

WEEK 3 MEDICINE & THE ARTS – ART AND THE BRAIN
ART EMBODIES VALUES

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Art and the brain, there is a great deal that one can say about art from the viewpoint of brain science. But I'm going to say only two things. I think that these two things are probably the two most fundamental things that brain science has to say about the arts. But before I begin, I really can't emphasise enough that when I say these are the two most fundamental things that neuroscience can say about the arts, I don't, by any means, mean that the whole of the arts can be reduced to these two things.

This is not about reductionism. It's about what can we, from the surprising quarter of brain science, what can we say about the arts? What can we contribute to the arts? What can we say from our disciplinary perspective that might be of some value to people working within the artistic sphere?

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So with that disclaimer, let me say what the first of the two things is that I believe neuroscience can say about the arts. The first is that art is about value. It embodies values. Art is about the good and the bad.

When you are perceiving aesthetically, as opposed to just perceiving, you're perceiving in an evaluative way. You're making a judgement. It's something about is this good? Is this bad?

Is this good art? Is it bad art? What does it mean? What is it about within a kind of frame of reference, which is not quantitative. It's not measuring. It's about value. It's about quality.

So, the question is where does this business of quality or goodness and badness come from? Where do things like aesthetics and ethics, which is the branch of philosophy within which aesthetics is embedded, where does this all begin?

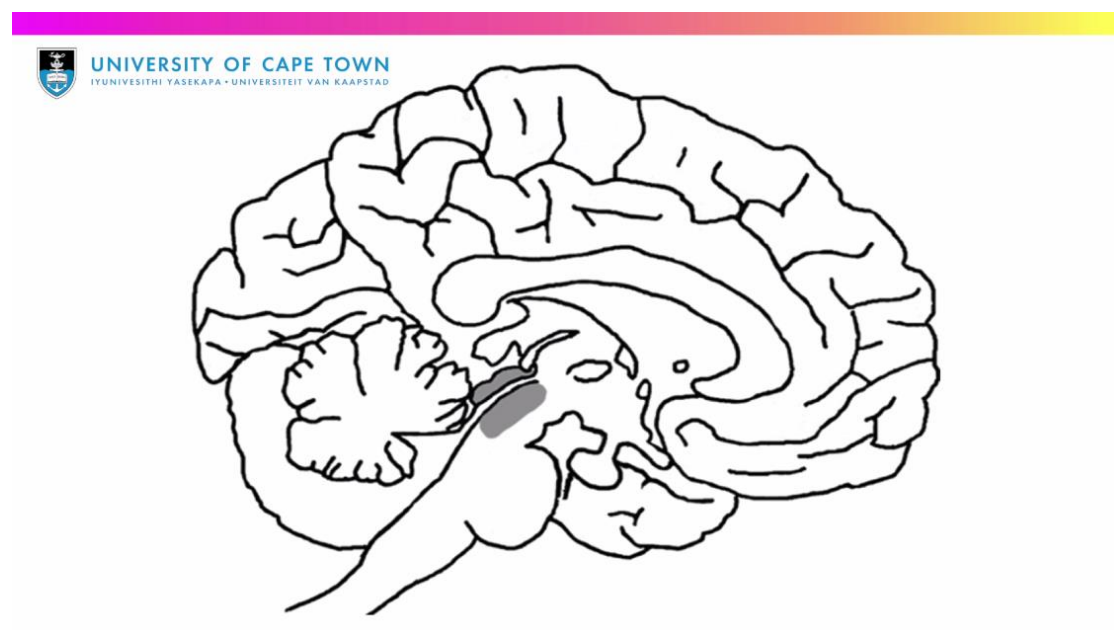
Some people would claim it all begins with Moses coming down from Mount Sinai. But within the natural sciences, we believe that it all begins with the basic rules that determine natural selection. It all begins in evolutionary biology.

I must emphasise here, too, that I'm not saying that evolutionary biology is all that counts and that the rules of natural selection are the values that should determine all of our cultural intercourse, and so on, not at all. I'm just saying that the bedrock, the foundations of values, are in the values that determined the anatomy and physiology of our bodies and of our brains, which in turn, formed the bedrock of our mental life.

And the value system upon which evolutionary processes are based is the idea, the notion, the principle that what is good is to survive and to reproduce. That's what gets selected into our anatomy. What is bad are things which lead us to not survive and to not reproduce. Those things don't get selected, and precisely, because we don't reproduce.

Now, built into the anatomy that issues from that basic principle, built into our brain structure, are mechanisms which regulate and monitor our bodily economy in terms of these principles. What's going on within the internal milieu of my body, within the range of temperatures within which I can survive or the range of sugar levels, water levels, oxygenation, and soon.

