



## Episode 15 – Emotion at Work in Memory & Learning Chatting with Nick Shackleton-Jones & Sukh Pabial

Phil: Hello there fair listener and welcome to the Emotion at Work Podcast where we take a deep dive into the human condition. Before we get into the podcast properly I wanted to set a bit of context – so this is the second podcast of 2018 and its theme is emotion at work in memory and learning. I mentioned in the first podcast of 2018 that I was going to be running some experiments with the podcast this year so this one is an opportunity for you to be a fly on the wall to a discussion. So sometimes on the podcast, I get researchers or practitioners or business leaders who are talking about the experiences that they have had and are talking about concepts or theories or practice or stuff as whereas this week it is very much like an embryonic type discussion really, so all three of us have slightly different perspectives on the role of emotion in learning, in how it interacts with memory and how it interacts with condition. So what you get to hear this time is an opportunity for you to listen to that embryonic discussion as it happens really. It would be great if you could let me know what you think and let me know how it comes across in your ears because my first experiment of 2018 is this podcast really. I hope you enjoy and let's get back to the podcast proper and cue the titles.

Phil: Hello and welcome to the Emotion at Work podcast where we have two guests this week which is quite rare to have three voices, so I am excited about that because I think the only time we have done it before is with Jo Cook and Barbara Thompson when I was with them at the L&D show. Before I set the context of what we are about today let's get their voices on the air - my two guests this week are: first up we have Nick Shackleton-Jones, hello Nick.

Nick: Hi.

Phil: And we have Sukh Pabila, hello Sukh.

Sukh: Hi Phil.

Phil: Now as regulars to the show will know I start with a question that is generally unrelated to the topic at hand but helps us to get to know our guests on the podcast a little better. My question this week is; is there a magic way to loading the dishwasher? So Sukh I am going to come to you first - is there a specific way or a magic way that the dishwasher must be loaded?

Sukh: So you are asking me a question about which I haven't used a dishwasher in about seven years because we just got rid of it at home and from my time before I seem to remember there are certain things you should do - obviously rinse before you put them in and bowls and plates should be at the bottom and they should always be facing the jets otherwise you don't get them clean inside, obviously but that seems to have escaped quite a few people. Glasses and cutlery, if possible, should be on top and I think that's the right way to load a dishwasher.

Phil: Wonderful, thank you Sukh and Nick you?

Nick: Somewhat disappointingly I also do not have a dishwasher so I am not an expert or authority on loading dishwashers, but what I do think is that I remember growing up that somebody would cook and then as a family we would get together to do the washing up. I think slightly, perhaps because it's of rationalisation, but I think it's a bit of a shame that that ritual where you would work together to prepare and clean up after a meal and people taking different roles sort of vanished. I am not a big fan of dishwashers.

Phil: Wow, I am trying to think if I have met two people at the same time who do not have a dishwasher. I am with you to a certain degree Nick, although I do have some quite challenging memories because my Dad was like that, especially when I was 10 I think, from 10 onwards my role within the...everybody getting together to clean up bit, was the washer and my Dad was the drier/inspector and the number of times I would get stuff rejected and he would unceremoniously deposit it back in the bowl and I would go what, what, what's wrong with that one and then he would say it wasn't clean and we would have to go again. Yeah, I remember that and get that, so in our family everybody has to take their plates to the kitchen but it then gets down to one person to load the dishwasher, but again my Dad is quite funny about it, if I go and visit and load the dishwasher whilst I am there he will rearrange it according to how he would like it to be.

Sukh: So in answer to your question Phil what is the right way to load a dishwasher?

Phil: You let the person who owns the dishwasher load it.

Nick: Is your Dad something of an introvert by any chance?

Phil: I don't know what you mean Nick. So thank you very much gentleman and part of the reason I like to ask questions at the start is because what it brings out is stories, so either stories of people's experiences or not with whatever that is and that links a lot, I think, in to the content of what we are going to talk about today. The idea or the reason I guess for pulling together this particular guest list for the podcast today was because it started as an online discussion - so Nick you wrote a blog and posted it about the topic of how do our thoughts and emotions link together or actually do we even have thoughts or is it all to do with emotion and also you mentioned about the overlaps in memories and experiences and decisions and then Sukh you then responded to that to say well actually Nick I'm not quite sure that I agree, I might have a different perspective or different view and I mentioned to Nick when we were off the air, one of the things that I particularly like is the longer form audio discussions as opposed to written, which is why I thought it would be really nice to pull the podcast together today so that we can get into it and explore it in more detail and I am sure that my short summaries there as to what it was that you guys wrote in your blog. When I started to pull the podcast together I got to think about how do I structure it and how do I kind of get your views out so I thought I would keep it nice and simple with a big, broad open question so what I thought we would do is, Sukh I will come to you first and then Nick I will come to you afterwards and then I will add my views in as well at the end. We are talking about emotion at work and thinking and feeling and how do thoughts and emotions interact and link together, for you then first of all Sukh, what are your thoughts or feelings or what do you want to say about this topic?

