



Episode 27 – Emotion at Work in Emotion Regulation
Chatting with James Gross <https://spl.stanford.edu/james-gross-phd-0>

Phil: Hello and welcome to the Emotion at Work podcast where we take a deep dive into the human condition and my inner geek is very excited today. I have at the other end of the line, in my eyes anyway, one of the world's leading researchers into emotion regulation. Now emotion regulation is a term that I don't think is often heard when people talk about emotional intelligence they often talk about emotional awareness or self-awareness or emotion management or self-management or management of others or relationship management, those sorts of phrases. And the term emotion regulation doesn't really feature so I'm very excited to explore that some more and to chat some more with the guest that we've got on. So enough about me and let's get our guest on the air. So let me welcome all the way from over in the US, James Gross. Hello James.

James: Hello, Phil.

Phil: How you doing?

James: Very well thank you. It's a pleasure to be with you today.

Phil: No, thank you. It's Friday evening here but Friday morning your time I think.

James: That's right.

Phil: Wonderful. So as you'll know with the Emotion at Work podcast we open with an unexpected yet innocuous question and what that hopefully helps us to do is have a slightly different conversation with each of the guests that we get on but also to get to know them a little better as well. I'm going to steal a question that I was asked actually for the last episode of the podcast which is, if you could either undo or copy and paste aspects of your life, would you rather undo or would you rather copy and paste and why?

James: Ah, that's a great question. I think copy and paste is sounding pretty good to me right now because I've been blessed with a lot of very, very happy periods with intense meaning and connection with people I love. The thought of extending those periods into the future by replicating them sounds really exciting to me.

Phil: Are there any of those in particular, any particular episodes that stick out for you as ones you'd like to copy and paste?

James: Well lots of them as I say I've been very blessed. I have particularly enjoyed being a father to three children and that's been a huge focus for me and that's a particularly salient moment in parenting for me, because two of our three kids are now in college and the third is heading into her last year of high school this coming year. So that's been a big focus and seeing that transition brings to mind the amazing times I've had with each of the three kids over the years.



Phil: That's wonderful. I'm yet to experience that period in their life. So my three, one is about to make the transition from what in the UK we call primary school which is up to age 11 and then 11 to 12 they then transition into what we call secondary school. Do you have middle school as well, is that right?

James: We do, that's right, elementary, middle and high school.

Phil: When does middle school end?

James: Usually middle school is just through eighth grade, so it's sixth through eighth grade and then we have ninth through twelfth is high school.

Phil: What would I rather do then, would I copy and paste or would I rather undo? In a way this podcast is very timely for me because I've had one of the most emotional tumultuous weeks I think I've had in a long time. So I'm in the process of trying to buy a house and it has been anything but smooth sailing this week. So there are certainly some things that I would like to undo and there are some things that I definitely would want to copy and paste from when things have been going smoothly. As a general rule I think I would rather copy and paste than undo but there's been times this week where I've really, really wanted to undo some things in the hope that I guess I would get a different outcome to the one that we have.

James: Although, and I'm sorry that the week's been difficult, I hope it ends up in the right place for you. What I find interesting about the question is that both are really impossible which makes it such a lovely thought experiment. So in a way I hesitate about undoing because I really believe that difficult times and difficult emotions have a lot to teach us. So to undo that would be to undo the learning that I think makes us stronger and better people. Copying and pasting of course also really can't be done because every experience we have changes us, but to the extent that we've had exciting or meaningful moments and we want to have more of those. I think copy and paste sounds a little better to me but both are tough because they can't really happen of course.

Phil: Because you can never fully replicate what's happened before you, you can never fully replicate it again. Can I pick up on one of the things that you mentioned there which was about difficult emotions. That's a frame or a preface to emotions that I don't hear very often. So sometimes I hear positive or negative or constructive or destructive, difficult is one I rarely hear.

