Episode 39 – Emotion at Work in Neuroscience and Organisational Change
Chatting with Hilary Scarlett

Phil: Hello and welcome to the Emotion at Work podcast, where we take a deep dive into the human condition, having conversations that you might not necessarily expect. Now already on this podcast we've looked at organisational change, that was with a lady called Julie Drybrough and that was on Episode 33. But it's such an important area that I wanted to take a look at it from a different perspective. Now similarly we've also looked at neuroscience before with Matt Wall who was a guest on Episode number 9, way, way back in the early days of the podcast. And our guest today is both a practitioner and an author, and in her most recent book or the most recent edition of her book, she brings together the neuroscience of organisational change. So I was particularly interested then to get our guest on today because she has those two different kind of perspectives, and even though we've looked at them separately what I thought might be really nice for you fair listener, is for us to bring them together into one. So enough of my waffling on, let's get our guest on the air, so I'd like to welcome to the Emotion at Work podcast Hilary Scarlett. Hello Hilary?

Hilary: Hi Phil.

Phil: How are you?

Hilary: I'm fine, it's good to be here.

Phil: That's wonderful, I'm so pleased that you can be here as well, I'm really excited about where we're going to go and what we're going to look at today. Now as we spoke off-air beforehand, the Emotion at Work podcast has a little unique thing that it does, where I ask each of our guests an unexpected yet innocuous question right at the start of the podcast. For this question I just want to preficit it I suppose with you could interpret the word, best, in any which way that you like. So you can interpret the word best in which way you like.

Hilary: Okay.

Phil: What's the best thing that you've done in the rain?

Hilary: In the rain? Ooh. I think swimming in the sea in the rain is good actually. I go swimming in the sea and there is something really nice about being in the water and then water coming down on top of you. I think that's what comes to mind.

Phil: Wow. So you're an open water swimmer then?

Hilary: No, just in the sea but I do love swimming in the sea.

Phil: So I properly swam in the sea for the first time last week, so when I say properly I've done it with my kids before, we know you go in the sea and you just mess around and sea, but I actually went for a proper swim in the sea, it was in the North Sea and it was really choppy. It was really cold but it was really fun and I wasn't expecting it to be anywhere near as much as fun as it actually was. I only

managed about 20 minutes before I thought I'm getting a bit cold I should probably get out now. But, yeah, but I can imagine that being fun in the rain actually.

Hilary: Yeah, you're kind of wet already so water from above, water below, it's good, yeah. Well the North Sea I'm very impressed, that's very brave.

Phil: Thank you. Just to complete the image, I did have a bright pink swim hat on, partly for visibility, so that people could see me, but also just to try and keep my head warm a little bit. And then a friend of mine who I was swimming with lent me these wetsuit type shoes or wetsuit socks maybe, so I wasn't even in a wetsuit I was just in swimming shorts, bright pink hat and the wetsuit sock things. Just to complete the image for you.

Hilary: [Laughs] What an image. That's going through all of our heads right now.

Phil: [Laughs] I think for me it's a similar thing and it's exercise, so one thing I really enjoyed was running in the rain, for a long time listeners of the podcast will know the history behind why I don't run anymore, but I can't run anymore unfortunately. But I used to really enjoy running in the rain so if I could choose between, again I guess there's degrees isn't there, so not when it's freezing cold and lashing down, but actually running through a shower that helps keep me cool, I've always quite enjoyed that, I thought that was quite a nice thing to do.

Hilary: Actually as I start thinking back now also I think clifftop walks when there's quite a rough sea and a storm and it's raining, some people are very dramatic about that too, I think that's another good experience.

Phil: Mm, definitely, oh and you've given me my link into the podcast as well. So you said about if it's a bit windy and the sea's a bit stormy and what was the word you used? You didn't say scary? You said dramatic?

Hilary: Yes.

Phil: So organisational change that can be quite dramatic then. What got you interested into organisational change and then the neuroscience link into that, where did that interest come from for you?

Hilary: Originally way back when I worked in marketing and advertising and that form of communication, and in a way I just fell into organisational change. I was headhunted way back into a management consultancy who at that point there wasn't much going on in the world of internal comms and change. And they wanted people with I guess the external communication skills and I've also done quite a lot of market research type stuff, so measurement skills, to begin to bring that knowledge internally and into organisations. Because I guess that was a point at which people were beginning to realise that employees who are communicated with, who are engaged in some way are likely to be more productive. I guess I kind of fell into it really in terms of change management but absolutely loved it, in that I guess the relationship between organisation and employee feels so much profound in some ways, than the one perhaps between consumer and organisation, because it works

on so many different levels. So I worked in organisational change for many years, mergers, acquisitions, restructuring, all sorts of things and the neuroscience I came across an article about ten years ago or so, written by a psychiatrist saying we can now understand enough about the human brain to apply that knowledge to the real world and to the world of work. I thought that's interesting perhaps if we can bring a bit more science to what we do, a bit more evidence to what we do in terms of organisational change, that would be really interesting. I went abroad and studied with neuroscientists in the States and more recently over the last four and a half years I've worked with neuroscientists, some at the University College of London here in the UK and still some in the States as well.

Phil: What sort of things have you been working on with them then, with some of those neuroscientists either in America or at UCL, what sort of things have you been working on with them?