Sukh: You are going to have to repeat the question for me, please.

Phil: What are you thinking, feeling or want to say about the topic of thoughts and feelings and how they kind of interact and go together pulling from the blog you wrote in response to Nick's original post.

Sukh: Okay. I am just having to think back also on what I wrote. So, what do I think and feel about it? So I think when I read Nick's piece it highlighted for me that there is a number of things that I suppose are really helpful for us in this time and space that we are in now when it comes to understanding how do people think and how do people feel and what is our understanding of that. How can we articulate it in a way that helps people to know that stuff better and from a kind of simple perspective? I read what Nick wrote, I had a reaction to it, that reaction prompted me to want to articulate my response back and in doing so helped me to articulate and express what I think



about the topic as well and for me there is also something here around, there is something of a continued exploration that needs to happen here which I guess is part of what this podcast is about - Nick wrote something, I wrote something and we are now going to explore that further based on what we've written and where this discussion then takes us and I think that is only a helpful thing to do because it helps us to be able to further frame our thinking and our understanding of whatever it is that we have. I guess that's certainly one place that I am taken to and the other place that I am taken to as well is that I am looking forward to this as a learning experience. Now I have a certain perspective on how we think and how we feel, obviously, that is why I wrote what I did and it will be really interesting to know how does my own thinking evolve through this process. I am very open to hearing and talking to Nick about this, and you Phil and to be able to see where that takes me further as well. So I guess initially without wanting to get into the depths of what do I think and feel about the topic at hand in any further detail I think that is probably an initial place to start.

Phil: Okay, thank you Sukh and if it's alright we will come back to you in a bit - I think the discussion will take us to that more specificity and more detail around it. So if I turn the question to you then Nick, I am happy for you to be as specific and detailed or not as you like really. Again, what are your kind of thoughts, feelings or what do you want to say?

Nick: Maybe I need to tell a bit of an origin story. So the first job I was a psychology lecturer without going on, I was teaching a lot of learning theory to kids who were basically just sitting and writing it down and would then regurgitate it and I think the curious thing is in education it never occurred to me that there is anything ironic or odd about teaching PRJs or learning it to be exploratory and then just having people write that down and answering an exam, but then it did start to become a practical problem because then when I moved into business and I tried to apply that learning theory basically none of it makes any difference. I am just going to be as blunt as I can, and this sort of dawning sense that it was all mumbo-jumbo became a concern for me and I think by and large in the industry it's never a concern. We talk about things being hypothetical like learning styles and there are loads of de-bunking and learning styles but we just like to have something, some sort of framework but I became really deeply concerned, partly I think because my background was philosophy and psychology about the truth, you know what it was that was really going on. We actually did a short experiment while I was working at Siemens Communications which more or less demonstrated, at least to my satisfaction, that none of this learning theory really made a difference and so that acted as a springboard for me to think well how is it people really do learn, what is the process that is really going on? It took me about 10 years to really begin to understand the outlines of what I thought was really going on and I started talking about it and I called it the effective context theory. It is quite a radical idea, the thrust of it is that we don't actually remember anything, what we do is we recall or encode how things impact us effectively, so if things elicit a strong reaction in us we are much more likely to remember them, if things are boring frankly they don't elicit any kind of effective or emotional response we are more likely to forget them. It is a good theory in the sense that it is very predictive and it explains an awful lot of things that other learning theories don't, what we remember and what we don't. So I began to apply this in the area of L&D coming up with some of the modules as courses and resources and experience design. I think that just to finish off the major challenge that I have got now is not trying to get people to agree with me but trying to get people to understand what I am saying, because emotion has become such a corrupted word and we have such a limited understanding of how it plays in our lives, if I can just end with one kind of metaphor - imagine that you and I or the three of us were sitting watching somebody playing a computer game, let's say it was Call of Duty, so we are all standing around watching somebody play Call of Duty and I say isn't it amazing how all of this is based on a manipulation of ones and zeros and you turn round to me and say no, don't be silly Nick obviously some of it is ones and zeros like the mathematics bit might be ones and zeros but obviously lots of it isn't ones and zeros, all of the graphics for example. That's where we are at in the conversation. I am



basically saying that effective processing is the operating system which underpins everything so by definition all thoughts and conceptions are a species if you like of effective processing. That I think is what I am really struggling to get across when we have this kind of conversation. I am not talking about the kind of emotions that people refer to every day when they get angry, you know on a train for example, I am talking about the basic way in which our brain processes inbound stimulus and then operates and compares and recalls that information.

Phil: Thank you, Nick. Sukh I am conscious that I said I would come back to you for some of the more detail and specifics. Would you like me to do that now? Would it be okay if I did that now?

Sukh: Yeah and also I have a couple of questions for Nick that I would like to just check in about as well.

Phil: Yeah okay.

Sukh: Nick, just to check, is the effective context module a theory and module that you have developed? I guess that is something that I am unclear about and haven't been able to ask you about previously.

Nick: Yes, it is.