James: We use the terms positive and negative emotions pretty loosely, I think often to mean emotions that feel good in the moment versus emotions that feel bad in the moment. I hesitate about that distinction because what we've learned as we've studied emotions is that positive emotions, that is to say ones that can feel good in the moment are sometimes positive meaning beneficial in the long term, but sometimes they can be not very helpful in the long term. Similarly so called negative emotions called that because they don't feel good in the moment, can actually have very salutary effects even though they don't feel very good in the moment. So I prefer to, when possible, stay away from the terms positive and negative emotions because of the confusion those terms engender. For me I think difficult emotions provides, as you say, a slightly different frame, that is to say there are some emotions that we find challenging and lead us to question whether they're



helpful. I think sometimes difficult emotions anger, sadness even guilt can be helpful for us in achieving our longer term goals. But the sense of difficulty allows us to ask the question, are they helpful these emotions I'm experiencing or I anticipate experiencing? I think that question is a very important one because it allows us when necessary to employ resources to change or alter those emotions. So when we find that we have difficult emotions and answer the question, are these helpful or not helpful in the direction of thinking they're not helpful, we then can do what I'd say is regulate our emotions. We can try to influence them in a way that will better help us achieve our goals, whatever those might be. So that's why it's a preferred frame for me to think about difficult emotions.

Phil: I was with a retired sportsman and he was showing some footage of him in action, he was saying I pushed the emotion to one side and it was all about the technique and getting the technique right. Yet, I could see from his facial expressions the anger and frustration, and the determination that he was having and he was using that emotion to give him additional adrenalin or just additional focus or energy or whatever it might have been. But I find it interesting when the goal is to achieve a higher level of sporting performance actually the emotion can be, you might want to regulate it up not down, you might want to take an emotion like anger for example and regulate it up rather than regulate it down. Does that make sense?

James: Absolutely. I think that's a wonderful example. We're very interested in cases where people regulate emotions particularly in unexpected ways. Of course the thing that we often think of is the simple case, where we are trying to decrease so called negative emotions or increase so called positive emotions. But if you think about the other two possibilities namely increasing negative emotions or decreasing positive emotions those are quite interesting. Our studies show that those happen, people are actually very motivated in special circumstances to not only do the obvious things but also do the things that are a little more surprising, just the ones you've mentioned in fact. So people are very motivated in some circumstances to actually increase emotions that we might otherwise regard as negative. I think that the example of sports is a terrific one where team members often, as it were, psych themselves up, get themselves pumped up with angry loud music and cheers. I think that can be immensely effective for enhancing sports performance. But it's more than sports, I think in many competitive interactions outside the sports field it's useful to harness powerful emotions like anger. So for example if one finds oneself in a political context where one feels things aren't going the right direction and one starts to feel a powerful sense of anger over a perceived injustice that can be very motivating and can sustain action that's very much in accord with one's longer term goals and values. So, no, I agree completely.

I think what's interesting about this, Phil, is that I think there is often a cultural narrative and we're quite conflicted in fact in that narrative about the proper place of emotion. I think this goes back thousands of years to competing traditions within the larger western conversation about whether emotions should be silenced, that is to say the best state is a non-emotional state or whether emotions are the kinds of things that we should master and modify and use, and harness. I think this is really at the core of our cultural confusion about the best way to approach our emotions. You have even accomplished sports figures saying that they try to rid themselves of emotion because they have subscribed to this idea that the best performances are not emotional performance. You certainly see that in other domains as well. But I think if you look carefully from having rid



themselves of emotions, high level performers in many domains have actually mastered the technique of engaging their emotions or what I would say regulating their emotions in order to achieve their longer term goals. I find this a very interesting case because people are unaware sometimes even of how they're approaching their own emotions.

Phil: I think in the workplace especially, I can't comment from an informed standpoint for the US but in the UK in particular the general narrative would be emotionless or minimum emotion is the most effective way or the most likely to get you success in what you do. And yet what you talked about...you didn't say confusing, I can't remember the word you used, about the two different narratives that run. Because at the same time leaders are told to be empathic and they're told to be compassionate, and they're told to be vulnerable, and they're told to be these things that will improve how others perceive them. So it's almost as though you have to minimise or rid yourself of emotion until you get to a significantly high enough position in the organisation and then you can start to display or engage with some of them, but only in particular circumstances or particular contexts. It's almost like you can hear but you can't overhear or you can't hear but you can overhear. Those variety of context then make it tricky to know, when should I and when shouldn't I?

