

And today's episode, we're going to be updating you with some brand new research related to the threat system and the amygdala, but more than that, we're going to really help you apply all that we know so far about the fear system and unconscious defense to help you master.

That's a tall order and we're hopefully going to have fun doing it too. Always before we jump in, we are just a week and a half away, depending on when you're listening to this podcast from our April 22nd 2022 meetup in Austin, Texas. And we're really excited as well as simultaneous meetups throughout the United States and different parts of the world.

Yeah, this has been probably one of the most fun things we've ever done. I, as from my perspective, agree we're getting the meet hosts and then you really create new friendships with folks all over. We've got almost two dozen right now. By the time this plays, I imagine it might be a few more.

Two dozen cities around the world. And I just want to mention just a couple, Wellington, New Zealand was one London that they still have. They have room for more and to get an updated list, just go to [therapistuncensored.com](http://therapistuncensored.com), just go to our website and right on the banner, it'll say simultaneous meetup, but it's [therapistuncensored.com/meetups](http://therapistuncensored.com/meetups). And see if there's one near you. And what we're saying is, brush off the COVID isolation dust and build relationships and build new connections.

Now we're of course not saying COVID is over. That's not what we're saying, but we're going to have hopefully outside communication with these very courageous volunteers.

I also want to mention, we have multiple in Australia, big shout out to Australia. We have a big group there, and we're so excited about that, but also all over the United States, from Colorado to New York, Florida, California, Montana. So yeah, as we said, go to our website or [www.therapistuncensored.com/meetup](http://www.therapistuncensored.com/meetup), and take a look, find one in your city and just show up or go, or, we also want you maybe to email your host so they know they won't be sitting there and whatever that is, that pub or coffee house all by themselves and meet some like-minded people.

Because if you think keeping up with neurobiology improves your relationship. You already have something in common with these people, and we just want to help people build communities and have fun. And for those of you, most of you who will probably not be in one of these locations, unfortunately, we are going to live stream some of it.

So to make it accessible to everybody. So it's going to be fun. We hope you show up either online or in any of these places. And again, thank you so much to the hosts and to our online community. We've got patrons that help produce this show. We invite you to join that as well. If you're a longtime listener, if you refer us, refer to us just jump on to [therapistuncensored.com/join](http://therapistuncensored.com/join)

And there you'll get access to it, ad free feed and just extra content. We do extra episodes and you have unique learning opportunities. There's usually some sort of a reading group or study group happening in small groups is another way to network and to grow community.

And you'll be part of helping us do this, get this material we're trying to really continue our goal of spreading security. One conversation at a time. All right, let's get to it. So let's start first. You had a really interesting interview with Joseph LeDoux. And since then, it's just added to our conceptualization of a lot of different things that we've been talking about and that episode's going to be coming up. It sparked a lot of conversation between us and would you like, what are some of the highlights that you got out of that episode with him first?

Like for those of you out there, including me till I was doing some deep dives into this kind of research might not have that name be familiar to you. Who is Joseph LeDoux?

Joseph LeDoux is the amygdala man, really? And as a matter of fact, he's in a band called the amygdala Lloyds and they've written songs about mental health and stuff like that.

He's really fun. But he is, yes, he's going to be the amygdala expert and he's been studying it for a very long time and has a lot of messages for us. So what we thought is that some of that interview got a little technical, so we thought we would warm you up by just Ann and I talking about some of those highlights, but also just some of our own take on it.

So one of the things that was really exciting from that interview was this research that he's done on rats around the freeze response. So should I just keep going and tell you about it?

Yeah. Yeah. Tell me a little bit about, and then we're going to, for those of you, we're going to actually believe it or not.

All of this is going to really apply to you and your everyday life with anxiety, arguments you have with your spouse with, if those of you that have certain anxiety is this going to be a broad trauma history? Oh yes. But a broad reaching impact. So listen to the technical stuff and kind of what we're going to get out of it.

And I'm going to not do all the technical stuff that can be in the interview with LeDoux where he talks more specifically about protein synthesis and things like that. But some of the highlights that I really wanted to emphasize was one of them was again, this research with rats and what they do is they of course scare the crap out of them by pairing a shock with a tone. And so let me just describe the study for a second. And then you'll very easily apply to. So they train the rats to be afraid of the tone and they can see in their little amygdala at firing up and being frightened, right? So then they let the rats part of where they're standing. They can jump over and they can escape the danger of the threat. So one of the things that he said that I really liked was that every single person has this bell curve of experience and every cell in your body has a bell curve of experience. And it's all unique and all different, even all the bazillions of cells you have even just in your amygdala.