Sukh: Where is that drawn out from please?

Nick: That's a really good question. I am going to be a bit presumptuous. The presumption is that one of the things I was studying was the philosophy of science and what winds me up no end these days is that I think people have science back to front, they think that the way science works is that you do a bunch of research and then you come up with a theory when in fact it is the other way around. You do a theory and that then provides a basis for hypothesis generation which you can then research. So where it came from is then a deeply philosophical question. I was talking to Phil earlier and I think nobody really knows where their theories come from, that's always retrofitted, people join the dots going backward, it's like where did the theory of evolution come from? You can tell a story about how Diane was looking at all of these birds and that led, but that's not really the truth and again like everything emotional, it bubbles up and you do it a disservice when you post-rationalise it, but I can point to a few people. As I said to Phil earlier I was reading Heidegger and reading Nietzsche and Nietzsche has this marvellous phrase which I often quote, he says thoughts are the shadows of our emotions, they are always simpler, darker, and emptier. Of course the problem with reading Nietzsche is that nobody ever takes him literally, he wanted to be taken literally but the things that he says are so strange and so alien to us that people take them as metaphors and so it has taken me a lifetime to learn to read him literally and the other person that I was reading was Heidegger who was talking a lot about the essence of human beings being concerned. So they were ideas which as a student kind of sat there and bubbled up and perhaps connected with other things that were bumping around in my head. Sorry, it's a bit of a long answer but it's the best I can do.

Sukh: That's really helpful for me because I've seen your writings on the effective context module and I think we all have a similar understanding and history of psychology in different ways and so anytime I read something which has any kind of psychology underpinnings to it, it fascinates me because I want to know more about it. It's good to have that context thank you.

Phil: There is a couple of things for me and I am going to be multidisciplinary so I agree Nick with a lot of what you are saying in terms of with the way that we as humans process information. So if we look at the field of linguistics, if we think about the way people interact with each other, Deirdre Wilson and her kind of compadre in research which is a guy called Dan Sperber, came up with this idea of relevance theory and it was originally inspired by Paul Grice but they came up with this notion that people will find the relevance in stimulus dependent on their own individual background and experiences. Because they looked at it from a very interactional point of view, as an example I could talk about swingers and there would be a relevance that Sukh would find to the relevance Nick that you would find because Sukh and I have got a shared experience and background with Swingers, namely being that Swingers is within a building crazy golf course that is based in the city, there is a second one in the West End, but we have a joint shared experience with Swingers. Now I don't know if you have that or not but when I talk about Swingers, obviously Swingers as a word often has other meanings as well. So dependent on your own individual experience and/or shared experiences that people have, they will find different relevance or different meaning based on what's happening. So back to your point earlier on, Nick in terms of we have experiences and then we encode that against our own background and experiences. I would support that and especially from a linguistics pragmatic point of view there is some research to support that that definitely happens and I think then where it gets tricky, especially if we don't think about emotion at work or how they are sort of working and learning is that because our backgrounds and experiences are different we may encode the same stimulus or find meaning in the same stimulus in a different way.

Nick: Yeah, and this is one of the reasons why it is a good theory, you may also have had this experience I suspect, when you speak at an event you think about the content of your speech as one thing - you think about it as look here's the message I want to get across, here are a number of points I want to make and what's remarkable to me often is that people who come up to you and talk to you have taken away very different aspects of what you have said or even something you didn't even think you were saying at the end of that speech and that to your point Phil is a brilliant example of how effectively we diverge, we are idiosyncratic, we all feel strongly about different things. A more kind of prosaic example might be if we take a train ride - if you are somebody who knows an awful lot about trees versus somebody who doesn't at the end of that train ride somebody might ask you about it and you might say it was really dull, it was a lot of countryside out of the window as whereas somebody who knows an awful lot about trees, who cares about trees might have noticed deciduous shifts in the trees, tree disease or all manner of things that you didn't and so our lives are built from effective significance, every word that we use is colourful in the sense that you can say dog or cat and depending on peoples past experience which is again a very emotional thing with dogs and cats they respond to that word very differently, so this is the problem partly we have ended up with this computational metaphor of the mind where we think we just kind of store information somehow in a box and people just don't work like that at all. There is nothing in there which isn't effectively significant and so that means there is a profound difference in the way we process information to sometimes the modules we bring to that when we are thinking about learning and development.

Sukh: I think this is where in the blog I started to want to explore other pieces as well. There are things, and in the blog, I used the example of the Battle of Hastings 1066, I don't have an emotional reaction to that but it is a piece of information which is, for whatever reason, lodged in my memory and is something that I can recall at will and if I think about it as a piece of information I don't have an affective reaction to it and there is nothing about it that causes me to...and I am trying to think back to also when I learned about it back in history at school. I don't recall anything at the time which was particularly affective that would have encoded it in a certain way which allows me to recall it in a particularly strong fashion. It was and remains a static piece of information which I have

had to store and so for me, and I guess Nick, we can explore. How do you explain for that then because that's not something that has an affect piece to it.

