend a couple hours in the cafeteria and you'd have juice and you can talk about anything you wanted. You sign up for time with them, like 20 minute slots. Google does this on their weekly calls, where they save time for people to send in questions from around the world and everyone can hear the answers. Part of their way to build trust is have this great openness and transparency.

Paul Zak: 38:15 So if we're all pulling together, and we have discretion on how we do things, which is the essence of trust, then we've got to know what we're doing and importantly, why we're doing it. A lot of leaders because we're so busy, we're all busy, right? We're so busy when say, we have this new program, we're doing this thing starting tomorrow, and it's going to be awesome. Then you do a survey after the program starts a week later and how much do you like the new program? Everyone, thumbs up. We love this new program.

But instead of you saying, look, here's a problem we have, we have problem with turnover, we have a problem with low productivity, we have a problem with customer churn, let me talk to the people about this. Let's hold it at town hall, let's hold some meetings, let's get information from everyone who's involved in working on that problem. Then the leadership will then make a decision. But when you communicate that decision, put in the why component.

Paul Zak: 39:06 Here's the problem we had, we held three different town hall meetings, we talked to as many people in our organization as we could, and here's the learnings that we took away from that. Here's the policy change we're putting in place to address this issue, and let me tell you why we made this decision. So it takes a little extra time, but now, I've empowered those individuals to have a deep understanding. So don't be a robot. If I'm just telling you, what? You're a robot, right? It's like, here's a new thing, do this. But if I tell you why, I'm recognizing that you're a human being and you're a critical thinker, and you're going to question this, and you want to know what the underlying rationale is.

Paul Zak: 39:41 My least favorite word in business is human capital. I don't know where that word came from, but capital is a machine. You're a human being, you're not a piece of human capital. So to top this off when we start recognizing people who work as human beings, human beings have good days and bad days. Human beings have family lives, they have emotions, then we start to actually understand how to capture all the science that we've done and put that to work at work.

Bill Murphy: 40:09 I love that. I have a curiosity though because I know we're going to talk about tools at some point. Because for a leader to be able to learn about this space and to try to be self-aware to make an impact with their teams, I was thinking, I myself, I bought this heart math – kind of a heart rate variability monitor and I plugged it into my laptop. In it, you can teach yourself through the algorithm of how to calm yourself down and to be in a certain heart rate zone.

Bill Murphy: 40:38 I thought, gosh, that's really easy if you're in the bottom of your basement. But then taking that into the day-to-day environment, it's impractical, but I guess I could plug that into my laptop at work and have some conversations with people and see how my heart variability changes based on the type of conversation I'm having. But are there practical ways that a leader can experiment with some of these from a tools perspective?

Paul Zak: 41:05 Great question. There are lots of tools out there and I'll give listeners a couple of those. One, certainly we create software at Immersion Neuroscience that allows us to work in the background so passively, so you don't have to actually know about this. We can actually guide you on know what you dig at work and then what frustrates you. Immersionneural.com is the site. But also, just to assess organizational trust.

Paul Zak: 41:28 Again, there's so many benefits of organizational trust from higher productivity, less turnover, greater job satisfaction, fewer sick days. There's actually a free survey license to a company called Envisia Learning. If you look at ofactor.com, O-F-A-C-T-O-R.com, you can take that survey and at least get a snapshot of your culture. One of the strongest indicators of whether your culture is effective or not is turnover. Unless you're bribing people into a golden cage, you're paying them so much that they never leave, again, most people do not leave for money. They leave for lots of other sociocultural reasons. So turnover is a good indicator.

Paul Zak: 42:04 If you have to take - when you do your annual survey, you can add in one single question; and that question is, ‘For a typical day at work, how much do you enjoy your job?’, one to seven? So if you're getting fives and sixes, pretty good culture. If you're getting twos and threes, you've got some work to do. So oftentimes, when I come into companies that have culture issues, I say let's start small. These are all management experiments, so if we're going to intervene in the culture, let's start in one area that the survey has shown is really struggling. I'll give one short concrete example of that.

