[00:00:00] **Christine J Ko:** Welcome to a special bundle of SEE HEAR FEEL podcasts, available for one continuing medical education (CME) credit. This podcast covers concepts in cognitive psychology that I believe are important to the practice of medicine, healthcare, and doctors' and patients' relationships. There are over 80 bite-sized 15-minute episodes on streaming platforms. This bundle includes three episodes, the first with Dr. Marie Angele Theard on the growth mindset, the second with Drs. Kyle Harwell and Jong Sung Yoon on deliberate practice, and the third on gut feelings and emotions with Dr. David Caruso. He also talks about how we can all use emotions as data, and we can use the concept of deliberate practice to practice doing that.

Dr. Marie Angele Theard Part 2

[00:00:48] **Christine J Ko:** Dr. Theard was educated at the University of Illinois, where she also completed residency. She went on to fellowship at Washington University in St. Louis. She is certified by the American Board of Anesthesiology, and she's a member of several societies in anesthesia, including the Society of Education in Anesthesia, the American Society of Anesthesiologists, as well as the Society for Neuroscience in Anesthesiology and Critical Care. For that latter organization, she is on the Board of Directors. She's currently working as a neuroanesthesiologist in the Department of Anesthesiology at the University of Washington, and she's an Associate Director of the Education Training Core at Harborview Injury Prevention Center in Seattle, Washington. As you probably noted from the prior episode, if you had the chance to tune in, education is very important to Dr. Theard, and partly why she's so interested in the growth mindset and has an article written on it that I think would benefit really all physicians as well as trainees to read. That link will be in the show notes.

In the first episode with Dr. Theard, we focused on the general definition of the growth mindset versus a fixed mindset, and how these different mindsets can really affect healthcare, medical education, learning, and daily practice. This episode will focus more on specifics of what the growth mindset really looks like in action.

[00:02:11] Welcome to Angele.

[00:02:13] **Marie Angele Theard:** Thank you, Christine. Nice to be here.

[00:02:18] **Christine J Ko:** I love how you have really used the growth mindset to help with education of the next generation of doctors. Can you speak a little

bit about what emotions you think characterize the growth mindset versus the fixed mindset?

[00:02:30] **Marie Angele Theard:** When I think about the fixed mindset, I think of detachment. I think of fear. You're trying to keep that space between anybody new or different from you. And so you stay in your lane. The growth mindset is just full of warmth. It's about engagement. It's about getting in there and really getting involved. It's giving your all to take care of a patient. It's giving your all to teach a resident and really trying to understand them so that you can do the best job you can to teach them. So it's about work, the growth mindset, a feeling of engagement, of hope, of a glass half full, and understanding. The growth mindset is just very big. When I think small and simple, I think fixed mindset.

[00:03:18] **Christine J Ko:** Yes.

[00:03:20] **Marie Angele Theard:** That's how I feel when I think about the two.

[00:03:22] **Christine J Ko:** Perfect. I like hearing it in your own words because I realized that listening to people speak about an article they've written through this podcast has really helped me understand and digest on a deeper level what I've read. There's a wonderful table in your article, and again, the link is in the show notes, where the fixed mindset is being contrasted with the growth mindset. You do have that written in, that the feelings that characterize a fixed mindset are fear, shame, avoidance, and dismissiveness and detachment; versus the growth mindset: the feelings are courage, self-compassion in discomfort, curiosity, supportiveness, and this feeling of being able to be a change agent. That speaks to that glass half full; we can each do something. Can I ask you what you think about emotional intelligence and how emotional intelligence might help move us from a fixed to a growth mindset?

[00:04:19] **Marie Angele Theard:** Emotional intelligence is actually very important and very helpful because espousing the growth mindset, you have to be able to understand and manage your emotions because things happen. I work in the operating room, a very fast paced, a very dynamic environment. As a faculty educator, I think we're leaders in that space and we have to respond, we have to respond. We have to be able to manage our emotions. We have to be able to communicate effectively. We have to be able to empathize and understand. We're all going through a lot in medicine that is hopefully going to allow us to all emerge different and better. Everyone's experiencing growth. You have to have some patience and some empathy to understand and make room for that. It does mean overcoming some of the challenges so that you can

deal with the conflicts in the operating room, which are not minor, unfortunately.

