

EVERYDAY MIND AND LOVE 2018

Session 6 May 31

Firstly, today, we need to pick up the main threads of our year-long **story about the mind** – that highly personal, rather enigmatic, extremely important, aspect of our lives that can create for us joy and sorrow, peace and fear, all kinds of feelings and, ultimately, the sublime **experience of love**. We are about halfway through the year and there has been a break of two months so I will recap a few of the main ideas in the story so far.

Firstly, the **principle** on which our mind operates can be explained through basic biology. Every living thing, from a single cell to the most complex multicellular being like you and I, must satisfy two requirements: it must be (1) **autonomous** (which means self-governing) and (2) **connected** to the medium in which it lives. Our mind is the tool we use to **connect** ourselves to our world in a way that will be good for us as an individual. We do this imperfectly so we have problems sometimes, but I think that the better we understand our own mind the better we can manage our lives, which we do by making the best quality connections.

The second point is the importance of recognising **the unknown**. What science gives us is very useful, but it's only a fraction of what we could know about how the mind works. And, also, knowing how things work still does not give us the sense of **meaning** that we need for our satisfaction and wellbeing. We get that from **context** and a sense of **wholeness** that only come from a deep respect for the unknown – the big picture.

We can distinguish **three levels of connectedness**, in ascending order of importance: **with other people, with ourselves and with the unknown**. Each one depends upon the one above it, but we often fail to appreciate this hierarchy. If we have a good relationship with ourselves we will have good relationships with others. The idea of **love** can be developed in a purely scientific way from this biology as a connection that validates each individual, but an appreciation of its deeper meaning will recognise the unknown as its most essential ingredient – I would say: its source. I believe a relationship with self that is based on trust in the unknown (or love) heralds the best quality of life.

We distinguish the **conscious** experience of mind from the much larger **subconscious** process that involves our brain and every cell in our body. **Our mind is a whole-body experience**; when you move your arm or raise your eyebrow it is happening. When your smile meets the smile of another person you are connecting – that's a part of what we call **love**.

Our mind writes its history **subconsciously** in emotional patterns (**AFFECT**) and **consciously**, through language, in our **STORY**. The story is the **vehicle of meaning** and we need it to remain coherent (even when it's not entirely true). Its medium is our **thoughts**, though these always occur in the company of the subconscious **emotions** and our **feelings**. No thought occurs separately from those.

Feelings, which lie between the subconscious and the conscious, are the principal **agents of meaning** (although we often mistake logic for meaning). They are not the same as emotions or thoughts though they often arise from emotions and are often expressed as thoughts. I think we get to appreciate our mind better when we focus on the role played by our **feelings**.

We've touched on **social engagement** as a crucially important aspect of our experience of mind and this is going to be the main topic for today. It is not just 'hello' and 'how do you do' of course. Its subconscious component is huge – mainly the **Autonomic Nervous System** whereby the tiny muscles in our face, ears and eyes are connected to every organ in our body so your stomach, heart and gut play a part in every inter-personal relationship. At its best it is expressed as love. There is always a certain amount of **stress** so there is always the need for social engagement.

I usually bring in some new books that I think are relevant and today there are three that I want to highlight – two of them only briefly and a third one that I want to cover in some detail because I think it's really useful. That book, by Amy Banks with Leigh Ann Hirschman, is called *Four Ways to Click – Rewire your Brain for Stronger, More Rewarding Relationships*. Its idea is that we really need to strive for the best possible connectedness to get the most from our mind, which is also the theme of my Course. She mentions a book by Dean Ornish that I haven't seen yet called *Love and Survival – The Scientific Basis for the Healing Power of Intimacy* in which there are many examples of how health and wellbeing are compromised when we there isn't enough love in our lives.

