

# WHAT IS A MIND?

## UNIVERSITY OF CAPE TOWN



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### Week 5 Answer to Question 2

#### Step 6.3 Ask Mark

Ok. Now we move to the second question for this week, and it goes like this:

**Question 2:** from a scientific standpoint, do you believe that enlightenment / spiritual awakening is something that can be achieved? And what actually happens in someone's mind to bring about this situation?

Wow. Well that's not an easy question, as I suspect you realize. It's not an easy question for a great many reasons, not all of which I'm going to go into. I'll just start with this: what is meant by enlightenment, or spiritual awakening, is by no means clear. I'm leaving aside the question as to how we are to interpret such events metaphysically - do they necessarily imply a mystical world beyond the empirical world that we experience? I'll leave that aside, and just say simply descriptively speaking, what is meant by enlightenment - and spiritual enlightenment in particular - seems to not be a simple thing.

When I read this question I looked up into the literature - which I must also hasten to add I'm no expert in. I'm not an expert in mystical traditions of any kind - eastern or western - and I'm not an expert in the neuroscientific work that's been done on these various traditions, including the various forms of meditation. And I emphasize the word various, because even when we're speaking about something as narrow as meditation, it takes many different forms, with many different mechanisms, many different purposes and aims in mind, all of them reaching towards this ultimate state - by degrees - called enlightenment. The process by which one becomes enlightened too, is by no means uniform. The practices that are employed to reach this thing called enlightenment - which as I've said already is defined in a great many different ways - the processes too, are not uniform. So to ask what - do such things happen? Of course they happen. I've no doubt whatsoever that people experience states that they call - various different kinds of states - that they call spiritual awareness, or enlightenment. There's no reason whatsoever to doubt people's descriptions of these states, and they show - you know, within the different subtypes - they show a great deal of uniformity. That's one of the many reasons to not doubt people's descriptions. The question is, of course, as to how we interpret the states - what do they

mean? And I'm being asked - I believe - to interpret them neuroscientifically. To say what exactly is it that's going on in the mind and the brain in these states?

Now, I say again, I'm hampered in my attempt to answer the question, because of the multiplicity of states. But, reading through the various literatures on the various traditions, the things that I came upon, is that there's an emphasis in most of them on feeling, as opposed to thinking. Mainly the feelings concerned seem to be a sort of ecstatic surrender - and remember, I know this doesn't apply to all definitions, and all types of enlightenment. But there's an emphasis on a feeling state - it's not a cognitive state - and the feeling is a pleasant one, something in the nature of a giving up, giving over of oneself. In these various states - the definitions of them - there's also a reliance on intuitive, as opposed to rational or empirical, insight - things just come to one, sort of a gut feeling. It's a sort of an irrational, if you will, or a nonempirical knowledge or knowing. So I say again, a reliance on intuition.

There also is an emphasis on the recognition of a true essence beyond the world of appearance. This is another fundamental feature, or a relatively common denominator through these different states. And, in particular, when we speak of a true essence that goes beyond the world of empirical appearances, there's a special emphasis on a transcendence of the self - this thing called me. There seems to be a recognition of something that goes beyond that appearance - the appearance of a thing called me. That is this famous sort of "oneness" with the universe, a sort of oceanic bliss, which brings me back to the affective part in the beginning.

Now there's a lot of research done on these different types of enlightenment - different types of meditative practice and so on - and they find different things, not surprisingly. It appears that some of the the work that's most current, and that's most widely cited, is the work of Andrew Newberg, and he's recently published a book on enlightenment. And so, via him, I dipped into the various literatures - from his own brain imaging work for the most part, but also careful systematic interviewing of enlightened individuals, or individuals who claim to have experienced spiritual awakenings of various kinds, and transcendent and mystical states of various kinds. The the common denominator that comes from that work is that there are deactivations of cortex. That is to say, a deactivation of the cognitive part of the mind, not surprisingly. And this means a relative shift from cortex to subcortical structures, which translates as a relative shift from cognitive representational, logicogrammatical, empirical thinking to affective, instinctual, emotional feeling states. And you can see how that coincides with my descriptions of states of enlightenment.