So even though it's a single event, everybody is going to have just a little bit of a different experience. And it's based on what we talk about a lot, which is our experience that then affects the current situation. So most of these rats figure it out pretty quickly and they jump away and they are able to escape the danger, but there's a small subset of rats that basically what would - the first reaction that a rat has when they're in danger of freezing.

That's just similar to us. Just a moment of pause, right? Is to freeze. The rats that could get out of freeze and move again, basically, continue to cope. They got right out of it and they were fine. And each group of rats, again, the bell curve was, eventually people, most of them learned it sometimes very quickly. Sometimes it took them longer, but there was a subset of rats that couldn't learn it and they would just sit there and be shocked. And the clinical point in this is basically what they did was they went in and they reduced activity in the amygdala. So that the next time, what they thought was okay, we're going to calm down.

The fear response center would actually, which is not the amygdala. That's another thing I want to say, but the threat response, we're going to calm down the threat response. And then let them watch them, figure it out. The surprise was that when they calmed the threat reaction, the rats immediately knew what to do. There wasn't a period of learning. They had already learned what to do. They knew they wanted to jump, but they couldn't jump because their body was frozen. And so when you think about all the people, lovely, incredible people that we know and love, and that are just out there in the world that are, that kind of are in a state where that they can't turn off the threat and they're in a freeze response.

This is one of those things that then impacts us day to day and. So studying, and this goes back to things like safety LeDoux talked about per Panadol and, physiological D the activation of the behavioral response. But as we translate it and him, he gave me some license to do that metaphorically, as we translate it. That one of the things, if one of the dangers in trauma is that we get stuck in the freeze response. So basically moving into action, even if that action is to avoid, that is a healthy coping strategy. Get away from the shock and get away from the danger. So this to me has really interesting implications for dissociation, for the treatment of trauma, things like that.

It's stuff that feels intuitively we're generally doing it anyway, which is we're trying to help people have more management over symptoms like dissociation and freeze. This sort of re-emphasizes the importance of and I hope also reinforces the less shaming aspects that we get associated with.

We know what to do when we get stuck and we don't do it afterwards. We can really have a really difficult time integrating that. And I love the example. You're giving that these arrests didn't know what to do, but until their amygdala, till their threat response calmed down, they couldn't move into actually.

Yeah, they were, their motor systems were, motor systems were impacted. They were literally frozen. And when I really thought about that, I just had my heart just opened up around oh my gosh, it's just painful. It's just so painful. This also speaks to body therapies and somatic therapies which with this brand new article we're also going to talk about today really points to somatic therapy again.

And in that episode, I really love that. He ends up talking about it. Ways to use this information to really integrate change in the body. I was pretty shy about doing that, but I wasn't, so he corrected me several times. But that's good. Cause he was, he's a scientist talking about his actual research, so that's good, but just two other quick highlights.

One was, we talked about some of his early research of memory reconsolidation and we've had Bruce Eckert on previously. And again, many of you have trauma. The trauma will be familiar with this, but I don't want to necessarily go into the details of it right now, because it will be fully in the next episode, but it reemphasizes this notion of healing trauma.

That you actually can affect. Basically, it's a protein synthesis issue that as you, as the memory comes up and you have a different experience, whether it be ideal parents, whether it be the treatment, whether it be even like a surprise that it literally does change that original. That it shifts the way that the memory is stored.

And as Ledoux has more of just regular life, like you can look at it. EMDR. We hear about that a lot with EMDR that what it does is it moves it from the trauma center where when you remember you're just in it to a more. Autobiographical place where you can, you still remember it, but you don't have the physiological arousal as you remember it is because you're pairing more positive associations, more positive memory of the present moment, whether it's with a therapist or to like your, I think it's what you're saying, right?

That it ends up being able to pair and then it gets reorganized by. Positive experience or a different experience in the moment with that body reaction to the trauma?

Yeah. It doesn't even have to be positive, I think, but of course we would want it to be, but to me again, if we just go to the physiological, it's like, there really is this little say chunk of a trauma memory.

And I'll just use myself, that I have one of these and I used to in therapy, if I would even get near it, there's a sort of this area. If I would even get near it, I would get. Disorganized and just ah, like my thoughts would clutter and it would be very uncomfortable. And then what I would do is I would get myself out of it.