Nick: I would beg to differ. We don't store information and numerous bits of research have uncovered this remarkable extent to which we confabulate, I'll give you an example; I might ask you to draw a picture of the front of your house. Now you might think that this is something that I am so familiar with this is kind of just information you know that I store and yet if I ask you to draw a picture of it you would make gross and striking errors even in something that you thought was just as familiar and informational as your house looks. If I ask you for example, if you can picture the front of your house how many bricks are there? You would say well don't be silly Nick I don't remember stuff in that kind of detail and I would say okay yeah fine, tell me what is the position of the lightest brick or the darkest brick? Now even if you had a blurry picture you would be able to say that sort of thing, so in affect and people like Elizabeth Loft has provided evidential support for this around eyewitness testimony, we don't ever store information, what we do is reconstruct - we take the impact things have had on us, the way they have made us feel and we reconstruct a memory from this and that leaves lots of unreliability. To your point Sukh specifically around 1066, I suppose when I think of 1066 I think of sitting in a history classroom, 1066 is immediately evocative for me as it will be for many people listening to this of history. History lessons - I can remember my history teacher, how she made me feel, I can also picture that grotesque thing of Harold with an arrow in his eye, all of those things are conjured up by 1066, but if somebody says to me 1722 there is no affective significance to that, so you can very easily picture a country where people don't learn 1066 as a date and where that number has no affective significance to them at all. Now if what you said was true then the informational significance of 1066 would be exactly the same between those two concepts, but clearly it isn't, we have a reaction to the number 1066 because of the experiences and the emotional experiences that we have had as part of our learning path and that's how that number is encoded. Like with everything else and I think this is something very hard for people to grasp is that even things that seem purely informational like numbers or whatever, which of course human beings handle very poorly, people really struggle with memorising spreadsheets, why is that? Computers do a great job of it, the answer is, of course, is that we are affective processing systems, that's how we encode all information. So you know you really have to struggle with numbers to give them affective significance and that is a big part of what we do in our early schooling but other things, you know we learn quite naturally because they lend itself to that kind of way of processing information.

Sukh: I guess where that takes me is that I don't disagree in that the experiences that we have and I guess Phil to your point earlier, the relevance that we find in the information is hugely drawn on what comes with it at that time and Nick, I know the work of Lofters and the fallacy of eyewitness testimony and at the same time I am not sure that we are describing similar things. I think we are describing slightly similar things in that eyewitness testimony research is quite a specific thing of you being witness to a crime and we think that you are able to reconstruct that in a way that helps us to understand, does it support or not. The case we are trying to present and so I can see that and I also understand how things can be reconstructed because we remember things completely differently, I absolutely accept that. I guess where I then start to struggle with this is that there have been masses of research into memory, absolutely masses of it that helps us to understand how the human brain takes in information, loads it, encodes it. We are able to recall it even years down the line and when we think about things like, I remember watching years ago, Guinness World Records, and there used to be people come on there and I can memorise two packs of playing cards in a minute and I will recall them exactly and you go okay fine, so you can do that and they do that because there is a particular methodology they use to hold that information, albeit short-term memory or however it is encoded, but there is a specific process which allows them to do that.

Nick: Interestingly it is an affective process if you don't mind me interjecting at that point. Basically, they build a story and they make it as bizarre as possible and there is no better way to work with an affective system than to take dull information and build affective significance. So what they'll say is they'll identify a couple of cards with a very strong visual image and then build that into a kind of story, so you know, I walked along a road and I walked into this house and there was this queen sipping tea and that's precisely an illustration of how you can use that approach to kind of strengthen the capability of the human mind to encode what is otherwise effectively insignificant information. You build affective significance around it. It is used in language training as well to great affect, but the key to it is the more bizarre and effectively striking the imagery the better the technique works so yeah it's a great example.

Phil: I'm not a memory researcher but doing what I do, supporting with helping investigations or interviews to establish what has happened in the past, it is important that I have a good understanding of memory so I have done quite a lot of reading and research into it and I guess I think the changes over time most of all have been the blurring of the lines between the different types of memory. What used to be short-term memory in more current research is termed working memory and the fact that working memory is the kind of buffer that both support the encoding and then the retrieval and then you have got the storage bit, so you have got the storage that happens in what is still called your long-term memory but then you have got your working memory supporting what is happening in that particular moment. So if you are reading, working with what you are reading on screen, if you are listening what you are listening to but then it will also kind of dip in to your long-term memory to pull stuff forward and again long-term memory used to be split almost distinctively into looking at things like your semantic memory which would be your general knowledge storehouse of things like what's the capital of France, when was the battle of Hastings, those sorts of things and Tolving would have said that's all in one part of your memory and you then have your episodic memory which is where you would then recall more of the experiences that you have over time. Someone's unique memory or interpretation of a specific event which is why, Nick back to some of the examples from earlier on, why two different people who have witnessed the same thing can have two different accounts of it in their head, because it goes into episodic memory. I think that's what we are talking about here is referencing the fact that actually, they are not distinct buckets in their own right, so your semantic memory isn't necessarily a distinctive bucket. So you might have something that is in your semantic memory which you are able to name capital cities or whatever that is, but as part of the retrieval of that data you may well bring with you some of the episodic memory as well, so as part of that reconstruction of specific piece of information or that specific piece of data you don't just dip into one bucket to get the information and pull it forward, actually it is a bit more complex than that.