Hilary: Well I guess initially it was just me learning from them, so initially it was, because I'm not a neuroscientist by background at all, so initially it was about learning, learning about the brain and then thinking about how do I make that relevant to organisations? So in a way how I work with them I guess is me kind of going in and saying look I'm really interested in this particular area, tell me more about be it stress management, be it about relationships at work, what do we know, what do we know from a brain perspective? And that's how I work with them, I guess I go in and say this is what I'm really interested in. And what do we not yet know as well I think is really important with neuroscience to be clear about that.

Phil: I find that really interesting then in that, and I risk now putting labels on things that might be inappropriate, so I'm very up for you correcting me. So are you building a bridge then between the world of neuroscience and research that happens in universities and the workplace?

Hilary: Yeah, absolutely. I kind of see my role as it's taking the work they do out of the lab and bring it into the workplace and making it really practical. Because my background obviously is working in organisations, with organisations for many years. Because in a way because I'm not a neuroscientist by background, I can go in and ask a dumb question and I think well if I get it, then hopefully that makes I can then interpret it so that other people can get it too. I think that word of being a bridge, absolutely that is how I see my role.

Phil: And out of curiosity is it a two way bridge? Do you get to take what you learn or what you experience in the workplace and take that back into the neuroscientists that you work with, either at University College of London or in the States? Does it feed back in that way as well or does it tend to just come out?

Hilary: At the original book launch somebody asked me a really good question, they said, "So Hilary you've learnt a lot from a neuroscientists, what have the learnt from you?" And some of them were in the room and one of them said, "Well what we learn from Hilary is when she comes in, she's asking us in a sense what the real world is really interested in?" Because it's very easy I think in labs in universities to get interested in certain areas but they say it's actually quite refreshing to have somebody coming in from that very practical world of work, to talk about this is what people are interested in and this is what people need. I think they were grateful for that perspective. Also they're

intrigued, they're quite intrigued some of them about how do you make those terribly complex stuff into something that is accessible and useful for busy leaders and managers? So they're interested in that side too. I also think especially working with UCL I think good on them, they are very interested and concerned that their work is relevant and useful to the world. One of them said a lovely thing to me, one said, well as professor at UCL I am paid to be here by the British taxpayer, if you're taking my work out and making UK PLC function better, that's great. I think there's a very nice sense of mutual reciprocity there.

Phil: One of the other things that I get interested in, yeah, do I want to go down there? I do think. Is myths and misconceptions and the reason that the conversation has triggered that thought, so normally it's one of the questions that I ask right at the end of the podcast, are there any myths and misconceptions that you want to put to bed? But I guess the fact that we've already started talking about how what you're trying to do is to find out, you're asking the questions that people in the workplace are asking. Then I wondered, sorry I'm speaking very poorly today, and then I wondered if you've asked questions that the US scientists and gone no, no that's not a thing, there's not much evidence for that type thing. So I wondered if there are any myths or misconceptions around neuroscience that you've experienced either from the workplace or that you've had to address or put right in that way?

Hilary: Interesting question. I think partly it's staying humble in a sense, neuroscience I think is a really exciting area but there is still a lot we don't know, and I think particularly in the areas of advertising and marketing we need to be quite cautious. Because I get a sense all right agencies setting up ten people we can put them into our fMRI scanner and play them your ad and see how their brain responds, whether they're going to buy your product or not. No, we can't. So I think it's about being cautious and I think especially looking at things in the popular press about what's there. I guess the whole right brain/left brain and it's useful as a concept, but the brain doesn't really work like that, it's much more about networks. I think things like that we need to be careful about. But I think one of the bits of really good news is about the brain's ability to keep on learning through life, I think a lot of us think oh once I've got to 30, 40, 50 that's it. But the good news is from the world of neuroscience is how our brains are capable of learning well into older age and not only can they but we should do, this whole thing of neuroplasticity. I think there's some really good news. I also think because my other message would be about we've probably got more control over our brains than we realise. I think if we understand them there are choices we can make, I think that's probably another area that's a positive message but one that people perhaps don't quite realise.

Phil: Okay, I'll come back to that one in a moment because I think that will certainly be a useful area to explore some more. Just in case it would help the listener then, neuroplasticity, what would be your working definition of neuroplasticity?

Hilary: So neuroplasticity is this ability of the brain to change and restructure and indeed our brains are doing it all the time, everything that we remember, every conversation that changes the structure of the brain, creates a new series of connections between neurons. But neuroplasticity is the ability of the brain to restructure, to change, but we used to think pretty much once you hit 25 that was it, the brain didn't improve in any way, that was it, it was downhill all the way into old age, over the age 25 our eyesight doesn't get any better. But other parts of the brain can absolutely change and

restructure and I think this is really good news for all of us. In fact neuroscientists say perhaps one of the reasons why our brains do tend to slow down in old age is because we don't perhaps quite challenge or stretch them in the same way we did when we were at school or college or university. So there is lots of thinking now about if you really want to keep your brain agile and active and young, then get out there and learn something difficult because we not only can do, but they think it's good for the brain too and might even be protective in older age.

Phil: Yeah, because there was a big growth, I don't know if growth is the right word, around Sudoku wasn't there, what was that, I don't know, ten years ago or something like that, Sudoku keeps your brain young type thing. But I'm less sure from memory, there's lot of brain things all mixed together into one, whether actually the evidence backs that up, I don't think it did.