I'm like, oh, this feels terrible. This isn't helpful. I'm not going to do that. But what I was doing every time that I did that was I was reactivating that negative physiologic physiology. And so that when this trauma would store again, it just reinforced yep, that's really dangerous. Don't look in that direction, stay away from it. Which was a mistake, we don't want to just stir it up and then have it go back down as the same experience.

I could also add to more of a traumatic experience because you start to really reinforce, oh, when I really go into that experience, I'm on my own. You're on your own. You experienced a trauma response in your body and it feels so. Versive in the current state and then you need to push it down and see, it just becomes additive, right. And physiologically additive. So that every time that I reinforce the fear and then the cutoff, the dissociation the, putting it away that then it just made it more and more ripe for that negative physiology.

When I got near it again. What's great about this is that it explains some of that, but also what to do about it, which again, you were going to point you to the memory reconsolidation and we'll keep talking about it in today's episode. And there was one more thing. Quick thing I was going to say, I think it's an important one.

I'm glad you're leaning off at the end, because I think we're talking a lot about that and that is that kind of the difference between fear and threat. And I think you were going to talk about it. One of the experiences of that fear in amygdala connection. Yeah. I think this is going to help us translate.

One of the things that's very important as the amygdala has been confused with the fear center, a lot of people talk about the amygdala as the fear center that is inaccurate. And I don't, I think, and you and I have done a pretty good job of not using that language and not saying that it is a, it is part of a threat response system.

It's not the whole thing, which we'll say more about too. It's part of the threat response system. And what's important about that? And this gets into the fun stuff of that. When someone is in, an, in an insecure state, whether that be that they're being in a dismissing state of mind or in a preoccupied state of mind, It means they are, their threat response system is active period.

It has to be. That's why they are, that's why we are either preoccupied or that's why we are avoiding something or being dismissive. And okay. But if you were to say to me, when I'm perky, let's say if I'm stirred up, if you were to say to me something like What are you afraid of?

That would not resonate with me. So like when you're sitting with someone that's upset and they're doing their thing, they do, when they're upset most of the time, we're not gonna, they're not gonna say they're afraid. It isn't, that isn't the conscious experience. So this isn't just semantic.

Basically what happens right. The amygdala does its little. We think of it as like the squid squirt, in the black ink coming so that they can get away. It's just physiological. Message that causes a cascade of things to happen, but basically it gets our defense system going. If it is, the texts threaten only much later, by the time it floats into our higher mind, and then it's in our non-conscious thoughts.

And then eventually it comes to a conscious thought and we think. What a jerk. I can't believe that person did that to me or whatever. We tell the story to make sense of our big reaction. That's why it's very important. So fear is a cognitive construct with an emotional component.

And you can define it in different ways. But one of the things we're saying just as you're working with someone on this, is teaching them. A moral it's theirs. It's not good or bad. It literally is just, oh, that I think of a puffer fish or something, or those fainting goats that just, they fall over. It's not moral that they do that. It's not weak or anything. It just means that their body perceived threat. And they did the thing that you do when you're in threat.

Yeah. No, I liked that. Yeah, you do. It's not amoral. It doesn't have a moral, it's not good or bad, it's not good or bad. It's not good or bad.

Yeah. It doesn't have, it just means the body's under there. There's, let's talk about why that, why, if you're out there, like why should this matter? And you've already touched on so many wonderful parts to that, but I think sometimes we try to make cognitive sense. Of our emotional response or our body's response.

And if we're not actually experiencing something we don't know that we're having a threat response, we're often then looking at what's happening outside of us and interpreting what's going on in our body. Like we're seeing what's happening and we're having a body's response to that threat. But we don't have a cognitive awareness of that or an emotional awareness that I'm afraid our body responds to the threat where our heart rate goes up, our pupils dilate, and we feel that, but we so often don't know her feeling that right.

We don't know that we're feeling threatened. So should we give an example? I love that. Yes. So one of the things, even though we teach this stuff and we. Decent therapists that help people with stuff. And we're decent parents, I guess that, we can do it in one state of mind and it's very easy, even as you're listening, it's yeah.

I know that. I know that, but when it's you, that is the one that's activated, all that stuff goes away for sure. And so like with Anand, I like it if I begin, if my voice begins to go up. Of course I'm responding to something. I think I'm doing that for some reason that some offense or whatever then it's going to trigger your amygdala reaction, right?