Paul Zak: 42:39 We did some work recently with the police department of Southern California. By and large, a very well run department. But interestingly, in this department, the entry level patrol officers had the very lowest trust. In most organizations, we find that trust levels have a U- curve. When you're first hired you're really excited about the company, and it's all new and happy and shiny. Then, if you're there between five and 10 years, you start seeing all the skeletons. Then after 10 years, you're a lifer. If you're still there, you still like the place and so trust has to go up. So it's kind of middle grounds.

Paul Zak: 43:16 But in this police department, it was the entry level patrol officers who actually had the lowest level of trust. Well, they're working nights and weekends, they're in many senses very much micromanaged, they don't have a lot of control of their lives, and their sleep is all screwed up per regular life. Anyway, so let's create an intervention for these guys. We did a survey, this Ofactor Survey I mentioned, and we identified this lack of growth opportunities, so we called this component invest. They just didn't feel like the department was investing in them. So I worked with this department to create a job shadowing program.

Paul Zak: 43:49 These patrol officers took one paid day, they didn't go on patrol, and they shadowed a supervisor two levels above them. These are frontline officers, so their supervisor is a sergeant, then next up is the lieutenant. They spent time with a lieutenant, sometimes with the captain, and they can see what he or she is doing. They can see the constraints that person faces, what the job is like, why they have to work nights and weekends, how they get out of working nights and weekends, and how they advance in their career. We looked at officers who went through that job shadowing program compared to those who don't, trust in the organization was much higher. The likelihood of leaving in the next 12 months was much lower, they felt more aligned with the purpose of that department, and many good things happened because of that.

Paul Zak: 44:33 Well, actually, that's not that costly to do. You've got to cover one shift. On this case it was about 100 guys over the course of a year, so it's one day's wages times 100 people, which for a big department is not that much money. What they got was greater effort on the job, greater satisfaction, less likelihood of turnover, and hiring for police officers is a lot. They have to go through a police academy, they've got to do background checks. It's pretty expensive.

Paul Zak: 44:59 So again, I think anyone listening can potentially do that. Think about based on your survey or even the surveys I mentioned, what are the friction points that are inhibiting us from reaching high performance? Let's work on reducing those frictions, so that people can really perform at their best.

Bill Murphy: 45:18 That one action really gave them a vision potentially with their future and a vision for a bigger macro story and a narrative going on around them.

Paul Zak: 45:26 Narrative is important. I think that a sense of purpose, why we do what we do, which comes right out of the work of Peter Drucker and Edwards Deming. I think they are the great management guru of the 20th century, is have that purpose narrative on the top of mind. This is why we actually exist as an organization and Drucker and Deming said that, at their core, every organization's purpose is to improve people's lives. So you've got to be super clear about how you do that.

Paul Zak: 45:54 Bill, I was at LinkedIn recently and every group I met at LinkedIn, when I walked in the room, the LinkedIn employees said, "At LinkedIn, our mission is to make our members more productive and more successful." Every one of them said it when I walked in the room. Well, I love that. You can't restate that purpose narrative enough times. And again, both those factors are measurable because they have all the information on LinkedIn. So I do think repeating this over and over and over is really important. We've got to know again, why? We're back to the why question. Why the hell are we here? Why am I putting so much effort into this organization? Oh, because this is how we improve lives.

Bill Murphy: 46:35 Paul, I have really enjoyed our conversation today. I want to respect your time and I want to give the listeners an access to be able to reach out to your resources that you have. You mentioned immersionneuro.com. Did I get that correct?

Paul Zak: 46:50 Correct, yes. Some free tools at ofactor.com as well. You can contact me there. If people are listening, and they have questions they want to engage, I'm happy to engage. Shoot me an email.  
Bill Murphy: 47:01 This is fantastic and I really appreciate you for your time. On the show notes I'm going to put references to all this and your previous material, your books, et cetera. This can be impactful for all leaders listening, and I'm going to thank you for your time.

Paul Zak: 47:14 Thank you Bill, it was a pleasure.

Bill Murphy: 47:18 So there you have it. This wraps another episode of Bill Murphy's RedZone Podcast. To get all the relevant show notes, please go to our blog at www.redzonetech.net/podcast.

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