Nick: I think I wrote a piece a little while back, I think it was a terrible mistake that researchers tried to kind of theorise this distinction between semantic and episodic because frankly it doesn't exist and it has just really confused and distorted our understanding of how people work and again it is just computational metaphor. So if I can take you a couple of steps back, there is an expression, the plural of anecdote isn't kind of research and you could almost say the plural of research isn't theory and I can see that textbooks are littered with all manner of misleading research which is based on flawed assumptions really about how people work and I'll give you a really good example - Ebbinghaus 1885 discovered that there was a forgetting curve and that basically if you push information at people they forget it very rapidly but of course in real life things don't work like that at all and that's really peculiar isn't it? What Ebbinghaus often leads to is repetition, so people like Donald Clarke for example will say Ebbinghaus shows that if you want to remember things you have to do them over, over and over again but yet if you actually think about the impactful events in your life they typically weren't things that happened over, over and over again. In fact, many of the things that happen over, over and over again like brushing your teeth you forget and so actually the

real world is flipped, it is completely different than the research and you think well why is that and the answer is of course that Ebbinghaus made this same mistake - he was dealing with garbage, he was dealing with what he called trigrams which were just combinations of three letters because he thought that would be the way to understand how memory works, is to give people completely colourless affectively insignificant information and of course because people are only designed to process affectively it completely distorts the findings and no wonder if you try and feed people chalk they don't digest it, but then the mistake was to feed them chalk in the first place if you like. That is a really good example of how research has been profoundly misleading because it was based on a flawed assumption of how people work so this is why I say the theory has to precede the research otherwise you just end up with a whole load of, as you say Sukh, scientific findings which don't add up to anything interesting or significant about how people actually learn or remember.

Phil: So there is a chance there Nick that somebody might have listened to that and heard you say repetition is an ineffective way of encoding information, which I don't think is what you are saying.

Nick: It's terrible, it's brutality, I hate it, it's like if somebody asks you how do you fit a square peg in a round hole, the answer is you hit it, you hit it again and hit it again and you hit it again. The much more sensible thing to do would be to stop and wonder why the square peg doesn't fit into the round hole, so I see repetition as a kind of savagery. It really is educational brutality and I regret that centuries of kids have suffered as a consequence of being forced to row learn things over and over again when really somebody should have stopped and said why are they struggling to remember this because in real life the things that matter to you, you remember, the things that really strike you - it can be something that somebody said to you, it can be one comment, it could be one experience that you had in a strange place and you'd never forget it, it has a profound impact on you and that is the way that humans are designed to work and because a creature that had to be bitten by a tiger 20 times before it learned would die out pretty quickly.

Phil: Okay, Sukh

Sukh: I am stuck thinking at the moment because I get what you are saying, Nick, and it certainly is presenting me with stuff that I do need to just think on quite a bit further mostly because I try and take quite an open view as I can to what I think I know about learning, about how we operate as people and try and be as open to that as I can and I guess what I am struggling with in different ways is that there are certain theories, actually I don't know about certain theories because then I am going to have to say which ones. There are certain insights I suppose that I think I've drawn and come to which are kind of multidisciplinary in where I have got to with those thoughts and stuff and I am just not sure how the affective context model fits with that in that I trust the research that has been done previously on things like memory in that because we have been able to objectively show how those things are done and your suggestion is that because they have been done in ways which are not how people would ordinarily operate in makes them redundant. I am not sure that is the case because there have been valuable insights that have come out from them and partly I wonder would you be able to say that they were fraud theories had you not been made aware that that was how they did their research in the first place. I don't know if that makes sense, so had Ebbinghaus not done his research in that particular way would you be able to draw the conclusion that that's just not how people operate so why would you have gone there in the first place.

Nick: The danger with research is that it is presented as kind of colourless and objective and there are always hidden assumptions. So what you sense with Ebbinghaus is there some tacit assumptions probably as I say this computational model which is never made explicit and I see this a lot and I think it really threatens the integrity of our understanding of people. I will give you an example of what I mean by misleading research - so I could come up with this hypothesis that lemons improve