[00:05:11] **Christine J Ko:** Absolutely. I recently spoke with Dr. Luna Dolezal who is Principal Investigator in the United Kingdom for the Shame and Medicine project. She focuses on shame in medicine and how it's at all levels, including in medical education. She's worked with Dr. Will Bynum, who's at Duke University, who also has been looking at shame in the learning setting. I think it's beautiful how the growth mindset can really counteract shame because in speaking with Luna, I realized that, yeah, I felt shame many times and the problem with shame, or at least, the problem for me with shame in the past is: I just want to run away. I don't want to face it. So then I don't want to face whatever caused me to feel shame. For example, if it was a mistake, or something that I don't know. Of course, it's going to benefit me to learn from that mistake and learn how to not do it again. Or if it's something that I don't know that's important to the practice of medicine, the practice that I have, it would only benefit me, as well as the future patients that I see, to be able to face that. It all connects, these feelings of shame or disengagement versus courage and curiosity; being able to interrogate, well, why did that happen? Why do I feel this way? What can I do differently? Can you give a specific example, as you did in your table from the article on the growth mindset in action in healthcare, or maybe a fixed mindset in healthcare, and help listeners picture how that looks?

[00:06:47] **Marie Angele Theard:** When you're doing something like this, you start to really think about your space, and the space you occupy, and the people that you deal with. All examples of the fixed mindset are opportunities for change. There are a couple of examples in fixed mindset. Two residents that were actually phenomenal. One was their ancestry or their ethnicity was Chinese, and another one, their ethnicity was African, actually Nigerian. Some faculty educators saw the gentleman from China as just difficult to understand, the accent was hard. There were comments about, "I don't know what I'm going to do with this resident. I'm just going to try to just let them keep going through, because I have no idea how to really find a way to understand them. It's too much effort. I can't do it." So just pass them along. I remember being on call and hearing this difficulty, and it's the same for this Black resident where there was this idea that, "I just don't think that they're ever going to be really good".

[00:07:45] And so as a new faculty in those spaces years ago, I am left with, what do I do? How do I deal with them? It made me ask some questions. Can you just tell me, so I know what to watch for? It led to a series of really good conversations. I was really very pleased to be able to compel them to engage on

a different level, and together really think about how do you approach these learners and how do you find a way, through understanding. It was interesting, days later, the same trainee, the first language was Mandarin; days later, we engaged a patient and spoke to that patient in Mandarin. Being able to 1) acknowledge some of their challenges, but now you're actually empowering the resident by saying, Oh wow, it's great. It's wonderful. Here you are. You're able to engage. Taking that time to understand and see what this resident can contribute, you went from this space of just passing them through, just not really wanting to engage. What I saw happen, which I really enjoyed watching was being able to see the strengths that this resident had, and you see them also evolve and become more confident.

[00:08:55] There's a lot of work in the middle where you have to really take the time to understand and have a plan for affecting things. Another instance which touches a little bit on the importance of emotional intelligence is there's a constant kind of bit of a tug of war between surgeons and anesthesiologists in the operating room. You've got this drape that separates us, and, we oftentimes don't have a name. We don't have an identity. We're just this "anesthesia". And I remember a member of the surgical team asking for the table to go up or down and saying, "Anesthesia, up or down, if we could get moving, we could get this case done." Then they made this comment. "If your boy could just get the bed up, we'd be..." And I remember pausing. He was talking about one of the anesthesia trainees who was a man of color. And this thing, this statement came out, "your boy". For members of underrepresented groups, particularly African Americans and some members of Latinx population, "boy" becomes a very derogatory term from a time of pretty intense patriarchy. I could see in his face, this member of the surgical team, in two seconds he saw what he had done. There was definitely like, *Oh, my God*. I'm not going to ignore it. I'm going to address it, and actually start the work right here. "Okay, there's no boy here. There's no "boy" that gets admitted to medical school, becomes a resident, and gets to become an attending. These are men." I just gave the definitions of where we're at, and he was so quick to, "I'm so sorry. That should never have come out of my mouth, that it'll never happen again." It was very quick, and it was very professional. And then you're not done, because now you have to engage the trainee. You have to be able to give them an opportunity to unload, to be able to free themselves of this feeling that they have. So you need to give them a space to talk about it.