Hilary: No, again it's another emerging field but I think on the whole the research into it, if you do a lot of Sudoku your brain tends to get better at doing Sudoku, but does it actually transfer into other areas? Not necessarily. But I know some neuroscientists I work with are working on things like brain training apps and I think there might be something in that. But certainly the neuroscientists that I work with say it's about learning something really hard, that's what's good. So it is about learning a musical instrument, leaning a foreign language, it's those kind of things, things that really challenge your brain that you have to actively get involved with and think about. That's the kind of stuff that's really useful to challenge and stretch the brain. I guess in organisations I say to people so I think we often do find change challenging but maybe there's a positive message in there if we are finding new ways of doing things that were difficult or awkward or say particularly challenging. Maybe there's a message about well good because of if it's challenging your brain maybe that's a good thing, because one of the things we have to stay aware of is that our brains tend to like habits, our brains tend to like doing things in the same old way. So actually challenging them at work, getting to learn new things could be good for us.

Phil: One of the other things about me is I'm a bit of a linguist, so when you mentioned just there a phrase like brains like habits, I go oh do they though? Is that generalisation, if I can do a softer 'G' and 'J', are those generalisations justifiable, is it as simple as brains like habit or is it a bit more complex than that?

Hilary: Well it is as simple as that, that on the whole what our brains want to do, because learning new things takes up quite a lot of mental energy, on the whole what I think our brains want to do is push things into being habits. So I guess things like if you think about when you learn to drive a car and how initially you really have to concentrate and if you're anything like me, I remember as a 17/18 year old learning to drive, I couldn't hold a conversation in the car and drive at the same time, it took so much of my focus to drive that car, change that gear. But now hopefully I could happily hold a conversation and drive a car. So that's an example of things turning and shifting into habits that learning how to drive, so the brain wants to do that, so to speak, because it essentially frees up by pushing things into habits, into nonconscious thinking, it frees up the brain to think about more interesting things. So habits are useful to the brain and so the brain will quickly push things into habits if it can. Because neuroplasticity in a way what neuroplasticity is all about is the brain thinking to itself if you're going to keep doing this thing whatever it is, I will make it easier for you and less effort for you by making tighter connections between brain cells and more connections, so those things become

easier for you. So when you drive a car it becomes much easier, learning to use a new system at work becomes much easier. On a whole that's what our brains want to do, they want to form habits in that sense. There are other things where you could question it, things like novelty is also attractive to the brain but that's another issue.

Phil: Yes, and then you get into the other things that are attractive to the brain, other things that can take any of that capacity up, so when you look at that executive control area, for want of a better phrase used to be the executive control, which looks at that bridge between short term memory and long term memory and working memory is included within that as well. Then you're right the more habits there are the easier it is, the more I can process a the same and the more things that I can be attentive to because I can automate some of those things.

Hilary: Yes. And we have very limited working memory, I think there's only about four things we can keep in working memory at any one time. Which is why the brain wants to push things into that nonconscious thinking. I think the message for all us in terms of habits is I do think we've got to reflect at work or wherever, am I doing this thing in a certain way because that's the best way of doing it or am I doing it in a way, this way, because I've always done it that way? Because there's a bit of our brains will say just keep doing the same old way, that takes less mental effort, it's easier for you to do it. So that's why I think we need to be conscious about habits because the good news about neuroplasticity is the ability for the brain to form these connections, make things easier for us, less effort for us, less conscious thinking about driving that car or whatever it might be. The downside is that once neuroplasticity has done its work so to speak, it's very hard to change that set of connections, once you've got a habit it's very hard to shift the brain from that habit. It's very hard to stop a habit, on the whole it's easier to replace that habit with another more constructive one, one that we want perhaps.

Phil: You've given me a really nice segue into one of the questions I was going to ask a bit later on which was bringing together organisational change. We talked about organisational change and habits then, because there's a risk that I sound like I'm insulting organisational change practitioners out there, and I suppose in a way I am, in that there are a lot of organisational change practitioners that exist, that have a habit or a process that they follow. So when something as I would argue because I'm biased, something as emotive as organisational change, if we're very process driven with it because that's the habits we've got into, oh I'm at this point in Cotters, or I'm at this point in whatever, therefore I need to… we follow the scripts that we've learnt over time rather than approaching it in the reflective way that you've articulated just now.

Hilary: Yes, absolutely, all of us, as you say, we have our habits, we have our way of doing things, we're very comfortable with those, also with the brain, the more you keep practicing those kind of habits, using both parts of the brain, that process, the more that part of the brain gets experienced and able to do that. You're absolutely right I think it's an area where we've all got to open ourselves up to are there other processes I should be looking at and other ways of doing it. Because once we're in that habit it becomes quite hard to see the world differently too and it's quite hard to step back and challenge ourselves to do things differently.

Phil: Okay, so that's one of the links then that we've established between neuroscience and organisational change is the neuroplasticity bit is good because that means that we can learn new things, it can also be a risk that we need to be aware of and look out for because we don't want to get ourselves stuck in a habit and not be reflecting on what it is that we're doing. What are the other links or what are some of the other links that you've found between neuroscience and organisational change?