James: Yeah, I think that's right and I think part of the conflict that people feel between these competing narratives about performance is enhanced if you have no emotions versus performance is enhanced if you do have emotions. I think the confusion or conflict flows from a basic uncertainty about whether emotions are good or bad and people feel as though they need to answer that question in a very simple way. I think our approach, Phil, is to take a step back and say wait a sec let's check whether that question is the right question to ask. I think we've decided in effective science research focused on emotion regulation that that's not a very helpful question and the one that we're circling around now in our conversation is a much more helpful way to go, which is let's ask instead when emotions are good or helpful versus bad or unhelpful? Not whether they are because that presumes a context invariant answer, whereas the new question which I think is much more helpful about the conditions under which or when emotions are helpful or harmful for a particular person with respect to a particular goal, much more helpful. It's a much more powerful question because it allows us to begin to address the possibility that sometimes emotions are helpful with respect to some goals but at other points those same emotions may not be helpful with respect to the goals one has. This is made even more complicated in the workplace and in other contexts because we often have multiple competing goals simultaneously. That's the story of the human condition, we want to be good family members. We want to be good partners, we want to be good workers, we want to be good members of our community but those often are in tension. So emotions or responses that might be helpful with respect to one set of goals might be really not very helpful with respect to another. I think that new question about when or under what conditions are emotions helpful or unhelpful, really opens the doorway to a very different way of thinking about our emotions and I think brings into the foreground the topic we're talking about today which is emotion regulation. Because I think when you ask the question about when emotions are helpful or harmful you get an answer that isn't all one or the other, it's nuanced. And then you say well if emotions are sometimes helpful and sometimes not helpful what do I do? What strategies can I use when emotions seem to not be helpful for me in this particular context? There you can start to get a little more creative about how you approach your emotions because you're not thinking you need to



kill them all or let them all live, you in fact think about cultivating some and discouraging others. I think that really is what we're thinking about when we talk about emotion regulation.

Phil: And cultivating some in some contexts and cultivating others in other contexts depending on like you say depending on what it is. So we talked about a couple of different, I guess key terms so far, so it might be worthwhile defining them then. So what would you go for, for a working definition for emotions?

James: So this is one of the oldest questions in the field of course, William James famously asked more than a century ago, well what is emotion? I don't think we have a great answer to that. This is something that's currently debated in the field. I would say an emotion is a multipart response to situations that we perceive as being important and relevant to our goals. When I say a multipart response that's just a fancy way of saying that that response has a behavioural component, so we're more likely to do some things than others in that situation. It also has an experiential component, in other words it feels like something, being in an emotional state. There is also a physiological component to their response so that our bodies respond in particular ways.

Phil: So it's got those different aspects and different components then, okay that makes sense.

James: The labels we give these multipart responses to situations that we see as important to us, we give them labels like fear and anger and sadness and so forth, and the debates in the field have been around how tightly coupled are these different aspects. So do I always feel something when I'm in an emotional state or could I have an emotion and not really in the moment be aware of it? So there are a lot of debates about it but I think it's a common sense way of thinking about emotions that says emotions are more than just a feeling. So it's the feeling plus the behavioural response, plus the physiological changes, the heart rate changes, the sweating in your palms, the respiratory changes, that whole package is what we mean by emotions. So that's our starting point I think for most people today and there are a lot of debates, are they universal? Does everyone everywhere have exactly the same emotions? I think the answer is no. Are there some important similarities? I think the answer is yes. How does the brain generate these emotions? Huge debates about the brain bases of fear and anger, and sadness. But I think if you ask people in the field or even outside the field what's the basic common sense definition of emotion they would say something like what I said, this multipart response plays out of seconds to minutes. It has to do with helping you position yourself with respect to an important situation given your goals at the moment and sometimes that positioning is helpful for you given your goals and sometimes the way you respond in an emotion is not helpful and that brings us back to the sole issue of what would you do, how would you regulate this so called emotion if it turns out that it is not really being helpful to your anger, your physiology, your behavioural response where you really feel like hitting somebody. That may not all be in line with your goals to be a good parent to a young child who's really frustrating you and in that circumstance, that package, that multipart package of anger we would feel in the moment, we might think this is not the way I want to be with my child and so at that moment we would decide this package of anger is not what I want, it's not helpful given my goals and so I am going to try and do something about it and that's what brings us to emotion regulation.



Phil: I was talking with somebody recently about having you as a guest on the podcast and one of the questions that they asked me to ask you, so it was a lady called Helen Amery on Twitter she goes by the handle @WildFigSolns but she was enquiring about emotion experience. So you talked about the three different components and one of those was the experiential bit, how it feels and how there can be individual differences between how intense an emotion may feel, how intense that experience may be or how long that experience may go for. So if you and I went through the same events we could experience either different emotions or we could experience the same emotion but experience it very differently. Is that because of the way that we regulate our emotions or is that because of the different triggers and associations that we have around it or a combination of two or neither.