learning, you don't really know why, it may be that I am being sponsored by a lemon company, and I could do a bunch of research in various conditions where a lemon is present and a lemon isn't present and I would be prepared to bet you money that in some of those conditions because of the way that science works that there is a significant affect and now I can say that lemons have been proven to improve learning and now we can sell lemons to schools. We can chant lemons holding hands, we can have a lemon theory of learning that is built on that and educational practice, instruction and design, put pictures of lemons in the beginning and end of courses. A lot of what I see in learning is of that ilk, it doesn't really come from any theory, it's just a kind of disconnected piece of research which may have some kind of tangential significance in certain contexts, but does not stem from a deep understanding of how people work and I think what was so interesting about Elizabeth Loftus's work is like Bartlett's stuff on the war of the ghosts, it is much closer. You said I think Sukh that it was very specific to crimes but it wasn't really it was just people saw something happen, this is real life right, people saw something happen and then they were asked later what do you remember, what happened and then the accuracy was compared with the reality, so in fact in the case of the cars crashing it wasn't a crime as such it was an event of emotional significance, two cars collided, you know how fast were they going, what did you see, and that is real life and what happens is that people get on a train in the morning, something happens, they get to work and they say you'll never believe what happened on the train this morning and then the sort of inaccuracies of that start to emerge and that's why it is such a lovely piece of research because it has much a closer correspondence to what people do kind of in real life as opposed to kind of sitting in a laboratory trying to remember meaningless information, which is the basis for a lot of the theory that you see.

Phil: One of the things to hold on to from Loftus' research is that what prompted them, especially in the car crash example, was the change of a word in the question. So everyone watched the same video and then it was how fast was the black car going when it crashed, bumped, smashed, so changing the verb within the sentence then affected the estimates of how fast people would go. She then took that research on to where she would deliberately change the colour of the car for example, so she did a different piece of research where she would change the colour of the car that crashed into another if that makes sense? So there were say two cars involved - one was red and one was black, the red one was stationary and the black one was moving, the question would be how fast was the red car going when it hit the black one which is a factually incorrect question but people would still answer that question and give an estimation of speed. Now what that also brings in is the compliance that humans will do in response in being asked to do something, So even though they might know or might not know whether the colour of the cars was the wrong way round they may just answer the question anyway because they have gone oh I know what you mean, I know what you are trying to get at so, therefore, I am going to go and do it anyway. Similar research happened with basketball players, I can't remember the name of the person that did it, but they changed the verb from how tall or short is that basketball player, you have just seen a basketball player how tall or how short were they, that would have a measurable impact on the estimated height of the basketball player just because of the fact if you say how small was that player it brings with it an implication that the player was smaller than you would expect for a basketball player, whereas if you say tall it sits with the natural assumptions, that's what you would expect a basketball player to be.

Nick: Yeah and at the risk of driving the point too hard I don't think it has anything to do with compliance at all, I think what you can see there is a perfect example - you have a phenomenon which you didn't have an explanation for previously and you do know which is that people don't remember this information, they are reconstructing it and the affective context in which they reconstruct it, so if you say how fast were the cars going when they smashed then you create a very different emotional context to how fast were the cars going when they bumped and so people will reconstruct the story differently and they will continue to reconstruct it, it's not that their memory



has been changed, it's not even that they are being compliant it's rather that given that everything is reconstructed from how you feel about something, how you feel at the point of reconstruction can also affect the way that you tell the story and I think that we see that every day in people's everyday life's, if people are very emotional when they tell a story about something that happened at work then they will reconstruct that story differently than if they are in a calmer state.

Phil: So I agree with and I disagree with you - so I think the way that the stimulus is presented will have an effect on the affect that people experience. You're right that the verb that she used in the sentence then will have an impact on the reconstruction that an individual brings with it but that we have to accommodate or account for the fact that that reconstruction has been impacted by, or infected by, the question that was asked in the first place. So the way that the questions are asked, whether it be a research study or everyday life, that will have an impact on the way that people reconstruct their memories of events.

Nick: It sounds like we agree, yeah.

Phil: I think what I heard was that it is about the way that the individual feels when they recall the memory and I agree with that but what I didn't get clearly was the point at where the individual feels when their recall is impacted by what's happening for them at that particular time, which I know is presupposed in the affective context model that this context would include what's happening within the individual and in the wider surroundings as well. I guess I just wanted to make that point clearer.

Nick: Absolutely, I am worried now that we are talking about a particular piece of research and some of the listeners may be more interested in learning.

Phil: And I suppose that is the other thing for me, so for me there is, and this is a personal bugbear, in that remembering something doesn't equal learning something.

Sukh: True.

Nick: Yep.

Phil: Because being able to...

Nick: Memory is a prerequisite for learning so I think, I would define learning as behavioural change or a potential for behavioural change based on memory. So I absolutely agree that memory doesn't equal learning but I don't think you can have learning without memory.

Phil: No, no I agree and I guess the challenge I think, especially if we look at learning design then, often I hear people talk about how we need to create something that is memorable, we have to create something that people will remember and one way we can do that is using emotional or stories or whatever that might be. That might support encoding but that doesn't necessarily support retrieval and/or application and that's where you have to think about, and I know Nick how you've linked your theory to some design principles is important because we have to think about the context of application as well as the context of learning because just making something memorable in a learning environment whether that be digitally, face to face or whatever that might be, if you don't consider the context of application or the context in which you want that thing that has been remembered to be applied then you're reducing any sustainable impact of what it is that is happening because you are missing the context in which that learning will be applied.