[00:10:38] There's so much work. There's quite a bit of emotional intelligence, but there's a lot of self-reflection and really thinking.

[00:10:43] **Christine J Ko:** Yes. The table is amazing. The great thing about is it looks so simple on the surface, and then when you really look into it, it's very deep and complex and covers how to move from a fixed mindset, which I think really does characterize a lot of the medical culture that I've been in, moving towards a growth mindset. It shows that each of us can make a difference. There're system problems, of course, and institutionalized issues as well, but we can really each make a difference. I find that really exciting and important.

[00:11:16] Do you have any final thoughts?

[00:11:18] **Marie Angele Theard:** One more thing about the table that I really like is it gives you a little bit of a play by play at a lot of different levels that we're in. As faculty, we have many different roles. The table's really applicable to the different spaces that we occupy within medicine.

[00:11:33] I've had the opportunities to learn at University of Illinois in Champagne, in Peoria, in Chicago; in Washington University in St. Louis. I've had the opportunity to work with some great educators in my career, and for that I'm extremely grateful. I think the growth mindset has really helped me to characterize my experiences to understand what I bring, to understand what we can all bring, and to understand where I can do better.

[00:11:57] There's another book called *The Growth Mindset Playbook*, and these two women educators, they, and Carol Dweck does this too, she talks about coaching. My husband is really into sports and I always think, when your kids, are playing soccer around the field, and the parents are standing at the side, what you hear is, they're cheering.

[00:12:14] "Oh, you can do it. You can do it. Kick the ball, get it over. Oh, you missed it, but you'll try again." You never hear them say things like, "It's not in you, you can't do it. Don't even try. You're not made for this." We don't say that. And sometimes we may think it, but we don't say it. We just cheer. I think about bringing that type of attitude to the operating room or to internal medicine or dermatology, bringing, "You can do it. Oh, you missed it. Let's try it again." And then afterwards, when you're pulling your son or your daughter, or a young child aside saying, "Hey, maybe some more sit ups or maybe some more running and you'll be better next time." When you think about that atmosphere and I think of myself as a coach, then you start to function more like that cheerleader that's going to do everything you can to really help promote proficiency in this trainee, successfully, and in a very positive environment. The growth mindset, the stimulation it creates, it allows you to create this back and forth that makes you very excited to teach just as the learner's excited to learn.

[00:13:19] **Christine J Ko:** Oh, I love it. I love the analogy. I love the excitement; your work is inspiring. Thank you for spending the time to talk with me.

[00:13:29] **Marie Angele Theard:** You're very welcome, Christine. It was a pleasure. Thank you.

[00:13:32] **Christine J Ko:** We will now transition from talking about the growth mindset to deliberate practice.

Deliberate practice

[00:13:36] **Christine J Ko:** I'm interviewing two people at the same time. One is Dr. Jong-Sung Yoon, and the other is Kyle Harwell, soon to be Dr. Kyle Harwell. Dr. Jong-Sung Yoon PhD is an Assistant Professor of Psychology at the University of South Dakota. He received his PhD in Cognitive Psychology from Florida State University in 2015, during which time he overlapped a little bit with Kyle. He has both an MA and BA degrees from Yonsei University in South Korea. His research interests include memory, cognitive aging, human factors, and the development of expertise. Kyle Harwell, again, soon to be Dr. Kyle Harwell, received his MA from Florida State University and will be receiving his PhD in Cognitive Psychology, like Dr. Yoon, in the summer of 2022. Kyle Harwell has the distinction of being Dr. Anders Ericsson's last graduate student. His undergraduate degree is from the University of West Florida. Both doctors Yoon and Harwell are grounded in the study of expert performance, the essence of deliberate practice, and applying the ideas of deliberate practice and the expert performance approach to the study of human performance in various fields, including in healthcare. A wonderful review of this topic is in *The Journal of Expertise* by Kyle Harwell, and a link is in the show notes. And another important link is to one of Dr. Yoon's papers; the link is also in the show notes. A really in-depth dive into deliberate practice is in a book that I love titled, *Peak: Secrets from the New Science of Expertise*, a book of Dr. Anders Ericsson's, that you can find on Amazon or in bookstores. Welcome to Kyle and Jong-Sung.