Before we get to that, the two other books are very new – I pre-ordered them before they were published earlier this year when I heard what they were about, which is a bit of a gamble. This one by Johann Hari – *Lost Connections – Uncovering the Real Causes of Depression and the Unexpected Solutions* – sounded good in principle, but it didn't turn out to be what I had hoped. These sort of outlandish sweeping claims never do. The author had medical treatment for depression himself from the age of 18 until 31 and is now on a mission to expose the flaws in the current medical model (right through to the proven fraud by drug companies), many of which are now recognised quite widely. This is important, but it's not particularly helpful for people suffering from depression right now as it takes time for further research to come up with better treatments and for the system to change. The 'unexpected solutions' he writes about and his ideas about the 'real causes' are no more than promising ways of thinking about the subject, not a quick fix or a conceptual breakthrough.

He documents nine kinds of disconnection: from meaningful work, from other people, from meaningful values, from childhood trauma, from status and respect, from the natural world and from a hopeful or secure future. His 'different kind of antidepressant' is any kind of reconnection, including, unfortunately, the use of psychedelic drugs to 'free yourself from materialism and ego.' It's an idea with a strong vein of truth behind it – connectedness does matter – but I really don't think he understands what is involved and I couldn't recommend the book to anyone. You can listen to the author on the internet if you want to follow it up.

The other book that I was very excited about, written by a very big name in the science of mind, Antonio Damasio, is called *The Strange Order of Things – Life, Feeling and the Making of Cultures*. What is so exciting to me is that he is the first recognised American neuroscientist to take a truly biological approach to the mind such as I do in this Course. Most of them stick to the typical cognitive model in which the brain chemicals supposedly do everything and information-processing rationality is the main source of meaning so that subconscious emotions are neglected and feelings are largely forgotten – never mentioned.

In fairness, Damasio did a lot to bring emotions into the story of mind with all his previous books. I will revisit them later in the Course. In this book, on the first page, he says that

‘feelings have not been given the credit they deserve as motives, monitors and negotiators of human cultural endeavours . . . cultural activity began and remains deeply embedded in feeling.’ His story differs from mine in that he describes the mind as the manifestation in living things of **homeostasis**, which is the basic physiological process that maintains internal constancy in the face of external change. ‘Feelings are the mental expressions of homeostasis . . . connecting cultures to feeling and homeostasis strengthens their links to nature and deepens the humanisation of the cultural process’ Damasio writes. He goes on to say that ‘regarding feelings as occasional visitors to the mind or as caused only by typical emotions does not do justice to their ubiquity and functional importance . . . it is not possible to talk about thinking, intelligence and creativity in any meaningful way without factoring in feelings.’ Philosophers such as Martha Nussbaum (‘the intelligence of emotions’) and scientists such as Charles Birch, Guy Claxton (‘intelligence in the flesh’) and Andreas Weber (‘the biology of wonder’) have been alluding to this for a while as I have mentioned before.

I find it very exciting that a leading neuroscientist has taken the biology seriously in the manner that my mentor Humberto Maturana did so I will bring this book in again later. It is, however, a largely philosophical discussion so this is not the book to read to get practical tips on how to use your mind. In this Course I try to place the philosophy in an everyday context so it will be relevant in a practical way to what is happening in your lives and mine.

This is why I want to talk about Amy Banks book, *Four Ways to Click*. It is a self-help book in a way – she has questionnaires for assessing your relationships. I don’t generally feature the more simplistic self-help books, unless they have some real substance to them regarding mind science. The ‘four ways’ that she describes are important topics in brain science that are already part of this Course and my book – some I introduced in Term 1, some we are just coming up to now. So I will use her structure to talk about what I was going to talk about anyway. We can’t cover all four topics today – they are too large – so we will continue with her book beyond this session.

She calls it **C.A.R.E.** (Calmness, Acceptedness, Resonance and Energy) and it’s a practical program of **Relational Assessment**. She specialises in helping people who don’t have very good connections and gives quite a few clinical cases showing that we can ‘rewire the brain for stronger relationships’ (that’s the subtitle of the book) – in other words, ways to find the best kind of connectedness, which ultimately is what we call love. She is critical of the culture of individuality and self-reliance that prevails today because it underestimates and fails to appreciate the deep human need for connecting.