Hilary: I think one of the things about our brains is that on the whole our brains they're constantly subconsciously trying to predict and make meaning for us, because our brains think so to speak, that if they can predict about what might be coming up they can better protect us. And for the brain it's all about survival. I think if we remember that, that's they key, the brain just wants us to make it through the day so it's all about survival. So one of the things that brain wants to be able to do and is very good at on the whole is about trying to predict what's coming up, trying to make meaning, so the brain feels if it can predict, it can protect us. Because if we go back to the Savannah if our brains could predict rustle in the undergrowth might be a snake, then our brains are better placed to protect us from that snake. So our brains are constantly trying to predict make meaning. Where things like organisational change takes away from us very often is that ability to predict, I don't know what's coming up, there's uncertainty. Our brains don't like uncertainty, they find it very difficult and I think any change practitioner, any one of us just needs to be aware of that, that uncertainty is difficult for the brain, it doesn't like that. I think choice is also hugely important for the brain, to have that sense of I've got a bit of choice, a bit of control is very important to the brain. And again going back to the Savannah because if our brains felt we had some control over what's going on we're more likely to survive, we're more likely to make it. So I think choice is very important.

I was working with a technology team recently, one of the banks, they were quite frustrated about saying why is it people at home will choose their new systems and whatever, music systems and whatever and love it and very excited about that, their music systems or whatever it might be, but when we get them into work any new technology they groan and moan and don't want to do it. I said one of the things is choice, if we've chosen at home to have that new music system or whatever, that's my choice. If it's somehow imposed upon us, which a lot of the organisational change can feel like it has been done, on the whole the bit of us goes I don't want to do it if it's being imposed upon me. I think there's a bit about choice, about control is really important to the brain and about certainty.

Another key bit I think for us to bear in mind when we're going through change, because it is all about survival, when our brains again subconsciously are thinking about is things that might be a threat to our survival or things that might enhance our survival. Anything that feels a bit new and uncomfortable on the whole our brain goes, huh I don't like it, that could be a threat. Our brains are much more attuned and aware of things that might be threats to us, and again uncertainty feels like a threat to the brain. We need to be aware of that and when we are feeling threatened or our survival mode, that our brains, because they're still really best designed for the Savannah, I think if we put that thought in our heads, our brains really still on the whole are better designed for the Savannah than they are for the very sophisticated 21st workplace, on the whole what our brains do is they go into flight or fight, flock or freeze, there are actually four of those. But flight or fight means blood goes to those parts of the brain and goes to runway or to fight and away from this executive centred, the prefrontal cortex, this bit at the front of our brain that's so important in terms of thinking and decision making.

So when we're in that mode of flight or fight, and lots of little things can trigger it, it could be your boss not saying good morning to you that day or an email that's a bit aggressive, it could be a colleague you don't get on with. Uncertainty, lots of little things trigger this kind of threat state in our brains. And when we have that threat state blood goes away from the prefrontal cortex, this bit of the brain that is so important in terms of thinking.

Phil: There's lots in there that I wanted to ask some more questions on. I want to stick on the threat state for a moment. So part of my interest then I guess the clue's in the title Emotion at Work, now when people use the word threat, typically the closest collocation to that you would go for would be fear. But I am less convinced that the threat state that you were describing would only be about fear or would it? I guess that was what I wanted to ask.

Hilary: Yeah, well I guess it's threat, so it's about like I say anything that our brains feel might be a threat to us, so it could be anything. So it could be being new on a team, not quite fitting into the group, I don't quite belong here yet, I can't quite relax with these people. That would create a threat state. It can be quite subtle, we could be conscious of it but I think most of us probably quite a lot of the time subtly are in a bit of what I call threat state. It's even driving into work in the morning or going to work in the morning and hotdesking, will I get a desk, will I not get a desk? Will I get the desk I want? All these little things create what I would call the threat state in the brain where blood begins to go away from the prefrontal cortex. But fear is very close to it, threat, fear are the emotions that kick in fastest in the brain because they're so important in terms of survival, so they tend to be the ones that kick in really quickly.

Phil: How would you, if at all then, map other emotions in on that then, so if you were look to at say anger? If we go with the prototypical universals as they're described, so basic emotions sometimes as they're described where you've got anger and you've got fear, you've got surprise, You've got disgust, you've got happiness, would they map across to the threat state or are they slightly different to the threat state, how if at all, would you link those together? If they wouldn't then that's fine to say as well.

Hilary: Well I think it is a threat, it is that fear. There's a little bit of the brain called the amygdala, it's part of what's called the limbic system, the limbic system is all about processing emotions and amygdala is key into processing emotions. It's a tiny almond shape bit of the brain but it's the bit that responds very quickly to things and tends to be associated with fear. So that is the bit that tends to get triggered first in our brains because it's much more important to survival. So fear threat is the one to be interested in at work in many ways. I think a key thing about all our emotions though is that they are contagious and I think again we need to be aware of that, if we're feeling a bit stressed or anxious, we're likely to be spreading that emotion around. But equally if we are feeling happy or joyful we're likely to be spreading that emotion too. I think they do all share that in common.

Phil: Absolutely and one of the articles that I have been sharing recently across a couple of different social media channels is there was one piece of research done in terms of the number of joyful or happy contagions that are needed to contrast an angry or a scared or a fearful contagion. I'm less convinced on the actual numbers, it's the numbers themselves that are being sited, but definitely the emotional contagion is a big part of it.

