WEEK 3 CONSCIOUSNESS
STEP 3.2 THE ANATOMY OF CONSCIOUSNESS

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We are addressing the question, what is a mind? Last week I was saying something implicitly which I want to now restate explicitly. I was saying first and foremost, the mind is something subjective. But I was also saying that not everything which has a subjective aspect has a mind. That there has to be something else added, some quality to the subjectivity of a thing if we're going to say it has a mind.

And that quality is: it has to *feel* like something to be that thing. In other words, things which have minds are **capable of consciousness**. They're sentient. This means if we're going to try to develop an objective criterion for determining whether or not a thing has a mind, it implies that we have to try to determine whether or not that thing is conscious. Whether or not it's capable of **feeling**.

These are the sorts of experiments that we have to do on other bodies in order to determine whether or not they have other minds. It's not impossible to do this, it's not difficult to do this. That's what we do. And it's called **neuropsychology**. Correlating mental states with bodily states.

Trying to find which bodily states are the correlates of consciousness. That's what I want to talk about now. What part of the brain correlates with the subjective experience of feeling something which is this second fundamental defining property of what a mind is. I have to make clear that in looking to the brain to answer this sort of question -- looking to the brain in order to answer is there a mind there or not -- we're not reducing the mind to the brain. We're saying that the mind can also be observed externally as an object, and that is the brain. It's a correlate of the subjective experience. Being the brain is the experience. Observing the brain is the anatomy.

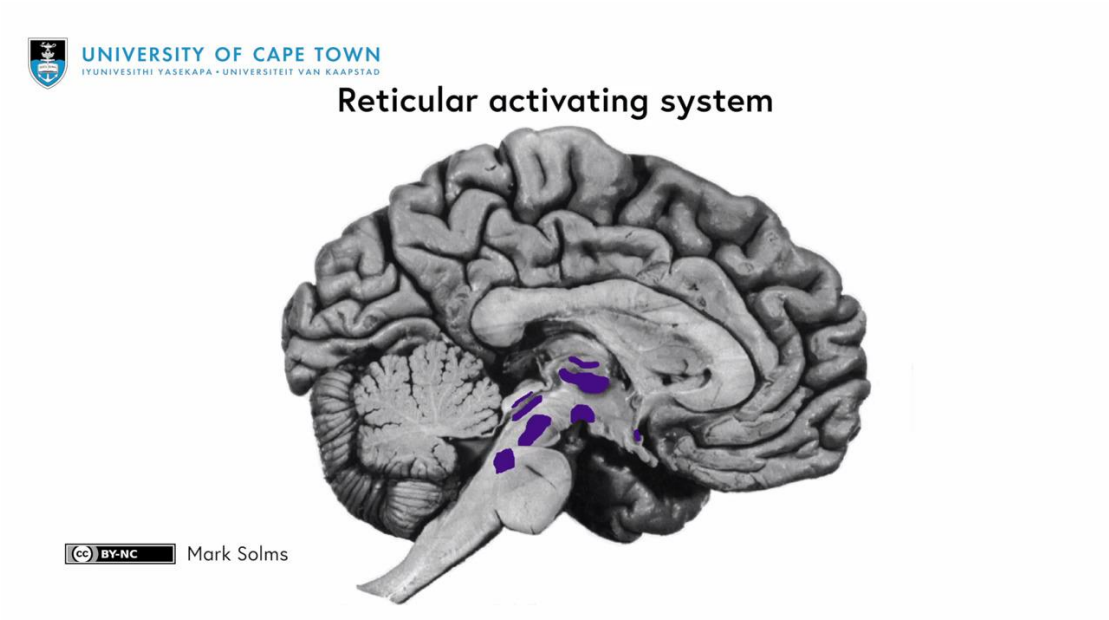
Let me read you something from what Oliver Sacks wrote in a book called A Leg to Stand On. He says "neuropsychology, like classical neurology, aims to be entirely objective. And its great power, its advances come from just this. But a living creature, and especially a human being, is first and last active. A subject, not an object. It's precisely the subject, the living 'I,' which is being excluded.

Neuropsychology is admirable but it excludes the psyche. It excludes the experiencing, active, living 'I'." The fact that Oliver Sacks says that shows that, as I was saying a moment ago, there are neuropsychologists who seek to exclude the

subject. That's because the subject is an embarrassment to science. But what I'm recommending is something different.

I'm not saying let's look to the brain in the same way as academic psychologists of the last century said let's look to behaviour. I'm saying the brain, because it is the object correlate of subjective experience, enables us to do normal science on subjective experience, but we always have to include the subjective experience to do it. The word neuropsychology to some people might mean something therefore like neurobehaviorism which is why I introduced some years ago the term **neuropsychoanalysis** to make clear that when I'm speaking about neuropsychology, I'm speaking about a **correlation of brain science with subjective experience**.

Ok. So if we do this kind of correlation, which part of the brain is the part that enables us to be sentient? It's a simple question, as I'm saying. All we have to do is have a look at which part of the brain, when damaged, puts the person into a coma. We already know this.



The part of the brain concerned is called the **extended reticular thalamic activating system**. The slide shows all the different structures that constitute this system. We also call it the reticular activating system for short. When this part of the brain is damaged, the animal-- human beings included-- fall into a coma. If that part of the brain is temporarily damaged, when they come out of the coma, they say during those last few minutes or hours while my body appeared to be in a coma, I experienced nothing.

I wasn't there. The subjective sentient being of the mind was absent. This applies only to that part of the brain, therefore we believe that the extended reticular activating system is the part of the brain that correlates with subjective experience, with sentience, with this bedrock feature of a mind. What's important about this piece of knowledge acquired in this very straightforward way is that we now have an objective criterion for determining whether another object is conscious or not. Whether or not it

has a mind. All creatures which have a reticular activating system, we may infer, have a mind.

It's not just a matter of observing the anatomy. As I'm saying, it's also a matter of doing experiments on it, making predictions. If this is conscious, then that will follow when I do the following intervention. On the basis of that sort of ordinary scientific work, we've come to this conclusion which gives us an objective basis for determining which other bodies are conscious and which are not. Which creatures have a reticular activating system?

Actually all vertebrates have this part of the brain. That enables us not only to have an objective criterion for determining which creatures are conscious, at least within the rough and ready way that science can come to truths. It even allows us to date it. To date the dawn of consciousness. Vertebrates evolved 525 million years ago, so it seems that's when consciousness appeared on this earth.

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