Again, morally neutral. It's not bad. It's just all of a sudden now you're responding to this non-conscious experience. You're not aware that you just got to. And that I got a squirt of threat. Like I'm not feeling afraid. If your voice goes up, I'll feel irritated.

I'm feeling like, like I don't have this conscious awareness that my threat response went off. And I think if there's anything that you can take from this episode today, that's the. That one of the ones I would want you to take is that you're not aware of your threat response. You're waiting for it to have some emotional salience and some intellectual salients, but your whole body is responding.

If your voice goes up and that's going to be based on different people, some people's voices go up, it doesn't have any effect. My history is such a voice goes up. Early learning experience, et cetera. In my body it's been automated. I have an automatic response that feels threatening in my body.

Yes. And then when it gets really tricky, I'm just using this example a little further. Is that because at that time you're not aware that you've had a little squirt of a quarter of your fear responses, right? Your threat response system says danger, then your voice is going up and you're making movement.

That to me, I see as dysregulated. And then therefore I get my little squirt, which it would probably there was already squirting, but then I get my little squirt and all I know is you're overreacting to me. Yes. So in my conscious brain, I'm just like what? I didn't say anything. And now she's getting all animated.

What's wrong? And on your side your conscious brain is saying, no, I'm feeling really screwed over here because you started it with your raised voice and that's obvious. And you're just responding neutrally for you're you think that you're matching me? Yeah, I'm like, yeah. And yet I don't realize that my hands are starting to activate and I'm showing my motor system right.

But my voice will because my voice will go up in this unconscious way. And I don't even think I'm fearful. I don't think I am, I'm just, I actually don't even think my voice is going up. I am just trying to respond. I don't even know that the most important part is that I'm not aware of the activation.

In my own body. All I can see, and this is why our bodies have been trained to do right. We haven't been, we've talked about this before. We're not trained to be introspective when a threat is happening outside of our body. We have to have an automatic response and to get that threat away, to fight with that threat or handle the threat, get out of this.

And so our body already starts moving. I'm already starting to use my hands, or my voice is going up. And not only that, it's now communicating to you that I've done something terrible. Yes. That I'm in displeasure with you, which then is going to activate your entire nervous system if you've done something terrible.

How does that relate to your own internal working model? And then another pro tip here explaining in that moment what you meant or how you should be seeing. Not very effective, not effective at all. And why it's because I'm a left brain cognitive process when what's actually happening is a lower limbic system.

So Ann's move was the correct move. If my, if I'm beginning to get wound up, is to move towards safety with me to help me be like, oh, oops, she's good. Yeah. There she goes. So soft face, soft eyes. And again, this is stuff I know that we've touched on some before, but the smartest move would be to calm down my threat system.

And the reverse is true too. If I see some of Ann's tells as she begins to get wound up. Rather than explaining what I meant or whatever, and so rather than feeling misunderstood, my better move would be actually there's two things, right? This is something that we just talked about is one, rather than trying to get my awareness away from her and more to myself, how am I doing?

I was really glad you went there first because we often talk about oh, if I can start showing soft faces, like you didn't do anything wrong. It would calm you down. But the most important point is I have to be aware that my body just ticked up. I have to be aware that my hands are starting to go. My voice went up and instead of thinking, what is, who just does to deserve that, which is know all of y'all can relate to this.

I don't know anyone that can't relate to arguments with a spouse or a child that gets in a friend or a friend that doesn't get into. I did that before. And I wouldn't have done that. And like we, and we talk a lot about that throughout our podcast. But I think the thing to add today is the part about noticing your own uptick in your own body and to recognize that it is hard y'all oh, it is.

But it is because it's an unconscious process, but here's the question is if you start to find yourself in this tit for tat, that's what I think it's easy to describe as a tip. No, but I went up, but you didn't, you did this, but I did this between two people, right? You're like stop and say, Hey, wait a minute, give myself a break for a second.

Just say, what is the threat? What is so threatening about what's going on? Ask yourself what is so threatening. Exactly. Don't ask the other person, don't ask. Yeah. That doesn't go away. But if you go, wait. It just like your own mind. What is the threat? And it's a different question. What is making you mad or what is making you mad or any.