[00:15:18] The first question I wanted to ask these two wonderful experts in deliberate practice is, in your words, what is deliberate practice?

[00:15:26] **Jong-Sung Yoon:** Deliberate practice is what asks you to be fully concentrated during the practice activities with very high level of cognitive effort as well as physical effort, demanding, depending on domain. As parents,

you can hire really expensive coaches, tutors, other expert to help your kids. But when learner is not ready, and if they're not fully focused during those activities, could be still very meaningless or not that effective.

[00:16:03] **Christine J Ko:** Great. Thank you. And Kyle, do you want to answer?

[00:16:06] **Kyle Harwell:** First, I wanted to say, thanks again, Christine, for giving us this opportunity to talk about the deliberate practice. So just to add on to what Jong-Sung just said, I think that motivational factor really is key, right? So it doesn't matter how well designed the practice is if the learner isn't ready or willing, or, sufficiently motivated to take advantage of whatever the practice environment is. Deliberate practice generally refers to structured training activities that have met certain criteria that Dr. Ericsson and other researchers have found are characteristic of the types of practice that's routinely performed by experts.

[00:16:41] The first is a no-brainer: the task should be well defined and have a clear goal. Second, the trainee should be able to do the task on their own. Third, the trainee should be receiving immediate feedback and actionable feedback as Jong-Sung said. Fourth, the trainee should be allowed to engage in the activity repeatedly, so they get multiple attempts or multiple practice trials per session. And then finally, the assessment of learner skill, as well as the design of the next stages of practice, should be overseen by a qualified teacher or coach. So these kind of relatively rigorous elements of deliberate practice are what differentiate deliberate practice from what a lot of people colloquially refer to as practice, which is really just repeated engagement in the domain versus a highly structured activity.

[00:17:25] **Christine J Ko:** Is it possible to be your own self-coach?

[00:17:29] **Kyle Harwell:** Yes, or at least that's the general thinking, particularly when you're getting to really high levels of expertise.

[00:17:35] **Jong-Sung Yoon:** Just try to satisfy just some of the principles of deliberate practice. I think that's better than doing same things over and over without cognitive effort.

[00:17:48] **Christine J Ko:** If I really want to maximize efficiency and continue to improve throughout my professional life, I probably would benefit from finding a coach in say, dermatology or dermatopathology. That would still

probably advance my skills more efficiently, maybe, than me setting up my own kind of practice activity.

[00:18:12] **Jong-Sung Yoon:** Again, it doesn't necessarily have to be a perfect deliberate practice activity.

[00:18:15] **Kyle Harwell:** Regarding practice and professions specifically, I think one of the challenges, and this is true across multiple domains of profession, not necessarily just in healthcare. Once you enter into most professions, generally your incentive structure for maintaining your performance changes. In one of Dr. Ericsson's older papers, they talked about the difference between maintenance practice and practice directed toward improving performance. I would imagine for most doctors, after 10-plus years of very grueling education, they're ready to start actually seeing patients and actually, doing the job versus doing the learning. And for most professions they're set up the similar way. You've established that you have a particular set of skills and then for the rest of your career, really, the only extrinsic motivational factor is to maintain your level of skill per se. Improving your skills might be something that a person takes upon themself. It's not necessarily built into the job's incentive structure. The idea of changing your mindset toward one of continual improvement versus maintenance is a huge first step. You don't need to do all the five elements of a deliberate practice in order to have a very effective, personal practice plan. As many as you can get in there, particularly the seeking out feedback, I think, is key. It's more about making sure that your goal of continuing to improve your performance versus just maintaining it, I think, is maybe the best way to frame it.

[00:19:37] **Christine J Ko:** Yeah. That's so helpful. Can you briefly speak about how you came to study deliberate practice?

[00:19:44] **Jong-Sung Yoon:** I love sports. Whenever I see some kind of super exceptional performance in sports it always makes me think how it is even possible.

[00:19:54] **Christine J Ko:** Kyle?

[00:19:55] **Kyle Harwell:** I've always had a fascination with expert performers, and how they're able to achieve. The incredible feats of skill that they do and make it look easy. And that making it look easy component is really what I think drove me to go into Psychology for my undergraduate degree and then pursue it at the graduate level. What really caught my attention is the differences in the way that people speak about expert performance, or expertise.