James: I think it's at least a combination of those two plus some other stuff and I think the observation is spot on and that is one of the most important observations to make which is, emotions can vary a lot and not only vary between people, let's say between the two of us but even within one of us, let's say you've had a touchy week this week. You're sharing with me a little bit about the housing challenge that you have been facing and I would say that if you had a problem, one of your tyres blew on the motorway and you had to pull to the side of the road and fix your tyre that might elicit a very different response this week then it would a month from now or a month ago when you didn't have as much stress in your week and some of the upsets that you shared with me. So I think it is not just that emotions differ between people, it also differs within a single person overtime and both of those observations about how variable emotions are give us some clues about where this is coming from and I think, yes it's true, our associations and our cultural practices, the things we experience when we are younger but also the culture we are living in now, those powerfully shape how emotions are constituted and play out overtime. But then even within a given culture or context whether it is in England today or England in another century or in America today or some other part of the world, there is a lot of variability in how people make sense of their emotions and how they orient it towards them and so whether they think certain emotions are acceptable or not acceptable helpful or not helpful and in that cultural context there's still difference because some of us have temperaments that is to say earlier appearing, probably biologically based, differences to be more reactive to certain cues than others, so we know, we look around ourselves and we see some people just spend most of their waking moments in a state of high positive emotion. They're just very, very happy at baseline. Whereas other people are born with temperaments that incline them to lower positive emotions and some have higher negative emotions so called, negative emotions like sadness, anxiety and these are early appearing differences that appear to be strongly genetically modified or produced and so when we think about the variation in emotion, yes it can be the associations, the cultural context, our personal learning history, but yes, it can be biology that shapes each of us and also that is just on the emotion generation side. That's what emotions we are likely to have and then we can also have this extra layer of regulation differences. We get dealt a different hand culturally, we're temperamentally from other people and then what's so important about emotion regulation is that you can then take whatever hand you have been dealt and play it the best way you possibly can. So we get dealt different hands, temperamentally, culturally, whatever but then the question is not can we go back and change our genes, we don't know how to do that yet in a way that would make a difference emotionally and so what I think is important, is where can you change things and it's not the emotions you are likely to have, it's what you can do with your emotions and how you can learn to

skilfully manage or enhance your emotions and what is crucial, I think for people to understand that this is not a programme of taking away all emotions, not at all. Emotion regulation is about having the choice or the capacity or the skills to be able to make really smart, helpful decisions about which emotions to cultivate and which to diminish in a particular context. So that is how I would answer the question about variability across people and within a person overtime.

Phil: And within that it sounded like you gave a working definition for what emotion regulation is as well. Is there anything you would add to that?

James: So I think emotions as we have discussed are this multi-componential or multipart responses that play out overtime and emotion regulation simply put is just activating a goal to try to modify one or more aspects of emotion, the experiential part, the behavioural part, the physiological part or the whole package and so you may be trying to turn it up, you may be trying to turn it down. Any of that counts as long as you have a goal in the moment to try to modify one or more aspects of an emotion, that is emotion regulation.

Phil: And your research suggests that there is a number of different families of emotion regulation. Do you want to outline what those are?

James: I would be happy to Phil. From my perspective and thinking about how people might go about regulating emotions it's helpful to ask a prior question which is, if emotions unfold overtime and have these different parts how do we think about how they unfold and how they are generated and let's do this in a really simple way and so we found it helpful, there is some situational features, there's some aspects of a situation that we attend to rather than other aspects of that situation. And then once we have attended to those aspects of the situation we then think about them in particular ways and it's this combination of being in the right kind of situation, attending to it, and then thinking about those aspects of this situation that you are attending to that leads to this multi-componential response. And if we use that very, very simple idea about emotions playing out in certain situations, when we attend to certain features and then think about it in particular ways we can then use that very simple cartoon for how emotions get generated to make some distinctions. So these are the families of emotion regulation processes that we and other people have been interested in studying and so if you start at the front end, let's take a situation where again, we are going back to a family context but you can take a work context, so let's say it could be a child, but it could also be a co-worker in a particular situation who's doing something that you find annoying. That you would really prefer they not do, so that's the situation and you notice your child's using horrible table manners. You notice your co-worker playing music without earbuds in a way that is obviously going to distract you and other people around him or her and that is a situation you then attend to it, you pay attention to it. Now if you were totally distracted and you didn't even notice your child's bad behaviour or your co-workers inconsiderate behaviour you wouldn't have an emotional response because you wouldn't even attend to it. But if you do attend to it you then might have the beginnings of an emotional response, but what's crucial, is it's not just the situation and your attention to it, it's how you think about it. So if you think as a parent my child is wilfully misbehaving and trying to get me angry and is just not amounting to the kind of person I want them to be, that can elicit anger and frustration, but if you have a different thought, if you think, he's just playing around, he's had a really stressful week. It's great that he has some spunk and he is not just