Nick: So if it is okay I will give a quick response to that because I am worried that you and I are kind of dominating the conversation and Sukh hopefully if you are happy to come back it would be good to know what you think. The quick response is this - basically there are only two conditions when you are looking at a learner, the condition where they really don't care about something and there are conditions where they do care about something and you do very different things - if they really do care about something then you provide resources and information and because they have the affective context they will add the emotional significance. If they really don't care about something then it is your job to add the emotional significance. A good example of that would be induction, typically when people join an organisation or their first day at school they are really worried about looking stupid. So if you produce a simple checklist that says don't do these stupid things when you join people will absolutely consume that, remember it, use it. Another example where they don't care might be safety - people might join an organisation and they just don't care enough about safety and there really showing people emotionally, putting them in simulations or scenarios or telling them stories can do an awful lot to change the way they feel and encode information around safety, so that's in application of that theory. The first thing that you have to do with an audience group is to understand what they care about, what they don't and then you can apply the appropriate techniques and then that's what we do.

Phil: Okay, Sukh.

Sukh: I agree with that and I guess this is the piece where I have been thinking about as I have been listening to you guys talk, is that the point at which we can take what we are discussing and start to think about. So what does this mean when we start to think about and in our collective context that we are talking about here is learning development solutions and how we help people to perform better at work. So within that context, I am completely on-board with traditional methods of designing these types of solutions, have been largely ineffective because we haven't really understood how people work, we haven't really taken that time to understand what they are doing when they are at work in order to help them be able to perform better. We get it in there now and that's where I think the strength, I don't know if it's the strength of the affective context model Nick, I would say it is more about the strength about the concerned task resource model because that is something that is more tangible I suppose and more easily understood for people and so when we help people to understand that if we look at people's work behaviour and design solutions that fit in with that work behaviour it helps them to perform better. If we can do that then that is us doing our job well and I think that is one aspect of stuff. The other aspect of stuff is that we if we want, and this is my personal take on it if we want people to learn something in a way which helps them to think better, be better, perform better in a way in which is around less tangible topics then we need to design a different type of learning solution. So as an example if we want people to become better coaches at work it involves doing a multi-pronged and multi-designed way of being able to help people to do that as whereas the traditional approach is just simply we will put them through a training programme and the training will be course-led and they will be told how to do it and then we will expect them to be able to do coaching and obviously we know that that is just massively ineffective and even if one person got better out of it that would actually be a miracle because people just don't tend to learn that way. So when we talk about it in these contexts I think I am totally on board with us needing to design solutions which help people to perform the way we know they actually work and the way that we know people actually do things. That's one thing, the other thing I have been reflecting on as we have been discussing things is that I guess the piece around the affective context model which I am just unsure about is or rather where it is challenging what I am thinking is that challenging a fair amount of the better research that is out there and available and I am not sure where I place that amongst the other stuff that I have drawn. I think that is kind of where I am at currently.

Phil: And if I may Sukh when you talk about that other better research and the other things that you are drawing on where are you coming from? What sort things are you drawing on if I may ask?

Sukh: Yeah absolutely. So in the realm of things like when we talk about emotional intelligence I tend to draw on the work of Paul Ekman quite heavily, that's one area there. If we think about things like how people live well, how do you take care of your well-being and your resilience I draw on the work of the likes of Martin Seligman and Tal Ben and then other things as well around physical health and what have you. I tend to just trust the NHS and what they tell us because they have been doing this for a very long time and they know lots of good things. Mental health I tend to trust the likes of Mind and the Samaritans and so there are lots of good places out there and good people out there where I trust the work that is being done in those fields because it helps us to advance what we think we know and should do things.

Nick: Sure and I guess that it is helpful for those people to have those kinds of links and make up their own minds. For my part the recommendations that I would make would be people like Antonio Damasio, a kind of Neurosurgeon and he wrote a book called Descartes's Error, the fundamental thesis was that we got it completely wrong about how we process information. If you can still find it in print there is a book by Jonah Lehrer called How We Decide which is very readable along similar lines and of course the work of Canaman. This is the interesting point of course, is that we can always find a bit of research to justify whatever theory we have, that's just the nature of science, the research that I particularly like there was a number of pieces of work into galvanic skin response in decision-making situations as the Iowa gambling task is interesting, but was fascinating about that is you can measure the point at physiologically somebody reaches a decision and the extraordinary radical thing about that is it's before they are consciously aware of it and this is why this is so relevant to affective context because whatever is happening in people's decision-making process it's unconscious, it's not logical, it's not rational in any sense that we would describe, it's what Canaman calls kind of system one, but then if you ask people after measurably they have made a decision why they made that decision they will give you a rational logical sounding answer. So this is the Descartes' Error, the hidden thing about people is that they have always got an explanation, they have always got a rational facade but actually what Neuroscience is starting to undercover what's going on underneath it is profoundly different and I think that's kind of you know where we are - we are often presented with this neat story about how people work and store and remember things and actually what is going on maybe very different. I think you said something to that effect in your piece Sukh, so I think there is a lot of alignment already.