Hilary: Yeah, no, I think putting numbers up would be a very hard thing to do but absolutely I think there is this thing about, yes… and one of the things I think this whole positive/negative, often I say to people in workshops if I got you to think about one email that you got saying well done great job, thank you so much. If I got you to think about another email that says, you've really let me down, you've really disappointed me. That second email would have a much bigger impact upon us and that's because of the nice things that get said to us, our brain in a way goes that's nice but not important in terms of survival, I'll hone in on the one that's negative because that's more important in terms of survival. So I do think in organisations we need to be aware of this positive/negative balance that our brains will be more interested in the negative, but all that said I do think going back to an earlier point, I do think we have got more control over our brains than we realise. And I think there is something about how we set our filters during the working day, that we can, in a sense, choose to be glass half empty or glass half full. And there's research beginning to come out now suggesting that those people who choose to be glass half full, think about the good things, about it's a choice that I do this job, here are the things I like about it, but the more we look for the positive, the more positives we're likely to see it elsewhere. And again one of the things I do in some workshops is just getting people to share three good things that have happened so far today, because I think once you begin to look for the good things you're more likely to see other good things. So this is where I think we do have more choice, more control over our brains than we probably realise.

Phil: One of the things that I do alongside all of the podcast episodes that are recorded with all of my guests, is have a set of what are called show notes, and so whilst I do a transcript of each of the episodes from an accessibility point of view, everybody can get access to the conversations that happen, what the show notes do is provide is both a summary of the podcast but also where to go if you want to find out more type thing. And so when any of my guests say to me oh there's some research that suggests this or studies that suggest that, and my example that I cited earlier on about the proportion of happy or joyful sharing versus other types of sharing, is to put links to either articles or the studies themselves within the show notes. So if there are any particular resources that we pick up on our way through Hilary, if it's okay, if afterwards you can send me a list of where people could go to find out more, that would be really useful because then I can pop all of that in the show notes, if that's all right?

Hilary: Yeah, absolutely. In the book that has all got the references too, so if people want all the references they're there but any key ones you think we've raised today, I'm very happy to share those.

Phil: Yeah, I'm guessing when we're talking about the appreciation and the noticing good things that you were talking about just now, I'm guessing that's a positive psychology kind of body of research that sits underneath that would be my guess. But if there's a particular study or studies that you know of then, yeah, that would be good.

Hilary: Yeah, sure.

Phil: A couple of times now then you've mentioned about it's the control and choice bits, so you've talked about choice in that the brain likes to have it and when it feels like it doesn't have it then that can create a less willing response. You used the example of technology earlier on, if people are making

the choice about technology, they're more likely to want to go after it whereas if they haven't made a choice then that may create more resistance, an unwillingness, that's a bit better word than resistance. Again right back towards the start of where we were talking, you said that we have a lot more control than we might think we do, so we have more control than we realise. And as we've talked about that a couple of times I thought it might be worthwhile to give you the opportunity to expand on that a little bit more. So what do you mean by that, we have more control than we might realise?

Hilary: Well I think that if we can understand our brains better and I know our brains are hugely complex things, and there's still a huge amount we don't yet know, I do think if we just understand a few key things about our brains it's really helpful, because then we can work with that knowledge and that information. I think we just become much more self aware too. Going back to this point about threat state, reward state, just being aware when that nasty email comes through or someone said something rude to you in a meeting, just being aware of that threat state and what it might have done to you, just that awareness begins to give us some control, rather than just emotionally reacting to it, just being aware, I think is really helpful. So for me it's very much helping people to understand their brains better, I think if we understand them it just gives us that greater understanding of what's going on in me, what's going on in other people. I think once we've got that understanding, that awareness then we can choose how we respond to situations better than just reacting to them. I think it's partly to me it's about that understanding your brain better and then you can work with that knowledge rather than just fight it or in ignorance of it.

Then there is this bit about priming ourselves, setting filters, that what the brain tends to do is brain likes to be right, so what we tend to look for is things that prove that I'm right. So again it is that feeling if you're walking in a meeting with people who you don't particularly like and you find them difficult and awkward to work with, if you go in with that mindset the first moment when one of them starts being a bit difficult or awkward your brain will go see I'm right, they are, they are difficult, awkward people. If we walk into that meeting saying maybe these are basically good people and here are things we've got in common and they are trying to cooperate, then we're more likely to see the signs of when they are trying to cooperate and what we have got in common. So we can set our filters before we walk into each meeting, each interaction. Being aware of like I say our brains want to be right so try to look for what we expect, but resetting our filters, perhaps just stop, pause before each meeting saying I am going to go into this meeting and be constructive or they are good people really. All these little things and part of the thing about neuroscience I think it's little things make a difference. You don't have to wait for huge cultural change in the organisation, I think just little things that each of us can do, so before each meeting, start of each working day, during the working day, that give us more control. And a lot of it, as I say, is about setting filters, priming ourselves so to speak about how I choose to interact with the world. To me it's, yeah, partly about understanding the brain, partly about setting filters and priming ourselves.

There's also again quite a lot about how we can get more out of our brains, being aware of what distracts our brains, being aware of what's mentally depleting during the working day and the importance of things like exercise for the brain, the importance of getting out into the fresh air, the importance of breathing properly, body/brain connection, breath gives big messages to the brain

about whether I'm calm or not. So lots of ways in which I think we can influence our brains for the good if we choose to.