So if you look at the way using the sports example, if you look at the way that, let's say, the announcers or the telecasters or the sports talk shows talk about these professional athletes. You'll hear a lot of discussion about talent, innate talent, giftedness, things like that. But when you actually look at the interviews of the professionals themselves, you see much more of a shift in the discussion toward practice history and a lot of hard work, right? The fact that you see this pattern repeat itself across many domains, that really caught my attention when I was a young undergraduate student.

[00:20:56] **Christine J Ko:** Can you give an example then of how you use deliberate practice in your life?

[00:21:00] **Jong-Sung Yoon:** One of the key principles of deliberate practice is yes, it should be challenging, but still doable. So when I get out from my comfort zone, it tells me where I need to improve. Then I try to design some activities. Or just work really hard to improve that specific aspect as a teacher or a researcher. And it's not easy, because many times it hurts my self-esteem; I experience some awkward moments as well.

[00:21:37] **Kyle Harwell:** Going off of that a bit, one of the important things to consider for applying deliberate practice to daily life would be... in my case, it's about reframing failure, or reframing how I attribute hitting a wall. My study of deliberate practice has taught me that's basically the best signal that you need a coach.

[00:22:01] Personal example of this: I'm interested in learning Mandarin. It's the most difficult thing I've ever tried to do. Given that I had been working on it for a few months, and I was really struggling, particularly with just developing my vocabulary and sentence comprehension. And what I recognized was that the production problem, which would be because I could not pronounce certain things, I was having a hard time remembering, like maintaining, the whole sentence or phrase, whatever, in my mind, that was a particular issue that was limiting my progress. So I've come to the conclusion that I will need to find a skilled tutor or coach or someone to help me with understanding pronunciation. And that, I think, will help me get past that wall. But the idea is because I've worked with deliberate practice, and I know that there is a path forward eventually. So the idea of really looking at why you are not successful or why you're encountering failure or mistakes. And identifying the causal mechanisms of those failures, I think is one major difference between the way I think about practice and training now than the way I thought about it before I was introduced to Dr. Ericsson's work.

[00:23:09] **Christine J Ko:** I love that. Yeah. I've never thought of deliberate practice in quite that way, but I like that you framed it that it's a way to think about failure and kind of have a path to move forward. I did want to cover mental representations...

[00:23:29] **Kyle Harwell:** The relationship between mental representations and expert performance, at least according to Dr. Erickson, is that it's really the underlying mental representations that are driving the performance differences between experts and novices. So where this idea of the mentor representations really became more widely studied was in the domain of studying chess. So the idea, initially, before there were really good behavioral studies of chess experts, the assumption was that chess Grand Masters were just geniuses. They were all super intelligent. They could process all that information like a computer. And that every move they're making was based on a series of really complicated calculations they were doing in their head. Where in reality, it seems much, much more common that they're relying on these patterns that they've stored over many years of really difficult and concerted effort and practice. So the idea of experts being able to do the amazing feats of skill that they do being driven more by what they've learned versus what their innate abilities are is a defining characteristic of Dr. Ericsson's model of expertise. And it's one that differentiates it from classical models of expertise as well.

[00:24:45] So you could argue that mental representations are like the engine in the car that is expert performance, and deliberate practices is what builds that engine.

[00:24:54] **Christine J Ko:** I think that the mental representation concept helps me because I'm in a visual field of dermatology and also visual field of dermatopathology. So what I see on the patient or what I see in a microscopic slide, that's how I come to a diagnosis, and I have mental representations in my mind of what a given disease looks like. And so it clicks in a System 1, Type 1, instinctual, expert type of thinking. Like this is this because it is. And then I can use System 2; Jong-Sung mentioned before: metacognition. I can use that and explain why. We call it in dermatology and dermatopathology, especially dermatopathology, pattern recognition.

[00:25:39] But I think that pattern recognition is essentially developing as many mental representations as you can for a given disease and then multiple diseases. I love this concept of deliberate practice because as Kyle just mentioned, it makes it feel to me that expertise is achievable. Do you have any final thoughts?