bending over and kind of doing all the things that we want him to do, good for him. That's a completely different response and you have a very different emotion and so for me just noticing that it's a situation that you have to attend to and then think about in particular ways that gets the emotion going tells me, one way to fix or change or modify or regulate an emotion is what we call situational. So it's situation selection or situation modification. What does that mean, that's just a fancy way of saying, look as people who can plan their lives we can make decisions about which situation we are likely to encounter. We can avoid people we know that can be toxic, we can seek out people we know we are going to like to be with and the situational selection or situation modification, that's where you change a situation in a way that enhances the emotional impact, those are very early types of emotion regulation. The so called situational strategies. A second family Phil would come at the next step, at the attentional step, so now let's say, we are in a situation, we haven't selected the right situation or it's a situation snuck up on us, now we are focused on attentional forms of emotional regulation asking how can we modify our attention for example, distracting ourselves, or really focusing on something else in a way that would modify the downstream emotion that we would otherwise have. That's the second family. So we have situational strategies, attentional strategies. The third family of strategies have to do with cognitive change and that's where we are focusing on the thought process and we are trying to say, normally I'd think about this as a co-worker being very inconsiderate. Wilfully trying to irritate all the rest of us in the office, but I might cut him some slack and say look, maybe he doesn't know that he's way too loud for the rest of us. Maybe it is just ignorance, maybe he is just a little bit clueless. He is obviously new to the job, he doesn't really know the rules here. Maybe he is not trying to piss us all off, maybe he is just clueless and that new way of thinking about it suggests new action. So instead of getting all pissed off, I will just say something politely. Would you mind using your earbuds, I am trying to take a phone call, and that cognitive change can totally affect your downstream emotions and then the fourth family, Phil, is all the way at the end of the line. Let's say you haven't been able to do situational strategies or attentional strategies or even cognitive change strategies, you can still do what you call, response modulation and that is where you have, you know you have an emotion that is starting to come up. You're starting to get angry, starting to get frustrated but there, what you are trying to do, you just try to manage the actual behavioural outburst for example. So you would try not to look upset or angry in front of your child or co-worker. You still feel angry or upset but you just try to manage or suppress that emotional output and those are the major families. You can see what we are doing, we are saying how does emotion get generated in a situation. You attend to it, you think about it and that leads to this set of responses that we call emotion and all I'm saying is this so called process model of emotion regulation just says, well let's just target each of those major steps in emotion generation. We can target the situation and try to change it. We can target the attention and try to change it. Target the cognitions and try to change those or we can target the actual responses themselves and those are the four families of emotion regulation processes.

Phil: I am wondering, as well as an individual having an urgency to do those things, I am wondering can other people use those same strategies in an attempt to help. So for example, when you talked about the attention one, in terms of where we focus our attention. I've been involved in a number of meetings in my working life where and I guess partly working within Human Resources, you are often involved in things like redundancies and re-organisations or breaking of bad news and so on and I can remember in particular a couple of meetings where different members of respective teams

that I was in got very upset either in terms of anger and frustration as one example and sadness was another and the most senior person in both of those examples decided to ignore what was happening. So they ignored the person crying and they ignored the fact that somebody stood up and walked out the room. Whether that was a strategy to try and help them regulate their own emotion and therefore it also became a strategy that everyone else had to adopt or everyone adopted in a complicit way or whether that was there attempt to help the individuals that had the respect flooding out. Whether it be the flooding out through sadness or flooding out through anger and other people choose the family of regulation strategy as well?