We can look all day to the other person who can explain why we're mad and angry. Absolutely. But I love that because, and it actually works pretty well. If you were to say, what's the threat to. Because we're a little practiced. It's actually, I find that very helpful because it reorients me back into myself and it's also basically making a point like really, it's probably not as threatening as your body is experiencing it, but that move from orienting outward and trying to understand what's happening with out there to moving inward.

And to really be aware of the little uptick and be curious about it and be caring about it. That's, that is a master move and whether it be mindfulness or therapies and things like that. But I can tell you people who teach mindfulness and your therapist and people who are really good at teaching this don't necessarily have this down.

That's so true. So we are all, every single person listening is we're all in it together that we have these animal bodies. And when that gets activated, most of the time, It we're wired right. To go outward. And the new thing that we keep emphasizing is that what we want you to do is go inward. get and just notice, even like the hands on heart okay. Because it's just that question, when I think as your arms get going, I begin to get nervous. I don't feel nervous, but I just begin to fear. I think that's the

importance of the distinction between the amygdala. Not necessarily waiting for a fear response, because if we think that the Migdal is all about fear, when it's actually. Getting all of the census from our somatic system from our gut gets direct information from our gut, right? This fluid intake to our gut, et cetera, our amygdala gets activated. We're not feeling fear. Our body's put in that defense system that we talk about and it isn't fear.

And yet our body is in a threat response. Hey, can I give an extra. A really great live example. We're always giving examples. You're really good about giving examples of things like, when you get threatening and how I'm responding to you.

Cause that's just BS like this morning when we're getting ready for this podcast. I hadn't had. And about one 30 in the afternoon it was morning. It was one 30 in the afternoon having eaten. And I'm not really recognizing that's probably sending signals to be clear. That was intentional, right?

That was intentional. It's not self neglect, so I hadn't eaten yet, but they're getting ready and I can't find the earbuds to do the appropriate soundcheck. We're trying to get ready to do the podcast. I can't find it right. And I look and look, and I'm getting more and more frustrated and more and more frustrated.

And I start to get much more verbal about that. And I'm like, oh, you're not. I'm like, ah, and I'm expressing it. And I think it's a combination between I really was ready to get going. I was like all these things. So my body starts to amp up and I start to verbalize this out loud and start to give it a diary of my stress, which is.

Not super helpful. And I'm like Irv river and I can't find them, and I'm just getting really animated. Ah, I'm so frustrated. I've looked everywhere. What you did was awesome. And it wasn't like some complete, mindful Buddha moment, right? You said, Hey, I can't remember exactly, but you said, Hey, could we not? What did you say? Can we not narrate what's going on or something like that? I'm finding myself, I am already stressed.

It's just increasing my stress. You said it was very caring. It wasn't judgmental, but you owned your own stuff. You own the fact that my narrating, my stress. Of course through mirror neurons, et cetera, was starting to amp your body up and that's not helpful. And instead of going, would you stop doing that?

You said, Hey, could we put a pause on that? Because my body's starting to get active, and I really am trying not to do that. And I was like, oh yeah. Okay. It was like, I think I need to eat. And it was, but I love the way you did it because you just identified that while I was doing that, it was amping your body up, but it was not through any judgment or stress or, it was stressed, but you just clearly own.

That you could feel your body amping up. There was no judgment in it. It was just, I, my body's amping up and it really worked well. What's interesting. If it wasn't I you're making me sound even nicer than I really was probably, but meaning that that what I was aware of was getting was feeling it.

And actually, I think what I said was some, I don't remember what I said, but oh What's good about this is that I actually, I think what I said was something much less nice than what you just said. If something like you're stressing me out or something like that, or you speaking this out loud as stressful, that's what you said.

And then I out loud, you didn't J you just, you speaking, you narrating this. Stress is creating stress on my body, but something stressful. And then I moved out of the room and went and did something, not upset with her at all, but just, I was like, it was just it, I think that thing about it was not that I said anything, all that nice, but that I said something about myself.

Yes. And I took care of myself. Yeah. Because I could feel myself beginning to ramp up around did I need to jump up and start looking at just a little bit of activation. So what's good about this? You guys, for those of you who are not very very skilled relationally, and that would be me that you don't really even have to do it that well, that when you keep the focus on you, it really is effective in the sense that one, it leaves you with the aggression in a way, right?

Like you're the one that's stirred up. But that, but also I'm taking care of myself, my oxygen mask on me first. I'm going to keep my regulatory system calm and then I'm going to be in much better shape to help you. Oh, absolutely. Yeah. You stay because if I go at you trying to help you would you stop?