[00:26:03] **Jong-Sung Yoon:** People just easily say, oh, the natural talent is more important. And when we see the sports event, the commentators, even former players say too often and easily, Okay, that player, that kid, so talented, so natural... without deeply thinking about what that means. So it actually also really bothered me.

[00:26:27] **Christine J Ko:** Awesome. Kyle?

[00:26:28] **Kyle Harwell:** If I really am serious about getting better, I use the Mandarin example, previously. Like I know I'm never going to be like a simultaneous translator for English to Mandarin. I would never want to put in that much time. But I do have a particular goal in mind. I want to have conversational proficiency to speak with my in-laws and have a meaningful conversation with them. So having that goal in mind is really good, because it also puts parameters on the total amount of effort that I'll have to put into it. I think that's what overwhelms a lot of people.

[00:26:59] And I think when you're talking about, you're already an expert in your field, right? Your performance goal is just continual improvement, right? Being the best in the world is something that a lot of people would aspire to. But it's not a very clear path to getting there. But the idea of making small, incremental improvements on your own personal performance day by day, week by week, month by month, year by year; that's something that I think is very achievable, and I think deliberate practice is a really good way to keep yourself motivated, and also provides a framework for actually achieving your goals.

[00:27:31] **Christine J Ko:** Thank you very much to both of you for spending time with me. I really appreciate it.

[00:27:36] **Jong-Sung Yoon:** Yeah. Thanks for having us today.

[00:27:38] **Kyle Harwell:** Yeah, thanks. It was fun.

[00:27:39] **Christine J Ko:** And finally, here is a key episode on emotions, how they are data, and how we can practice interrogating them.

Dr. David Caruso

[00:27:45] **Dr. Christine Ko:** Dr. David Caruso is a management psychologist who develops and conducts emotional intelligence training around the world. He co-authored the Mayer, Salovey, Caruso Emotional Intelligence Test, which

is still used today. And he co-wrote several books, including The Emotionally Intelligent Manager with Dr. Peter Salovey and A Leader's Guide to Solving Challenges with Emotional Intelligence with Lisa Rees. He is married with three children and four grandchildren. He has been an executive coach to leaders around the world. Welcome to David.

[00:28:13] **Dr. David Caruso:** Thank you so much.

[00:28:14] **Dr. Christine Ko:** I asked David to talk to me again because he's an expert in emotional intelligence, and I've been telling him that I am definitely not. Recently for the podcast, I did speak to Dr. Antoine Bechara who did research with Hanna Damasio and her husband Dr. Damasio on the somatic marker hypothesis and the gut feeling. I wanted David's take on the gut feeling, and I thought first he could define for us what a feeling is versus emotion, because those two are not necessarily interchangeable.

[00:28:49] **Dr. David Caruso:** I do want to just go back a little bit: when people, in your field, when you are called an expert, you have expert knowledge. In my field, especially with emotional intelligence, when someone calls me an expert, if you told my family that, they would probably disagree. A few weeks ago, it was a especially stressful week, I yelled at someone in a zoom meeting. I didn't really yell at that person, but I was really impatient and I was just amazingly frustrated, and it leaked out. Knowledge doesn't always translate to expert behavior. Here's the thing: even if you do all this stuff, you're still gonna screw up. You just wanna reduce the numbers of times when you had the choice, to do something, to behave in a more, let's say emotionally intelligent manner. You don't always have the choice. I certainly don't. So the struggle is, you get a little better. In terms of feeling, there's a wonderful article by the psychologist Sigal Barsade. And there's a wonderful table that I always refer to. She defines the term affect, which is a broad range of feeling, that you experience, physical sensations. Feeling is used interchangeably with affect. Affect includes moods and emotions. Then what's an emotion and what's a mood? She defines discrete emotions have an identifiable cause or a target: anger, or, jealousy or happiness. And they come on really quickly. And then they dissipate. What a mood is, is a little different. She describes it as a global positive or pleasant, or global negative or unpleasant feeling, and they're very diffuse. They don't have real specific cause. You aren't aware of it; it's this background noise. The key for us is when I have that feeling, I need to validate the feeling, but then investigate. What's the sources? How much of it was that discrete emotion? That event? How much of it is this background or global perspective? Including my overall personality. Am I a grumpy person? Am I an upbeat, cheery type person? She calls that dispositional affect as well. You have

to put all these things together. I'm not sure how clear that was or is that helpful in beginning to approach this?