DIAGRAM OF BRAIN INDICATING BRAINSTEM



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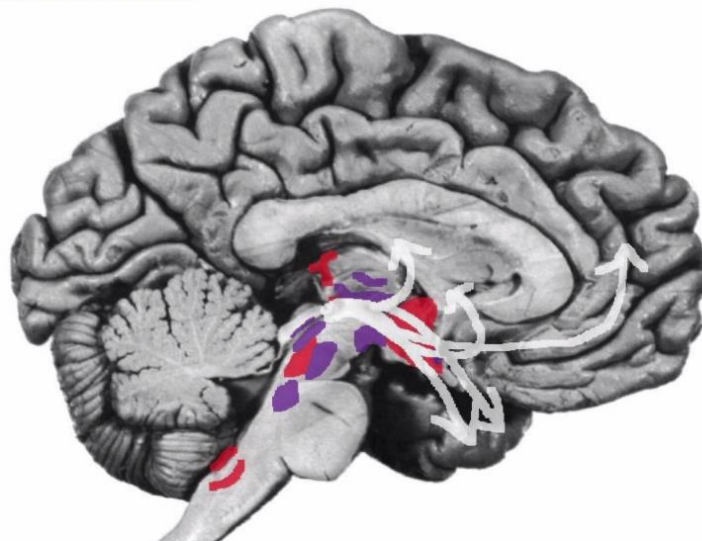
And there are structures in the brainstem, in a lobe, a primitive part of the brain, constantly monitoring what's going on inside of your body from that point of view. Is this guy going to survive to reproduce is basically what these brain structures are busy measuring.

The important bit for us is that those brain structures then broadcast the outcome of their evaluation of how you're doing in terms of feelings. This is what feelings are for.

A pleasurable feeling means this is good for my chances of surviving and reproducing. Do more of it. And an unpleasurable feeling is the opposite. Avoid doing this. This is bad for you. This is not going to lead to a good outcome within that biological scale of values.

So, in the upper brainstem, there are brain structures which are constantly translating a measurement of what's going on within your body into this qualitative feel. This feels good. This feels bad. And that is then broadcast upwards to the upper brain, which then determines what you're going to do.

FEELINGS BROADCAST UPWARD TO UPPER BRAIN



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As I say, it determines whether you're going to approach something or avoid something, whether you're going to carry on doing something or desist from doing it. All of it is determined by these feelings.

So, that's where feelings come from. That's what feelings are for. And very importantly, feelings are the bedrock of all consciousness. All the business of perceiving and remembering, learning from experience, making decisions, acting on the world, all these sorts of things don't intrinsically need consciousness. In fact, that's why robots can do them, and computers of all kinds can solve problems and perceive things and act on things.

What we biological, living creatures have and not all living creatures have this, only more complex living creatures. We have this capacity to form our own opinion, to make our own judgement about how we're doing in the here and now based on how it feels. If it feels good, we know that this is something we should carry on doing, we should do more of. We should approach. If it feels bad, it's something we should withdraw from and avoid and not repeat.

That bedrock of consciousness, that basis of consciousness, is what imbues our perceptual experiences, which otherwise don't have to be conscious, imbues them with feeling, that is to say, with consciousness. That's how we become aware of our own perceptions.

I'm feeling this about that. And I think there's the nub of the matter as to why this is so important for understanding what aesthetics is about. It's me feeling my way into the world, the world that I'm experiencing, and imbuing it with value and with meaning fundamentally rooted in these basic biological principles.

This is also why my perception is always only my own. The feelings are my response. What does this mean to me?

So self-consciousness always emanates from within. And my judgement, my assessment, my evaluation of what I'm experiencing is my own. And it's not objectively determined. It's subjectively determined. And I think that also, for obvious reasons, is important for art and for how it differs from say, for example, science.

Now, I repeat, this is not the whole story. This is the foundation stone of values and aesthetic values, in particular. Built upon that foundation stone are higher mechanisms, layers upon layers of higher mechanisms, but all of them rooted in the same principle for evaluating, for making sense, or for giving meaning to and attributing value to our experience.

The ones that are built immediately above the basic pleasure-unpleasure mechanism that I've spoken to you about now are things which we might call instinctual emotional systems, like fear versus rage versus sexual desire versus partnering and attaching. These sorts of feelings also have basic biological value.

Forming a pair for mammals, having sexual intercourse and everything that goes with that, fear, anger, these are very different sorts of feelings, very different sorts of qualities, very different sorts of values. But all of them are different types of good and bad, built one step above the basic pleasure-unpleasure distinction. These are different types of pleasure and unpleasure.

All of them are tools for living, basic tools for surviving and reproducing, absolutely fundamentally important to what makes us tick to why we behave in the way that we do. But I believe that one of these instinctual emotional systems is especially important for understanding the arts. And that's what I want to talk to you about next.



Marc Solms, 2015

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