Phil: That thread of the conversation then began with the question from me about what has neuroscience taught you or what have you learnt from neuroscience about organisational change. So we've talked about control and choice, we've talked about filters and priming those filters, and how understanding more of the brain can help us with our awareness, but also with about how we might approach things in a constructive way. Like you said talking about things like the importance of exercise or fresh air or breathing. So if we can have that broader understanding of what's happening in our brains then that can help us with how we engage with the world around us. What are some of the other things that you've learnt then or what, if any, are some of the other things that you've learnt from neuroscience that then you use in the organisational change work that you do?

Hilary: I think it's almost that thing about choice and control, I think my experience of working with organisations going through change is that leaders tend to go to darkened rooms with the consultants or whatever, look at all the data, lots of thinking and emerge with a strategy, a plan. They might be very well thought through and very good but then they tend to go to broadcast mode and say here's the challenges, here's our strategy, here's our plan, here are the benefits to the customer, for you, da, de, da, de, da. And then wonder why a lot of employees dig their heels in and don't really want to do it. I think again from the world of neuroscience it's this point about choice, this point about giving people a chance to reach their own conclusions, their own insights about why a certain course of direction might be better than another. It makes a big difference to us and I think leaders have to recognise that they perhaps have that two or three months or however long it might be, of being able to look at all the data, look at all the information and reach their own conclusions. I think organisations need to give employees perhaps a bit more time to do that too, just to look at some of the information too. Because reaching our own insight, reaching our own conclusion, not being told it makes a big difference to the brain. We actually process thoughts about goals that we have chosen as opposed to goals that we have been given by other people in a different part of the brain, so it feels different to the brain.

There's something to me about giving people a chance to look at information, reach their own conclusions. I think it's one of the reasons why coaching is coming so much more to the fore because people are recognising that if you've got somebody being coached rather than just told what to do, if they've reached their own conclusion about why they want to pursue a certain goal or do a certain thing in a certain way, they're going to be much more committed to it than if they're told to do it by their manager. So for me that's one about giving people a chance to reach their own conclusions. Another big one for me that didn't really strike me I guess until the first time I started running workshops with leaders around praise and how to lead better by understanding our brains better. The very language, you mentioned language, the very language of neuroscience, the very language of science is really useful I think in many organisations. That my background is very much organisational change, very much the people side of change is what I've always been interested in and I think that can be seen as being a bit of a "soft area" and perhaps a matter of opinion as to how best we lead people through. From the very first session I did with a group of bankers around understanding the brain a bit better in terms of leading people through change, I could just see I'd got their attention in a way that I hadn't done before. Because the whole of that science about evidence I think is hugely

appealing to many leaders because in some ways it takes away what's a matter of opinion, because we can say there are certain things that we do know about the brain, that what helps it to focus, what helps it to collaborate better, we know what gets in the way of that. I think the very language of neuroscience, that ability to bring evidence in studies as you mentioned earlier, from the lab into the workplace, I think is really persuasive to a lot of leaders who might otherwise be quite sceptical.

Phil: I agree, and I want to bring some of that scepticism with me to the question I'm going to ask next then, and I appreciate this could be a certain degree could be an on the spot putting question and I'll have framed as such, I'm letting you know that it could be. When you said about the goals then and the goals that are set versus goals that we decide ourselves, and they're processed in different parts of the brain, that's led me to two questions, I'll let you know what both of them and then I can come back to them in a minute. One of those is which parts of the brain is that in then? So which parts of the brain do the self determined goals and which ones do the given or attributed goals? And then secondly, what evidence is there that it's a good or a bad thing that one gets down in one place and one gets done in another, is it not just different?

Hilary: I guess the short answer to the first question is that goals that I have chosen for myself is done in what's called the medial prefrontal cortex, goals that have been given by others, which you tend to see more activation in what's called the lateral prefrontal cortex. And there's various studies around that. Good or bad? I guess if you want people to be committed to those goals then you want people to feel they've chosen, you want to be that medial prefrontal cortex one. That said there are times when people just want to be told what to do, I appreciate not everybody all the time… it's not that all the time it's always good to involve people. I think there's a question there about where is it appropriate to be getting people to set their own goals to choose, as opposed to times when people are like for goodness sake just tell me what to do and I'll do it. I think it's always that dilemma in organisations especially with change, where can you let go? Especially you've got to be honest with people too, if you've already made the decision about things then don't pretend you're involving people because that's not helpful at all. But I think there is that discussion about how much do people, just tell me what to do and I'll do it, as opposed to let me think about it. Yeah, I think that's always an interesting question, dilemma.

Phil: Yeah, because I then get interested in, and for me also what we're starting to potentially do is bring two disciplines together and bring together disciplines of psychology and/or sociology and/or neuroscience together into one. Because if when I choose it's in the medial prefrontal cortex and I'm being told it's in the lateral prefrontal cortex, they're both part of the prefrontal context then, which is what a lot of the thinking and that's where the cognition work happens. I guess what I'm less familiar with is that if something is in the medial prefrontal cortex does that make it "better" and my pause and my elocution of better, tells you that I'm doing it in inverted commas, than it being in the lateral prefrontal cortex, because the implication is that it's better if it's in the medial when it's choice and it's worse if it's in the later when you're told. But I don't necessarily…

Hilary: No, I agree with that. And I think there's the evidence about where those thoughts are processed which is one thing and not to be judgemental about that. The research shows that, I suppose those goals tend to be processed, I think it's a different thing about what's good or bad? I think the other thing we just do need to be aware of is going back to that part of the brain called the

amygdala again that's around threat, is sometimes being told what to do or even well intentioned advice can start to trigger the amygdala because it somehow it's saying you think you know better than I do. So even well intentioned advice can actually activate the amygdala in our brains, which is part of this threat state. Again we need to be aware of that because if we're triggering a bit of a threat state in our brains again that tends to be distracting to the brain, it gets in the way of the prefrontal cortex working its best. So, yeah, even well intentioned advice can do that, can trigger that threat state, trigger the amygdala. So I think it's when the amygdala gets involved and activated I think when we need to be interested.