If you started telling me what you will find or would you stop? Because then what you're telling me is. My activities are bad. It comes with some heavy weight to that. That then is increasing our entire threat response. And what happens for different people that also, if you anticipate these kinds of things, we're already going to be acting right.

That's the story. That's another thing about Luddu. He was really focused a lot on the implicit narrative and that's why he was focusing so much on early experience. So that part's really interesting too. Jives really well with the stuff that we're talking about updating your narrative into a more accurate, compassionate narrative instead of the old implicit stuff.

But you said something earlier about the somatic stuff in the gut, this new article, just to move us along here. If I can be sure. This new article. Just published in March, 2022. So that's really very brand new. And what it talked about was not only the amygdala, not the fear center that it's not even the threat system.

It's not even the whole threat system that what they're finding and. Shall we cite the w the article is going to be linked to. The last name of the author is Li L I, and there's at least two articles. This is a followup to a previous study that basically where they found where fearful memories were stored was in the sensory cortex, not in the amygdala.

Which is a huge thing. If you think about it all, our sensory cortex holds so much of our memory. Why would that be right to protect us? Because it bypasses we can respond so we can have that threat response become automated. That's true. And they didn't say it like they couldn't find it in the amygdala.

They really found it in. It's basically a more sophisticated part of the brain. It's a higher up, but it also is in all the senses. But they particularly talked about the olfactory system, which was pretty interesting. So this is so new that I, one of the things that, one of the possible things that can come from this as people with PTSD or with a severe, being tortured by generalized anxiety, that there can be new interventions.

To do, to take care of the physiology. When we now know a little bit better about what, where it's stored in a different place than we thought, and intervention can happen in a different place. That's some of what you guys are going to talk about. It's definitely stored and impacts us.

It'd be interesting to really talk about the meaning around that. And that is what is store? Cause we talk a lot about attachment. What gets stored. In our body, through our senses has a lot to do with our early experiences and our early memories and in our internal working model. And so our bodies are prepared for those kinds of things.

So that one thing that should be sensitive to that similar to that is a lot of, there's been some pretty interesting old and recent research using fMRIs, et cetera, looking at the amygdalas of the different attachment styles and the. There is an impact when we are looking at emotional faces.

Our amygdala is activated when we are, and our hypothalamus, when we're looking at emotional faces. So we're going to be assessing that emotional face. Is that threatening or not? And what's so interesting is we're going to see like the individuals with insecure attachment, both avoidant and preoccupied or anxious attachment, have a heightened amygdala response to emotion.

So that doesn't mean that they're aware of anxiety. Does it mean that they're aware of fear? It's just that in an engagement where an emotional face happens, especially like that there's a heightened feeling of threat and ready to respond. So when we're in those activated internal working models and we see a threatening phase or we see an angry face our bodies are going to get activated where we are, whether we know it right.

Okay. So I found the reference real quickly. It was published March 23rd, which is like yesterday, practically 20, 22 in the journal Current biology. And we'll definitely link that. It's really interesting. But the general gist of it is that the threat system is not the, just the amygdala that it really is a.

Full circuitry. And that the long term memory, fear memories will be in the sensory cortex, which is again, new and different. I'm gonna read you something from it that I don't know exactly what it means yet, but we're gonna keep learning, but basically.

And by the way, these circuitries are related to folks that have generalized anxiety disorder, that in other words, there's a hyper activation of these particular parts of the brain. So if we could figure out how to calm the sensory system down, which to me goes at least most immediately to somatic therapies and body oriented, bottom up therapies.

But it says pattern differentiation and tuning shifts in the sensory cortex. Now I've looked all this stuff up. I'm going to have to either contact the author and get them to translate it for us. But there'll be some of you guys that are way smarter than we are, that we'll have a sense of what that means.

But basically it's a sensory-based fear pathway and they said it's rooted in the primary, all factory cortex. Jives with something else you mentioned this morning about smell.

Oh, I, I've I love where we're going with this because we're really talking about the unconscious unaware process. So those of you other than, oh, I got myself down, really open up to most of our audience.

I don't think things can wait, taken. Yeah, no, there's a fabulous, there was a study I read recently out of Stony Brook, New York university. And They really proved that the smell, that is, that we can smell fear or we can smell our response. And so this study's really fun. And when to geek out for a second, so what they did is they put.