1. Calm

It all starts with what she calls CALMNESS, which is exactly what I would say too. This is our Autonomic Nervous System (ANS) that I talked about in Term 1 in relation to **stress**. To be calm we need good **vagal tone** – she is referring to the ‘smart vagus’ that I call the **new soothing vagus** nerve. It was Stephen Porges **Polyvagal Theory** that uncovered this important aspect of our subconscious mind. Our mind’s natural state is to be defensive and wary towards any change or anything new, particularly the presence of other people. This is why our subconscious mind tends to respond more negatively and the conscious mind is generally more positive as I explained earlier. Our whole nervous system is involved from our eyes and ears through to heart and gut and every muscle in our face and body.

The subconscious part has two main branches: one to speed things up and one to slow them down. I call them the **arousing** ANS and the **soothing** ANS (in scientific terms, *sympathetic* and *parasympathetic*). The arousing system is also called **spinal** because it branches everywhere via the spinal column (as most nerves do). The soothing arm is different – it employs the longest and largest nerve trunk in our body, the **vagus**. This has been refined as we evolved from more primitive animals. In the earliest nervous systems of cold-blooded animals the vagus nerve running from the back of the brain stem throughout the body served mainly to shut everything down for the ‘freeze’ response and for hibernation during winter. We still have that nerve, but we shouldn’t really need to be using it very much. That’s our **dorsal vagus**.

Mammals (like us and most animals we are familiar with) have brains that need a constant supply of oxygen so the classical response to stress uses the arousing ANS to produce **fight-or-flight**. Heartbeat speeds up, we breathe faster, blood glucose is mobilised, every muscle is ready to spring into action. We shouldn’t really be using this one too much either. We humans are more subtle than a mouse running away from a cat, for example. We may feel a quickening of temper or some alarm, perhaps getting into an argument, feeling the need to justify ourselves or defend ourselves. This is the spinal, arousing ANS, which isn’t particularly good for relationships, except perhaps very occasionally. It may relieve a bit of stress (or sometimes make it worse), but it’s not the preferred response to stress for humans and can lead to heart problems, ulcers and so on.

The dorsal vagus is not the answer either because shutting down the conversation, avoiding issues or politely running away is not helpful for relationships. That vagus response manifests as fear, which is not good. The mouse running away from a cat will often die from fright because its vagus shut everything down. So we humans have developed another branch of the vagus nerve – the **ventral vagus**, running from the front of the brain stem to all our organs – that can quieten and calm us, let us be still, but without fear. This system enables humans to feel safe while close to another person and actually hold one another in an embrace, to hug – I fact, to experience all the human behaviours that manifest as love. It is what we need first and foremost to cope with all kinds of stress that we will inevitably encounter.

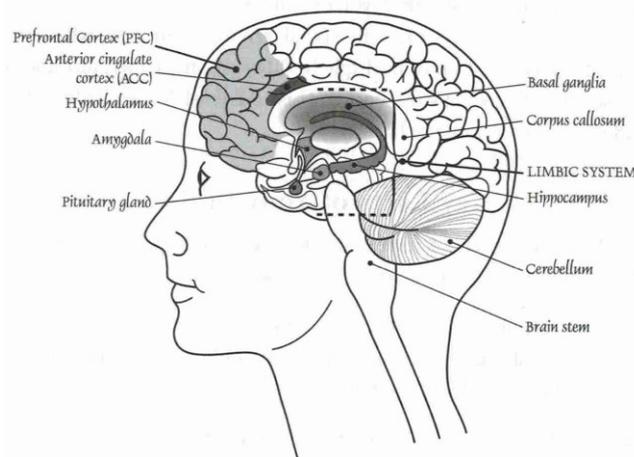
When Amy Banks refers to **vagal tone** she is talking out this system. The first of her four attributes required for strong connections, **calmness**, is based on our ventral vagus system. It is actually not too difficult to measure vagal tone and following Stephen Porges’ work it has become an important indicator of our health. People with all sorts of clinical conditions, both physical like heart problems and psychological like depression and anxiety, have been found to have poor vagal tone compared to healthy people. So how can you improve vagal tone? In a nutshell, through appropriate movements and through love. Exercise generally and certain specific exercises activate this part of our subconscious mind. Practising hugs is very good for it.