Phil: One of the things that you've made me curious about which I'll go and do some more reading and research on is, are different emotions triggered at different speeds? So is fear for example, is that faster than anger or faster than happiness or faster than others that go with it? Because I'm not aware of, just because I'm not aware doesn't mean that doesn't exist, but I'm not aware of any research that suggests that one emotion fires quicker than another. So that's one for me to go away and look at.

Hilary: Yeah, this bit about fear and threat it tends to be the fastest emotion because it's so important in terms of survival, that's why it tends to be the fastest one because it's important for survival, so that tends to be fastest. Yeah, that's why of all of them.

Phil: I can cognitively I can understand it from a why… there's the evolutionary link there and therefore that would suggest that if we can identify our threats quicker therefore that allows us to maintain our survival and you made the link earlier on between one of the brain's functions is to make to sure that we survive to end of the day. I'm going to get really nerdy now, so one of the pieces that I did some research into for my studies then was the orienting response and the P300 wave that gets picked up on typically on EEGs but can picked up on other scanners as well, which seems to be an orienting response that when we see something that we give meaning to, there is an orienting response that goes with that. Whether that be somebody using your name in a busy environment, through to a threat that you might perceive, through to seeing something that is sudden and unexpected that you weren't necessarily expecting to see, it might not be a threat it could just be something you weren't expecting to see. But there was no differentiation in the speed in which the orienting response would pick up on that particular stimulus, it would be the same thing. And like I said it's interesting, this is what I love about getting different guests on because I get to find out new things that I can then go away and research and investigate some more. So that's good.

Hilary: Good stuff.

Phil: There was something else that you said a while ago that I wanted to come back to. So typically when the amygdala's mentioned most people that I engage with talk about fight or flight, some will talk about fight, flight and freeze. Now you added a fourth one into the mix that's very, very rarely talked about which is flock. Do you want to just talk a bit more about that for me?

Hilary: Yeah, and flock, we see it in animals, sometimes animals flocking together sticking together. But there is also a response that is referred to tend and befriend, is how sometimes people respond to things. So it's the coming together and looking after. And so that's a fourth one, that's how some people might respond to change or to a threat is a kind of a coming together. And there's some

interesting research about dog shows, these best in shows for dogs and how people respond differently. There's some interesting research, some quite recent research, about how dogs being put into these best in show competitions and if they win and when they lose, men and women can respond in different ways. A man with high testostorone with a dog that tends to lose tends to pat the dog slightly less, women if their dog has lost tend to pat their dog more. I guess that's a bit of that tend and befriend when we're in that stress space of actually paying more attention to the dog. Again not to say whether one is right or wrong but just that slightly different response. And that would be that tend and befriend response from women in terms of patting the dog more when it's lost.

Phil: That would be fab if you could get hold of that piece, again within the references, that would be really interesting to…

Hilary: Yeah, that's in a new edition of books, I came across that quite recently but I can definitely share those with you, yeah.

Phil: That would be great, thank you. Looking back over my notes now that I've been taking as we've been going. You know you talked about giving choice or giving people the chance to make their own insight or conclusions and you also rightly made the point that don't do that under false pretences, if the decision has already been made, don't make it as though people have got a choice when they actually haven't because if they found out they haven't got a choice later on, they'll be even more frustrated than they might have been before. But I was curious about how do you do that in practice? When you're working with a client what strategies do you use to give that choice or the chance to make their own insight or conclusions in the practice that you do?

Hilary: I guess it's a mixture of things there because I guess sometimes it's about, okay a decision might have been made but there's a bit of a chance to give people more information so they can see how that decision make look and that same information for themselves to understand how that decision was made, rather than just saying here is the decision. I think that's one side of it and so I think in my experience a lot of organisations in their haste to get on with change and I understand it, the change has to be, people need to crack on. There's a hesitation or resistance to doing that because people say we've just got to get on with change, we haven't got time to do that. But I tend to say to organisations well you've got a choice, either you spend a bit of time upfront with employees giving them a chance to understand why option C is better than A or B, and give them a chance to look at some of that information for themselves. Or you go into this broadcast mode and tell them it's going to be option C, but then you will spend quite a bit of time mopping afterwards trying to persuade people, trying to take people with you. I think it's about where do you spend the time and effort in terms of taking people with you. I think that's one bit.