[00:30:54] **Dr. Christine Ko:** That's helpful! So, you're saying, there's feeling and affect are overarching; and then under affect there's emotion and there's mood. And emotions are often triggered by something, and we can, especially, if we get good at it, we can name it. Okay, I'm sad right now. I'm angry right now. I'm happy right now. And those emotions themselves dissipate, usually relatively quickly, but moods are just background. So I could think of foreground background, like in art. If there's a figure in the foreground, the emotion is in the foreground. And then there's either a bright, sunny sky in the background. Let's say a more pleasant mood; versus a dark, stormy, background - just sort of a sad or darker mood. Not to get so bogged down by semantics or anything, and we can get really bogged down in dermato pathology/ medicine; we can get really bogged down and just argue over the terms all day.

[00:31:43] But the reason I was wondering is because the Damasios and Antoine Bechara, who worked with them, do call it a gut feeling, a bodily state that we have, in their somatic marker hypothesis. And their term is "gut feeling". Where do you think that lies related to affect / global feeling as an overarching term?

[00:32:05] **Dr. David Caruso:** So, that sounds like affect. Should we go with that gut feeling? Is the gut feeling informing us intelligently or does it lead us astray? I think, if you can figure out and investigate the source of those feelings, gut feelings, if you can separate out your emotions from your moods, I believe you'll make better decisions, because how you feel impacts your decisions. You might be a better diagnostician. I think everyone would want to make better decisions; more accurate, comprehensive, diagnostic work.

[00:32:33] **Dr. Christine Ko:** Apparently you can improve having a gut feeling that's advantageous to you. And he says that's true, but we really have to, he said, be in a calm state, and be aware of our bodily states, of those kind of gut feelings. People who have gut feelings, as measured by say skin conductance, their body knows, earlier, and then eventually people have more cognitive awareness of it, but their body knew earlier than their minds knew.

[00:33:01] To me it sounded like, okay, so if you take the gut feeling as say, like an emotion, you could probably train yourself, just like you train yourself to deal with anger a certain way, over time, and you still make mistakes, but you train yourself. If starting to listen to your gut, and you manage your gut feeling and learn how to use it, then that would be helpful. And it's a skill though, just

like emotional intelligence is a skill. That gut feeling, and listening, being able to listen to it and know when it's right and when it's actually not right. Like when it's a fake gut feeling. I just wanted your opinion and thoughts on this.

[00:33:41] **Dr. David Caruso:** What they're describing, Christine, I think what you're describing, too, is -just to bring in another line of work from clinical psychology- is dialectical behavior therapy, D B T. So it's been around since the eighties or so. And there's a term that D B T folks use and it's called wise mind. And it's the intersection of, they call it, rational mind, the completely logical person, if that exists, and emotion mind, which I object to. I think you should call it mood mind. But it's the intersection, in a Venn diagram, of the rational mind and emotion mind, creates wise mind, or really good decisions. And the reason I'm thinking about that is what you said before, which is how do you get there? And so they teach a lot of mindfulness. It's that reflection on that gut feel, on that feeling, and it's sources, not the source, but it's multiple sources. And so we can figure this stuff out, but we have to actually pause, take that breath, reflect on it, ask myself how I feel. You have that feeling, but is it reasonable for me to be angry? How would someone else react? And also, like, how much sleep did I get last night? Did I have breakfast? Oh, gee, I didn't sleep very well. I'm just in a bad mood. So my anger is not reasonable. Someone else may not feel that way. And so that gut feel of anger or frustration that tension in my stomach, no, I can't act on that. That's just junk; background noise.