Under the armpits of a group that were first time jumping out of an airplane. So my you've done this. I haven't thought of it very much. I can already feel myself sweating, but what they did is they took the excretions of what happened for the first time jumping out into the airplane. And you might imagine that we have some fear response happening.

They took these same subjects and we got their sweat names on when they are their sweat response when they're just running on a treadmill. So no threat response, but perspiration, and they won't give the details of that, but they gave those different smells to a group of subjects that were unaware.

They have no idea. What, this is what this research is about, why they're in an MRI and what they found when they could not smell the differences at all, reported no differences, but they had a higher amygdala and hypothalamus response to smelling the fierce. The sweat of the, then they did when they had just the running.

So their brain actually the amygdala and the hypothalamus got activated, no awareness. They're not experiencing fear. They have no awareness. The smells were the same. So that is such a great example about how our body is responding to threats with no awareness. If you're not experiencing fear, they are not experiencing fear.

I love that. That's so interesting. So we're smelling fear. In couples or with your children and you have this fear that they're going to get angry with you, you're already experiencing fear and sending these messages to your partner, your child, your pheromones, your fair moments.

And so then when they're ready to respond, we're just really bringing out this idea, highlighting how much our body is responding to threats without our awareness. Yeah. And again, this is something that everybody will say yeah. We know. But what's, I think the harder part is that it's true for us too.

Yeah. And we can't, I love the, where we get pushed back the most is oh really? My childhood has nothing to do with today. Oh, come on. But this kind of neuroscience research. Just re-emphasize what we understand about implicit stories and cognitive unconscious narratives about ourselves in the world?

That this is all part of, it's all going on under our awareness, but it's very much driving our perceptions and our expectations and our behavioral responses. And we have no idea. So the action step here is to get more curious. To let go of your narrative a little bit too. I get really curious about your own personal history.

Like what have all the cells in your body experienced over and over so that they're anticipating and creating a narrative about what's going to happen. So what experiences in your body threaten your body? And if we bring it back to attachment, right? Like research has found that.

Attachment and fMRI studies with different attachment styles have shown that our sensories are going to be impacted and like visual images. So our body seeing emotional expressions in others is already trained. We're trained. As animals to see your emotional expression and interpret that. Is it threatening or is it not, are you going to be smiling at me?

Are you going to show a disapproving face that communicates to my body threat? But what's interesting about that? Is it insecurely attached? Both avoidant and preoccupied, insecurely attached will be more highly activated by emotional expressions in somebody's insecurity. So that we're all amygdala are all going to be responsive to that, but an insecurely attached, internal working model. And I would also say state of mind, you're more likely to feel the face of another human being as threatened as threatening.

So think of it as that, like you have under your nose without awareness, the perspiration threat, the skydivers perspiration that is just we used to talk about it, like with jaws music, like the background is that there's something scary and that, that impacts then how we perceive how we interpret events.

And there's literally no way to be like the unconscious is unconscious, so we can only. Point to it and in a way you're going to have to just trust us on this. Because we can't, it's like we can't see the, our own unconscious, So let's talk about what to do even in this situation.

Let's talk about what to do about it. If we know let's say being preoccupied, I'm going to over re. You're our example to begin with. If I over read your expression, my body sees that as threatening or your voice goes up, and my body is reading that as threatening, by being aware that we have a bias, it really helps us.

One of the suggestions is just to slow down and instead of focusing on okay, wait, what is the threat? What is the. Here really, to me, let's say I've done something and Sue's really in disapproval of it. What is really the threat and asking yourself that question again, getting it back down.

Like I often experience, I think that's a good takeaway. I experienced that couples will often say why don't you talk to him or her about it? She'll get mad. She's going to get angry. The next step is not to turn to the other person and say why are you going to get angry? It's to say what is so threatening about that?

What is the threat? If he, or she gets angry? Because if we bring it again, just to tap a little bit back into attachment is if your attachment memory is. If you have intense emotions, sadness, or whatever actually creates in your attachment person, anger or irritability, or withdraw your body and code that is a threat.

So somebody gets emotional, too emotional or too disapproving to be in quotes, to being right. So if you experience it, the feeling of threat is I'm going to be abandoned, but like it's an unconscious threat. And if I asked myself consciously, okay, wait, what's really the threat. What is the worst case, what is the threat?

And I can stop and say, okay, if you're mad in the very big moment is that really that threatening? So there's ways to really then in, in code okay, wait, what is the threat for me? What's the threat for the situation? And it really can diffuse it because it really, you can station your body in that moment, feel the grounding of the floor and bring yourself in the present moment.