James: That's a lovely point. So you are making two different points and let me pull those apart because I think both of them are really important. So the first point I think you are leading with, which is, I've been talking about this as though it has to be, let's say James regulating James' emotions or Phil regulating Phil's emotions and that often happens. That's what we call intrinsic emotion regulation, so that's the person trying to regulate his or her own emotions and the first part of your comment I think really is helpful because you are pointing to the idea that it does not have to be intrinsic emotion regulation, it's often extrinsic emotion regulation meaning that James may go about trying to regulate Phil's emotions or in a work context James may try to regulate lots of people's emotions if he's in a leadership role and I think that is exactly right and there is actually a lot of interest in the past couple of years in what's been called inner personal emotion regulation or extrinsic emotion regulation and that precisely has to do particularly in a workplace context with the leadership style and the way that someone is in a position of authority, but it can also be a friend or colleague or co-worker trying to go about shaping other people's emotional responses on purpose so they have a goal to try to modify the other person's emotions. So that's the first point. I completely agree, I think it happens, it's important. People are trying to study how to do that effectively but that brings me to the second point which is I think a really important one as well, which is whether we are talking about intrinsic regulation or extrinsic regulation. So James regulating James' emotions or James regulating Phil's emotions, there is nothing that says that when I try to do that I am going to do it in a very sophisticated way, or that I am going to be successful. So the examples you've given me about prior work contexts, I'm not sure because I don't have the details, but those don't immediately strike me as being necessarily the wisest forms of extrinsic regulation, right, so there is no guarantee that when someone goes about trying to regulate either his or her own emotions or somebody else's, that they're going to do it in a very sophisticated or helpful way. They can actually make things worse, so that far from emotion regulation being a one size fits all solution to all problems it's just a way of talking about strategies that can either work or not work and we found in our studies that there are some strategies that in general seem to be much more effective than other strategies and the challenge is that many people have no way of knowing what strategies are helpful and what strategies even are because there is no rule book that says, as we come up through elementary school or middle school or high school, here's what emotions are here's how to regulate them successfully. Most of us do this by trial and error or we are looking at other people for models and sometimes we don't have successful experiences or very good models and so we are really excited about finding venues for helping people understand what the options are. How to think about the problem and that's because we subscribe to a very simple idea which is if you are able to articulate and define a problem clearly it's much more likely you are going to successfully address that problem than if it's a big mess and you have no idea how to conceptualise it, there you are just likely to get stuck and do things, flail around and do things that

are unhelpful. So that's sort of the project as we study emotion regulation and emotion. Try to think what are the strategies that could be used and what might be the most helpful ways to approach emotions when they're not working the way you want them too.

Phil: Can I pick up on one thing you said, in that your research findings are that some strategies are more successful than others. Could you elaborate on that just a little bit for me? Of those different ones then because you talked about the situational ones, situational selection or situational modification. You talked about the intentional ones, then you talked about the cognitive ones and then finally at the end of the line, for want of a better phrase, the modulations ones. What's your findings been on the different strategies and their effectiveness?

James: Thanks Phil, so I think the punch line here is that not just my lab but hundreds of labs around the world have been exploring this issue because emotions are so important to our lives. We really want to know how to make the most of them. People have been really excited and I think you know this but to share this with your listeners. There are now literally every year tens of thousands of papers on emotion regulation trying to understand these processes. So it has been a really, really exciting period in the past couple of decades as people have really dug in and tried to figure out some of these questions that we are addressing today. I think my starting point was a very simple idea so in this process model of emotion regulation that we just talked about with these four basic strategies. My thought was a simple one which was if you can catch something early on so that you can, at the very beginning, where you are deciding what situation to get exposed to, or how to modify a situation that seems to me like a higher leverage position to be in than all the way at the end of the cycle. These response modulations strategies, we made the prediction, a very simple prediction that the earlier you go in general in this so called process model, the more effective the strategies would be and so to start out our research now several decades ago, what we did was we compared the cognitive strategies with the response modulation strategies and in particular what we did is we looked at one form of cognitive change which we called re-appraisal and I'll explain what I mean by that in just a second. And we compressed the re-appraisal with one form of response modulation which we called expressive suppression so we wanted to take two specific strategies that we knew people used in real life. The re-appraisal is where you try to think differently about, and the example I gave a moment ago, your kids misbehaviour at the dinner table or your colleagues thoughtless playing loud music or talking in a loud way in the next cubicle over. Re-appraisal is, can I change the way I would naturally think about this in a way that would make me feel better. So that is re-appraisal and its cognitive change because it involves changing the cognitions that are the engine for making you feel a certain emotion and we can trust that re-appraisal, this type of cognitive change with expressive suppression which is a type of a response modulation and that's where you just try to not show what you are feeling so that someone who's watching you might not know you are feeling anything at all. So what we did feel in these early studies is we brought our participants into the laboratory and we then elicited emotion, we made them emotional by showing them short film clips that we had in other studies, pre-tested to make sure that they generally make people emotional and so we showed them some short film clips and we randomly assigned participants either to just watch the films, that was our control condition. So they did whatever they wanted. Just responded naturally or we randomly assigned our participants to try to reappraise, or to think differently in a way that would make them feel calmer. That was our reappraisal condition or we randomly assigned them to expressive suppression. That is to say, just