Sukh: I think there is, yeah and I absolutely agree with that in that, I totally accept, it sounded like it's beta complete can't ever go wrong from it. I agree that emotions, the way that I normally term it is I say emotions drive behaviour and I think that is in agreement with what you are talking about when you talk about the affective context model and I guess the place that I was taken to within the piece is that there is a certain point in which I think and the way I rationalised it is that there are a few pieces I think, one is that we are really starting to understand what that means which I guess is probably the challenge of when people are trying to understand the affective context model is, it's quite hard for people to appreciate that they can't think their emotions and certainly I remember after the piece that I wrote I had at least one person come back to me and say but surely if I think it differently then I will be different and I tried to provide some examples of how that's likely not to be the reality because that's just not how we work as people and so there is something there that is quite challenging for people to accept that they aren't fully in control of their responses because their responses are often driven by something which are really only just starting to surface. We are only really starting to help people understand that there are these things called emotions and feelings and they are so fundamental to humans that it causes us to act and react in ways which once we try to rationalise and once we try to articulate I guess this is part of the piece you are saying



there Nick, and I suppose it builds on what Nietzsche was saying from your earlier piece. We already start to then try and colour it in a certain way which helps us to try and make sense of it when actually it is something which currently we don't have a full insight into and a full vocabulary for that actually helps us to understand, so if we witness a crash or something then we will interpret it in a certain way because we've taken it in a certain way and I've tried to rationalise it in a certain way, whereas there may be a whole layer of insight I have available to me which currently I can't express because I just don't know how to as opposed to not wanting to.

Nick: I think that as we start to get into it, I can sense we are peeling apart different uses of this term emotion, so we talked about emotional intelligence which I think is very interesting, we talked about emotion of work which you talked about Phil, you were talking about the emotional self, I am talking about it as a basic operating system, so if I could tell a pseudo neuropsychological story you got a shed load of information coming in, yes I know that you have got neurons which detect kind of edges, different orientations and stuff. The challenge for the brain is you have got to have a very efficient mechanism, you cannot possibly store all of this inbound information, so what do you do and my story is that you basically process all of that, pass all of that information into how it made you feel and you use those feelings and an incredible degree of sophistication in the same way that you use colour to reconstruct what actually happened, because it is a very efficient mechanism, you could say well I had all these kinds of feelings and so I can reconstruct that so if you are asked about a birthday party you will reconstruct a birthday party - it will often be grossly inaccurate but it allows you to very efficiently crunch huge amounts of information and to then reproduce it with a reasonable degree of accuracy. So that's at the most basic level and I think what you are talking about Sukh is a very real phenomenon as well to the extent that people are strangers to themselves. The reasons they make decisions and the trajectory of their lives, the consistent mistakes and the people they become, they are not really fully aware of. I think that is why feedback is so important in the workplace, is that people have this rational story about why they do things but something completely different may actually be going on.

Phil: Yeah and I think that kind of post, I am almost taking us back to the philosophical place of where we started but that post-event rationalisation aspect, I can't remember the researcher but I watched a TED talk, it was a positive psychology TED talk where people who had had really quite horrific experiences were able to look back on it and construct a narrative that pulled out the learning aspects from that and how actually it had been the best thing that ever happened to them whether that be redundancy, I think it was people that had either been made redundant or forced to leave work for whatever reason, they were able to look back on it and go you know what that was the best thing that ever happened to me and part of that is because it is the thing that happened and to look back on it and go actually you know what that was the worst thing that ever happened to me doesn't necessarily support that sense of self that you want to have - you don't want to be the person that is at the whim of others actions, but also you don't necessarily want to be the person that's at the whim of all of the emotions that may be happening within your head. So I think you are right Nick, we are peeling lots of stuff back.

Nick: I have just seen your message Sukh, but we are going to have to end. Were there things that Sukh you wanted to talk about just briefly before we close?

Sukh: No not in particular. Like I said at the outset it's, for me, Phil I appreciate you reaching out to Nick and I to take this further and I think we really have taken this further, to be able to say different pieces and also to be able to have this dialogue as well. So I appreciate the time to be able to do that and it has been good to explore. Thank you Nick for all of your different insights and thoughts into the model.



Nick: I was just going to say thanks very much as well. I think often my experience is I don't really know what I think until it bubbles up in conversation, so it is really helpful for me to be able to have this kind of conversation. Thank you for setting it up.

Phil: No you are welcome and thank you both for your time and taking part. So what I would like from both of you is if you have any references or links or places that we think people should go to find out more and if listeners are interested in finding out more than if you ping those links across to me that would be great. Everything that we have talked about through the podcast, so everything from the Iowa gambling study all the way through to Nietzsche and everything in between I will put all of the links to all of that information in the show notes but other than that I just wanted to say Nick, Sukh thank you very much for your time today and thank you for taking part in this episode of the Emotion at Work podcast.