On the second bit the bit about giving people choice, my question to these managers is where you can let go? Where can you let people make decisions and it can be quite small things can make a difference. I've had a couple of people give me examples, pretty much the same example about relocating and employees have been very unhappy about relocating and lots of moaning and groaning and resistance to go to a different location. And then in both cases these people again an example of just taking in new chairs, it could be the new chairs in the new office and in one case saying, which colour chair shall we have? We can all vote is it blue or green or whatever the choice was. And another

case being able to choose which kind of chair? And in both cases said the moaning and groaning certainly diminished once we've had the chance to make that choice about chairs. Quite small things, quite tiny things can make a difference or another example. Or another example was I was working with an organisation where jobs were going, they were closing down and a manager was saying well there's no choice we can give to people, this office is closing, the jobs are going, there's no room for choice. But again we just said well is there other choices in terms of what people can chuck away and what people can keep as souvenirs? How you say goodbye to people, there's always some way you can say over to you, how do you want to do this? And it's just a really important where you can let go. It can be quite small things just meaning I've got a little bit of control over something makes a big difference to us. I think it's always that question of where can you let go? Where can you pass that decision over to the employees?

Phil: Fab, wonderful, that was a really good example, I like that. Okay, I think that's it. That was all the questions that I had. Is there anything else that's come into mind for you, Hilary, or anything else that you're thinking or feeling or would like to say?

Hilary: I guess the only thing we haven't touched on which is one again I do think we hugely underestimate is this bit about what deeply social creatures we are. I think for me when I was doing my neuroscience studies all those years, I think that was the bit that really struck me, but again we all, personally on one level relationships matter to us. But I do somehow think in organisations we don't allow for that, we expect people somehow to switch off that need for relationships, social connection as people walk in the workplace door. But we absolutely don't, we are deeply, deeply social creatures and again constantly subconsciously are checking, do I fit in? Do I belong? Is my manager interested in me? Because if I do belong, if my manager is interested in me my brain goes oh that's okay the. But if I don't feel I belong you go into this threat state again. One of the things that really brings it home I think that we think of physical pain and social pain as being two quite different things, where I feel I don't belong as opposed to I've hurt my leg. We tend to think of them as being two quite separate kinds of pain but to the brain it's the same part of the brain processes those, the brain does not distinguish in the same way that we do. From the brain's point of view both are essential in terms of survival, that physically you've hurt yourself, so don't keep running or whatever or the group is rejecting you therefore that's also a threat to survival. And again the reason that's a threat to survival because our brains still think we're on the Savannah, if you're in the tribe you're much more likely to make it, if the tribe throws you out you're much less likely to make it. Our brains are incredibly sensitive to do I fit in, do I belong? And again I think it's one of the areas we've underestimated but again an area where I think we have a lot of control about the quality of our relationships at work. I think again it's a really interesting area of neuroscience but it's also an area where we can do a lot about that too.

Phil: Yeah, two things I think, so one I really like again if you could give us a reference for the pain processing bit, that would be really good. The need for social connection stuff, again for me there's a real overlap between different disciplines here. I'm really fascinated by the way and ways that identity and relationships are negotiated in the workplace, I think there's a relationship between both the employee and the organisation. Because the organisation is an entity in its own right and there is a relationship that happens there. And then there are the relationships that happen with all of the individuals within it. I get quite interested where individuals, I don't know if individuals is the right

word, or people that are engaging in interaction, so from my sociology background I call them interlocutors, which is the linguist view of people that are involved in a conversation, how they distinguish and delineate between those two different things. So how they can be talking about one relationship that they might have with the organisation and then at the same time there is an individual who is both representing the organisation but is also an individual in their own right, where there is an interlocuter who is both representing the organisation and they're an individual in their own right. So if I think about organisational change if I use your broadcast mode example, a senior leader may be in broadcast mode and other individuals or interlocuters are able to distinguish between that person as a person in their own right, and the message they need to deliver as a representative of the company, and how those different relationships are dynamic in that way? I get really interested in that.

Hilary: Yes, often I feel for managers who are going through change, those people caught in the middle of they're not necessarily the ones making the decisions about change, but they've got to represent those changes to the team, whether they agree or don't agree with that and that difficult position I think also managers are put in. Yeah, to try and represent the organisation and yet they as an individual might feel slightly differently about what's happening. I think, yeah, that dilemma that they face I think is a really interesting area.

Phil: Remind me then your book, the latest edition of your book is out already or out shortly?

Hilary: It's out in the UK and Europe now, yes, so Neuroscience for organisational Change, second edition is just out there, it's going to be out in the US at the end of the month.

Phil: Wonderful, thank you. Are there any other resources like books or videos or TED Talks, are there any other things that are top of your list of go-to places if somebody wanted to go and find out some more?

Hilary: Well there are lots of good books out there, my book is about neuroscience and organisational change, so anybody going through change or anybody in leadership I think mine is useful for. Then if you want to dig down into certain areas Matt Lieberman is one of the neuroscientists who's really good on the whole social brain, I'll give you a connection for them in terms of pain and the social brain. People like David Eagleman is another neuroscientist that writes very well. If people are really keen for the academic articles. Google Scholar is fantastic, most bits of research are now available for free on Google Scholar. So for me when writing a book Google Scholar and my neuroscientists are the go-to places.

Phil: Yeah, I agree Google Scholar is a good friend of mine.

Hilary: Yeah, it's an extraordinary resource.

Phil: All right, in that case then I think I'll bring it together and wrap us up, unless there's anything else that you've got to add, anything else you're thinking, feeling or want to say?

Hilary: No, I think we've covered quite a lot.

Phil: Yeah, I agree, definitely, it's been really good. Thank you so much for your time today, Hilary, I've really enjoyed having you on the Emotion at Work podcast and thank you so much for taking part.

Hilary: Pleasure, it's been a real pleasure for me too, so thank you.