act in a way so that someone watching you wouldn't know you were feeling anything at all and what we found Phil from that study and what other people have replicated again and again and again is that the people and the suppression conditions, so that's the response modulation, end of the line condition, they were able to look cool, they suppressed their behaviour but that didn't help them feel better at all. Inside their experience was just as intense as it would have been if they didn't suppress at all. So it didn't help them feel cool and physiologically this is the key point, they had not just the same response as if they weren't regulating, they had a substantially increased physiological response so that effort associated with suppression made them look cool, did not make them feel cool and it actually increased their blood pressure and other aspects of their cardiovascular response compared to either of the other two groups. So suppression, we are not saying we should never suppress, but suppression is pretty costly so you got to use it strategically. Now let's compare that to reappraisal. Reappraisal which is this type of cognitive change. There people are also able to engage their strategy but there they not only looked cool so when we coded the video tape records we found that they showed less behaviour than the people in the watched condition. They also reported feeling better, so unlike the suppression condition where they looked cool and didn't feel any better at all these people who were reappraising looked cool and felt cool and a number of studies that we've started to do brain imaging studies using functional magnetic resonance imaging, what we find is that people in a reappraisal condition that are now more than one hundred neuro imaging studies particularly focused on reappraisal, we find the way that people are able to look cool and feel cool is that they are turning down using prefrontal cortical conditions to turn down reactivity in these emotion generative regions of the brain so it's a very deep process. If you really re-think what you are experiencing that can really, really have a powerful emotional impact. So this has lead people to be quite excited about the possibility, the different strategies could have very different consequences and now people have done what's called meta-analysis and that is just the idea, instead of doing one study at a time if there have been enough studies you can actually take all those studies and gather them together and ask if you look across all of the studies that have been done, let's say on the effects of suppression or reappraisal across all of the studies what do we find and the findings that I have just described from our early studies from two decades ago seem to be very very consistent with dozens and dozens of other studies that have been done.

Now Phil I want to be clear that even though that study and now dozens and dozens of other studies suggest that re-appraisal maybe more powerful than suppression that doesn't mean re-appraisal always works or is always helpful. So just like we ask the question about whether emotions, not whether emotions are always helpful or harmful but under what conditions or when are they helpful or harmful same thing here. So we need to ask the question under what conditions are these forms of regulation helpful or harmful and so what we are finding is a nuance picture which is that in general re-appraisal and other strategies that come earlier in emotion generation are better than the response modulation but that doesn't mean we always can use reappraisal. If we are in a situation that's brand new, that's overwhelming emotionally we're not going to be able to re-think it and so people just have to go to something else. Let's say to an attentional strategy, so Phil that is a quick summary of some of our core findings and I think the punch line here, that's really important to me is that there are different strategies. There are very different ways to regulate our emotions and that some of them are going to be more effective for some people and some circumstances than others, so the smarter we can be about emotion regulation and it's appropriate application the more



helpful we can be, not just to ourselves but as you pointed out to other people as we try to help them with their emotions as well.

Phil: That's a wonderful way to sum it up. There's a few things that you have really got me thinking in response to that around I guess, you got me thinking, do I have a go to. Is there a go to family or a go to family of strategies that I have got. I don't know the answer to that question, it's something that you have got me thinking about which I am going to think about some more. Where do I tend to play, are there any patterns on where I play, maybe that's a better phrase to look at it. Are there any patterns in the different family of strategy that I go for? So if people wanted to know more whether that be to read more, or to watch more around either your work or the work of your peers where would be a good place to start. Where would people go if they wanted to find out more?

James: So for someone who has an appetite for academic papers which not everyone does because they kind of go on and on and get into all sorts of unhelpful details but for those listeners who are interested in that detail all they need to do is to Google my name, James Gross and they'll see my Stamford Psychophysiology lab come up and on our website we have all the papers we have ever published.

Phil: Wow okay.

James: We have four hundred or so papers from our group. So that's for the people who really like that kind of detail and I think in that list and you and I can email about this and maybe I can send you to a very accessible set of a couple of papers if people wanted to get a quick overview.

Phil: Okay that would be lovely.

James: I would be happy to do that as well. But that's probably the best place to go for now.

Phil: Okay and any books. That was for the academic, any books or videos or anything like that that you would point people in the direction of?

