WEEK 5 – ASK MARK, QUESTION 1

So welcome to week five and our Ask Mark question for this week. As always there are four questions that have been selected by our mentors but the first question this week is really a sort of collection of questions. I'll read them to you quickly and then I'll tell you what I'm going to do about them.

It says firstly do you have an opinion on how mindfulness and its formal practice of meditation might affect the usual way that the mind works, especially with relation to thinking? Secondly it says how do you see the practice of mindfulness affecting the mind, each of the four aspects that you've taught us the last four weeks.

And then thirdly it says I'm not easily swayed by a lack of scientific evidence but my subjective experience of mindfulness means the evidence must be there somewhere. Hence a follow up question, from a scientific perspective have convincing neurological correlates been found

Now - I hope you can see that I can't possibly answer such a complicated net of questions in just a few minutes. The topic of mindfulness is a gigantic one and in fact the mindfulness practices cover a great many different things. There are many different mindfulness interventions and so the evidence, and there is evidence, as to what happens in the brain in relation to these various mindfulness techniques.

It's impossible to summarise it without going in detail through the different aspects of mindfulness and the evidence is quite different depending on how the technique is being used. So I just want to say you may be surprised to hear this, I myself did a brain imaging study on mindfulness a few years ago together with Victoria [unclear00:01:59]. But since then there's been a plethora of work.

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There was a special issue of the journal SCAN, which is an acronym for social cognition and affective neuroscience; they devoted a special issue to the neuroscientific evidence about what happens in the brain during mindfulness. And this evidence was all summarised in a very good article which I'm going to post so look on the site and read the article and you'll see a comprehensive summary of what we know about what happens in the brain during mindfulness. It's a very interesting topic.

I'm tempted to – yes I will, I'll give you just one generalisation, which is probably unwise, which is in the brain, in the forebrain medial surfaces, the midline structures represent...are self related processes and the convexity of the forebrain represents more the state of the outside world. That midline structure is generally speaking referred to as the default mode network, sort of resting state of the brain and these external surfaces are involved with various other networks like the attentional network, the semantic network, the executive network and so on.

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These all relate to external things and if I can make one generalisation about mindfulness it is that it's a change in the relationship between these two aspects of cortical activity, changes in complex ways. That's why I can't summarise all the evidence; it goes in both directions not only functionally but also in terms of connectivity and

also in terms of actual structural changes in experienced mindfulness practitioners. There are parts of the brain which become thicker, parts of the brain which become thinner, I'm speaking of cortical layers, and it's really extremely interesting. So do please look at the article that I posted; the link that I've posted and then you'll get a fuller answer.

Mark Solms, 2016

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