So what we see in the brain coincides with the phenomenal descriptions. Which, incidentally, is another reason to believe that such things happen. If the objective neuroscientific evidence is consistent with the subjective descriptions of the the people experiencing these states, it's further

reason to not doubt what they're describing. From a scientific point-of-view, to interpret what they're describing, one would say there is a relative "giving up", a relative "letting go" of cognitive, representational ways of thinking, in favor of feeling states. Now the two main areas of deactivation that Newberg's work refers to - and others - is, first and foremost, relative deactivation of the prefrontal lobes. The prefrontal lobes are the reflective part of our cognition, the thinking about our thinking, the reflecting upon our representations, our memories, our ways of picturing - cognitively - ourselves in the world. So that coincides again very well with the description of a transcendence of selfhood, of a kind of non - a kind of intuitive way of being, rather than a logicogrammatical, analytical, cognitive reflective way of being.

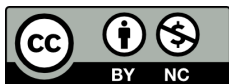
The other brain region that seems relatively commonly to be deactivated, is the parietal lobes. Now the parietal lobes - to oversimplify somewhat - are the spatial part of the brain. Particularly though, the right parietal lobe is the concrete spatial part of the brain. The left parietal lobe is also spatial, but more in terms of symbolic, meaningful space. By that I mean the distinction between left and right, north and south, the 12 and 6 on a clock, and so on - the positions thereof, those numbers - that's what's meant by symbolic space. But more importantly is the concrete space. People who have lesions in these parts of the brain, they lose their representation of their own bodies. They lose also their representation of the distinction between their own bodies, and the world beyond their bodies, so that they might, for example, experience their own left arm as belonging to somebody else. Or they might experience themselves as not being in their bodies, as not being able to find body parts, and so on.

These are pathological states, but they help us to understand what happens in these meditative spiritual states, where the meditator, or the monk or whoever we're talking of - when they describe a transcendence of their self, of a feeling of becoming one with the universe, of a feeling of losing this appearance of being a me, separate from everything else in the world, these neuro - functional neuroimaging studies, help us to understand at least neuroscientifically, what it is that's causing these experiential states, or what the external correlate is of those internal states. I put it that last way for a reason. I don't believe that looking at things externally is more real than experiencing things internally. So I'm not wanting to cast aspersions on the reality of what these people experience. They experience something which is perfectly real. That is to say that they lose this reflective thinking, that they lose their sense of them - this idea called me, and the physical representation of the body by the external sensory organs is relatively reduced in favour of the internal, affective representation of the body. And that last point is the one I want to end on.

I don't think that these states are defined only by an absence of certain types of cognition. There is also, as I said at the outset, a presence of a ecstatic affective state. It's - I'm oversimplifying - I can only do that, for the reasons I've already stated - but there's a special emphasis on the

pleasant release and surrender that coincides with the cognitive blurring of self and other, of me and not me, of self and universe. And that affective state coincides not with affectivity in general, but with a particular type of affect. And I think that the particular affect that is most relevant here - and I don't mean to reduce it to this - but the affect that I think is most relevant here, is an instinctual emotion which underlies attachment bonding. All of us human beings have a - and all mammals, and birds for that matter - have an affective, instinctual, emotional circuitry which generates feelings of attachment, of linking, and of being looked after, of being cared for, of being safe. And I think that the surrender that's described, and the pleasurable quality that does not have a cognitive concrete imagery, is something like this attachment circuitry, activated in its pure form - that is to say, it's the pure emotion of attachment bonding, the pure emotion of being connected, of being loved and of loving, of being at one, of being secure, of being safe, and of surrendering oneself to care - the relief that comes with that sort of feeling. Without the concrete words and images that go with it - that's why I say I think it's a pure form of that affect.

In saying what I've just said, I must conclude by mentioning that this is not an idea of my own. It's an idea that was first put forward, to my knowledge, by my late friend Mortimer Ostow [said Ostov] - or Ostow [said Ostow], as they say in America. He wrote a book on Jewish mysticism - on the kabbalah - which was called "Ultimate Intimacy", and that's a book I would highly recommend to those interested in this topic. The - important to emphasize here, is that that instinctual emotional system that I'm referring to, is mediated by opioids - that is to say, the brain chemicals, also colloquially known as endorphins, which are artificially imbibed in drugs of abuse like morphine and heroin. Opium generates the states of mind that we're talking about, and it's no surprise that opium played such a large part in some of the mystical traditions that I'm talking about. As indeed did other mind altering substances throughout the ages. So that's the best I can do with a gigantic question, the best I can do within the limits of my own expertise, and, of course, the time frame. Thanks.



Mark Solms 2016

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