James: Yeah this is a complicated space. I think you are wanting a short answer which I'd love to be able to give you. I don't unfortunately have a book myself that is broadly accessible. Most of the work that my group has done has been in the more academically inclined. I think a conversation like this gets me excited thinking about the ways that maybe we could better layout this material for people who don't have the time or inclination to dive into all the details of the academic work but for now I'm afraid we've just mostly got different kinds of academic papers. I've probably on the web got some talks that are out there floating around if people Google me but there is not one, unfortunately there is not one go to source for understanding this space. Sadly not.

Phil: That's okay. Can I ask a different but slightly related question? Who should we look out for in the future? Who are people that you're excited about that are doing research in this field?

James: Well that is a great question and I will try to limit my enthusiasm because this could take me a while. What's exciting here is the research that is happening now I think I mentioned a moment

ago that literally there is tens and thousands of papers getting published every year now on emotion regulation and lots of excitement here. I think some of the most exciting work that has been done, I'll just highlight a couple of people and notice that these people are all over the place. So some people, let's take one of my friends and colleagues Gal Sheppes who's a professor in Israel Tel Aviv and his students are hard at work trying to understand how people make decisions about what forms of regulation they should use. So that's a very important question because what you and I have been talking about is, are there different strategies and the different strategies have different consequences and the answer is yes. There is different strategies and yes, they have different consequences, so the next question obviously is how are people making decisions, how do people figure out, as you said, what patterns they typically have. How do they change those patterns? We are talking about ways to enhance wellbeing but we are also talking about in the clinical context people who are struggling with depression or anxiety and of course many theory are in part designed to help people be more successful and skilful in regulating. So Gal Sheppes and his team are using biological and behavioural measures to try to understand the choice process. So how people are actually going about choosing what strategies to use and how conscious is this and can we affect these processes. So those are some of the, I think, exciting findings out of Gal Sheppes work in Israel but there are people working literally all over the globe on this set of questions and so I think we are going to be looking at some of the better and better answers to how we can find more sophisticated managers of our own emotions and those people around us. There is also really exciting work as we think about Angelia Duckworth who is a friend and colleague who is a working professor at University of Pennsylvania. Very exciting work thinking about how can we take what we know about emotion regulation and apply it in a school context. So we know that middle school kids struggle to adjust to the new challenges as they move from elementary to middle school and then into high school. How can we use what we know about emotion regulation to help teachers and to help kids thrive academically and Angelia and her team are doing some really exciting work thinking about that. So those are two examples, Gal Sheppes and Angelia Duckworth noted of dozens and dozens of exciting laboratories around the world who are engaging these problems and instead of what we've done for thousands of years now, which is doing our best and flailing around, we are starting to have some science behind our decisions about how to regulate our emotions to lead more successful and happy and fulfilled lives so I'm really excited about the work that is happening.

Phil: It is really exciting and I am really interested in Angelia Duckworth's work because she is teaming up with, I think, with Carol Dweck as well to try and bring grit and growth mind-set together into one. I'm sure Angela Duckworth was involved in a really big long study as well but I can't remember what that's called. I will dig that one out and put it in the show notes.

Wonderful, let's pull it together then. Is there anything else James that you are thinking, feeling or want to say about the topic of emotions and or emotion regulation?

James: So Phil I think this has been a great conversation. We have touched on the ideas that emotions, what are they, these packages of different responses. We've talked about how emotions are sometimes helpful, sometimes not, so the real question we need to ask is, when are emotions helpful for us and when are they harmful and when we answer the question that an emotion either for us or for someone we care about is harmful, with respected goals that we care about, then we are starting to think about emotion regulation and we discussed how they are actually different at



least four different families of emotion regulation strategies and that some of these tend to work better than others and so we can be more and more sophisticated in our thinking about how to guide or cultivate certain emotions in ways that I think are happier more productive functions. For me that has been the ark of our conversation, it's been a lot of fun. I am trying to think with you about some of these key issues and hopefully this will be of some use to folks who have been listening.

Phil: I'm sure it will. It has been a wonderful conversation. I have thoroughly enjoyed it so thank you very much for your time. Like you say we will pick up over email to get some of those more accessible papers available to people and I will make sure I will put links to the show notes to all of the other researches and/or pieces of research we have discussed. All that leaves me to say is a very heartfelt thank you very much James. Thanks for being on the emotion at work podcast.

James: It's been my pleasure. Thank you Phil.