[00:35:06] **Dr. Christine Ko:** Yes. No, thank you. I'll have to look into dialectical behavior therapy. I've never heard of that, but that sounds useful. Like a good framework, that may really be getting at what I'm trying to get at. Every diagnosis is actually a decision. When you say, how we feel impacts how we think... you think judges are supposed to be impartial, but they've shown with studies that it's towards the end of the day, they give harsher sentences. If they're hungry, they give harsher sentences. If they're tired, they give harsher sentences, and maybe the corollary to that is in diagnostic work at the microscope- since I'm lucky to work with many colleagues who do the same thing that I do- we'll talk about that. Oh, today I feel more benign. Like, I have my benign hat on today, we'll say. Maybe my mood is good, and so I'm less likely to make a cancer diagnosis, which is horrifying, in a way, like, really, that today I'm in a better mood, so I'm going to give a different diagnosis? Shouldn't diagnosis be objective, rather than subjective? I guess I'm thinking that at least I can control maybe those quicker emotions, if they're quicker, like I'm really mad right now, for whatever reason. So I'm not gonna, diagnose 10 melanomas in a row. I'm gonna calm down first before I do some diagnostic work. That's an extreme, sort of, simple example, but I guess that's why this stuff matters to me, because I do try to be objective at the microscope, and I try to be calm and in a sort of even state, not like overly emotional in any direction, but just really

concentrated and focused. And as you've mentioned before, maybe actually towards a more like depressed mood in a way, so that I'm able to look for errors and think about errors, and just be more careful. But there's definitely this gut feeling aspect of when we look. Like people will say, my colleagues will say, oh, but I just really don't think that this is something bad. And, I believe in that feeling. I have it myself. Before I say, this is the diagnosis; before I finalize it, I'm thinking, does this sit right with me? I think the more I delve into this stuff, I make better decisions.

[00:37:26] Through talking to people on this podcast, one of the subjects that I touched on was shame, shame and medicine. I wanted to see what you, as an emotions researcher and someone who leads emotional intelligence seminars around the world, how you categorize shame and what you think of it?

[00:37:46] **Dr. David Caruso:** Yeah. We have these basic emotions, right?

[00:37:49] **Dr. Christine Ko:** You were the one who first introduced me to the universal emotions that most emotions researchers agree on: happiness, sadness, anger, disgust, fear and maybe surprise as a sixth one.

[00:38:01] **Dr. David Caruso:** And then there are secondary emotions. There are complex emotions. There are social emotions: so embarrassment, shame, guilt. Those kinds of things might be social emotions. They're unique to one's culture and upbringing and so forth. They do exist. So the reason, probably, shame is not considered basic, is the work of Paul Ekman and colleagues, on basic emotions. He would say basic emotions have unique causes, unique physiological signs and causes, things like that, whereas a shame may not. So that's the only reason it's not in that core category, if you will. And there may not be a universal expression of it as well. It's well, beyond those basic building blocks.

[00:38:42] **Dr. Christine Ko:** Yes. And I think it's helpful that you point out that shame, it's a social emotion that you need an “other” there in order to feel it, whether that the other is really present or not, if, even if it's just imaginary in your mind oh, I've fallen short here and so it's not just guilt, but it's really, I've fallen short of some norm. There's a lot of shame in medicine, and I do think that emotional intelligence, and using it better, like you say, can help address that.

[00:39:09] **Dr. David Caruso:** Yeah. Let's use that as a signal. Let shame be used as signal, whether slow down, consult with others, I have difficulties with a certain area. All emotions can be super helpful, right? We say they are data,

they help inform us. They should make our lives better. Now it's a signal that's something got messed up. So let me stop, let me examine it, and let me not do the same thing.

[00:39:30] **Dr. Christine Ko:** Yeah.

[00:39:31] **Dr. David Caruso:** So, it's a very helpful emotion.

[00:39:34] **Dr. Christine Ko:** Yes. I think, what I've ultimately learned from you, one of the major things, is that all emotions can be helpful. They could all be used as signals.

[00:39:41] **Dr. David Caruso:** Emotion management is really the key, and being smart about it, and interrogating it.

[00:39:45] **Dr. Christine Ko:** Thank you very much, David. I appreciate the time. I appreciate your insights. I appreciate your spending time with me and just giving me chances to learn more and be able to apply these things better.

[00:40:00] **Dr. David Caruso:** It's good for me as well, because I think these are important concepts, and it helps me when I describe it. And I'd really love these concepts to be applied well, to help people. Thank you so much for the opportunity.

[00:40:09] **Dr. Christine Ko:** Thank you. Thanks, David.

[00:40:10] **Dr. Christine Ko:** Thank you for listening in. Your time is precious, and I appreciate it!