Then you're less likely to be responding to this. Internal working model sense of threat that you're not recognizing, you know, one other maybe anchor. I love that question as an anchor that you're asking yourself, what is the threat? Another anchor is anybody that is familiar with the Jill Bolte Taylor work and the four characters.

Maybe we'll evoke that memory of that. And if not just check out that episode, we'll link it as well in the show notes, but basically her work is doing the same thing we're talking about, except that she does it in metaphor of characters in the brain. And so basically what you're seeing is.

That as you get threatened, in other words, your character too begins to get active. Then we want to call on some of the other characters, the other parts of our mind that can create safety for that character to be the same. I love that's the exact same thing. We're just, it's just a different language. I love that.

Yeah. Yeah. And just the awareness can take the thread out of it. And also realize one other point I know we need to wrap, but if we think about it, if our senses. Are so important to the sense of threat. They are also extremely important to calming down a sense of threat. So bringing senses into it, to like being aware of the sight of the moment.

A lot of somatic experiences are about looking at the room in the moment, bringing your senses into the present moment, smells in the present moment. To really calm your body down is that I should really like, okay, so

that's three T that's three anchors. Okay. Yeah, because what you just did is you went back to the body, which there, what we're figuring out is that's where that fear memory is. So by using your present experience in the body, that's memory reconsolidation it's true, right? Like you're both feeling the anxiety that is the historical, but then by grounding in the moment and really grounding into your belly or into your stomach or into your cheeks or wherever, or even orienting all the orienting exercises.

That you're then having a different experience. You're not just recycling that old memory that you're really messing with so that when it stores again, let's just say the three anchors. I'll probably forget them already because of my add, but the first one was the question asking yourself, what's the third.

Ask yourself, what's the threat? And then going a little bit deeper into that, because you can say, what is the threat is he's being, she's being, what is the threat? If somebody's angry, what's the actual threat is the actual, is it actually danger because it's a difference between feeling threatened and discomfort.

And we tend to pair that we don't like, if we feel discomfort in our body, right? We might pair that with threat, but what is actually the threat? I don't like somebody being angry at me, but is it actually threatening? So what is the threat? And That leads to being more internally aware of your own body, responding to your own voice, going up your own hands, being raised.

And then I guess to add one that you did also self reference, like I'm feeling a little stressed out with your raised voice. I need to take a break rather than you being too much. I'm feeling stressed out. I need to take a break. Really helps deep pathologize it between two. So that's why though the anchoring is what's the threat, what to do about it.

We also saw, talked about the census and brought it in at the moment. A part of the memory reconsolidation is being in the moment with the activated state. What was the third one? It was the one where it was the second one, actually.

What's the thread, the sensory and the present moment. Wait, we had it' cause we said smells, it was something I said, Was it just the narrative?

Yes. In the near what? The narrative and the third one, let's just say that there, third one is you have to update your narrative. Okay. Cause if you keep saying, yeah, And then the third one you were talking about, like updating your narrative, update the narrative into a more realistic present moment rather than Sue is so scary and mean.

The current narrative is when. I get really activated when a voice goes up and I start elevating, like changing the narrative. I'm fine. If we're angry with each other, it is not a threat changing the narrative to a place of more secure relating.

Yeah, exactly. And again, you can hear the complaint, it changes from the threat to the compassion. Like even if She's upset, everything's still going to be okay. And even if I feel threatened, I actually have this capacity. I can. Do all kinds of things to protect myself. My life isn't in her hands. I'm not actually danger in danger.

And that is an important, empowering, powerful position. That's going to put you right in the green, the balance between thinking and feeling you've got this, and then you're pairing then the positive. So if your body's stressed out and you start to pair the positive then you have a positive pairing, which will calm your nerves, your nervousness.

So you would think that we would have this all figured out, but I think it's pretty clear that wherever we are works in progress, just like everybody listening. And we appreciate that. I think that's why we all get along together pretty well.

Thanks for listening. And you know what this is, I hope it's set up for the really gonna enjoy listening to the more scientific part of the expert Joseph LeDoux coming up in our next episode.

And hopefully you're going to learn even more strategies through their conversation about what to do with this kind of information. All right. So thanks for listening. We really want to do a big shout out to our Patreon members. The patrons and our super cast are literally the core of what brings these episodes to you guys there.

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