Stanley Rosenberg, a American body therapist practising in Denmark, has written a book called *Accessing the Healing Power of the Vagus Nerve* which I have also brought in today. He likens the three forms of the ANS (spinal, dorsal vagus and ventral vagus) to the experience of Goldilocks – too hot or hard, too cold or soft, and just right. His therapeutic work is designed to move people from predominantly dorsal vagus function, which he says makes you sluggish and depressed, to ventral vagus function, the primary purpose of which is

to improve social engagement. I don't want to overstate his supposedly 'miraculous' cures for various diseases, but the principle of what he is trying to do is very important and it points the way towards better therapies and general health.

2. Accepted

The second attribute of the mind for strong relationships is a sense of ACCEPTEDNESS – knowing that you are accepted and accepting other people for who they are. Amy Banks attributes this, albeit in a rather simplistic way, to the part of the brain called the **anterior cingulate cortex** (ACC), in particular its dorsal branch (the dACC). This region is labelled in the brain diagram that was part of an earlier handout and is reproduced here.



The dorsal end of the ACC (towards the back) is a key part of the circuitry for **attention, error detection, motivation and reward-based decision making** and a major linkage system between the more cognitive regions like the PFC and the sources of emotions like the amygdala so it is obviously important for the social engagement functions of our mind. The ventral end of the same region is closely linked to the *default network* that I mentioned earlier which we use to develop our **sense of self** and the insula (not shown in the diagram and often hidden from view) that, broadly speaking, monitors how we feel. Whether we feel accepted or not has a lot to do with how we feel about ourselves so I think Amy Banks oversimplifies a much larger issue here, but her argument is interesting as a practical guide for strengthening relationships.

The dACC is also an area where physical pain anywhere in our body shows up in the brain. A famous experiment based on a team computer game called 'cyberball' showed that when people suddenly find themselves left out after they had been included earlier they experience activity in the dACC – in other words, they feel pain. Other research shows that psychological pain such as social exclusion is no different from physical pain so far as the brain is concerned. We need loving social engagement to ease any kind of pain so it seems that the distress call from the dACC is designed to point us towards stronger relationships. However, it often becomes oversensitive and overactive. We learn to experience its distress call when it is not needed. From our earliest upbringing we need to learn that it is okay to be slighted or left out at times and not always get your needs met because we are loved anyway. We need to move from the closest bonding to the outsider role fairly easily and naturally. The trauma that many of us endure damages this aspect of our mind.

Being unduly sensitive to social pain with an overactive dACC has the unfortunate effect of blocking us off from the very thing that will help us most – social engagement. It reinforces the commonly-expressed idea that you need to be strong and independent and you shouldn't go looking for help from other people. Then you tend to look for pleasure in other directions whereas the healthy dACC is built around obtaining pleasure from social engagement. A culture that emphasises self-reliance and independence is often not very supportive of this universal need for strong relationships.

Early in this Course I suggested that it was not wise to be using our mind to make a lot of judgments about other people. The judging culture that we live in contributes to feelings of shame and fear that sabotage the loving aspect of our mind. Amy Banks points out that judging others disconnects you from them and she suggests ways to stop doing it with exercises that reveal your judging habits. She explains the difference between giving feedback and making judgments, which is a skill that can be learned. Giving feedback is intended to strengthen the relationship whereas a judgment puts you at a distance.

3. Resonant

In discussing the third attribute, resonance, Amy Banks has a lot to say about the **mirroring system** in our brain, which is the subject of much debate in mind science. Marco Iacoboni's lovely book *Mirroring People – The Science of Empathy and How we Connect with Others* and Gregory Hickock's book *The Myth of Mirror Neurons – The Real Neuroscience of Communication and Cognition* are contrasting opinions on the matter. I will discuss them both in more detail in a later session. There is no doubt that we use our mind to mimic the facial expressions, thoughts and feelings of other people so this is another very practical and useful component of Amy Banks' work that we will look at in the next session.

4. Energetic

She relates this to the **dopamine-based reward systems** in our brain, about which I will be saying a lot more when we meet again.