The End of Suffering-The Diagnosis

I invite you to close your eyes and pay very close attention to your breathing; just pay attention to your breath, the minute details of air flow, temperature, moisture content, the different dynamics of the in-breath and the out-breath. Unless you have dedicated yourself to his practice for some time, you won’t be able to do it. Rather, you notice after some period of time your attention is somewhere else. Some far flung chain of internal thoughts, images, feelings and associations has taken over. You are amazed at your lack of ‘control’ over your attention and you try harder now. The same thing happens. You notice that it is difficult to estimate the time elapsed from your focus on the breath to the derailment of the process and your sudden awareness that ‘you have lost it’, again and again. (If you are amazed and dismayed by this phenomenon, you may be ready to start your meditation practice).

How is this possible and what mechanism is driving this? You realize how little control you have over such a simple process as paying very close-exclusive-attention to such a familiar physical event-your breath.

The Default Mode Network
Nobody knew the answer to this question until a few years ago- when the Default Mode Network (DMN) in the brain was discovered (1) and subsequently shown to relentlessly drive self-referential, internally generated thought, when you (your brain) are not actively engaged in a task that engages you full attention (2). This activity is called mind wandering and it turns out that you spent more time doing it than you are aware of or would have guessed (3), perhaps 40% of your waking hours are spent doing it. Why should you care? The obvious reason that comes to mind is: during mind wandering you are not paying attention to what you are doing (you may not even realize you are doing it), decreasing your productivity.

A less obvious reason is this: “a wandering mind is an unhappy mind” (4); the more time you are “lost in your thoughts”—thinking about the past with regret, worrying about the future, obsessing about what people think about you—you feel (5).

There are other observations that you can make during this brief experiment. When you become aware that your mind has wandered away from closely observing your breath (if you become aware of it) you notice an unbroken, uninterrupted stream of thoughts, sensations, images filling your consciousness-never is there any pause or quietness during which you could observe your ‘Self’.
The DMN is relentlessly active, using up a major portion of the oxygen that your breathing provides to the metabolic engine of the neurons. It is ‘ON’ whenever your attention takes a break from the task your involved in. It is one of the engines in your brain that run your life. It has remained hidden in plain sight until it was discovered by serendipity.

**The Dopamine Reward System**

The other engine is the ‘reward system’ in the brain. This network uses dopamine as neurotransmitter, notorious for its propensity of being high jacked by drugs (stimulants, opiates) and food (6), particularly sugar (7)-causing untold number of deaths due to obesity and its medical consequences. This system has deep evolutionary roots. We share it with rodents and honeybees (7). Without a well-controlled dopamine network, we can’t move (Parkinson’s Disease), or get motivated to do things and experience joy (Depression)-the world turns into a grey ashen wasteland.

The reward system constantly evaluates our activities in terms of ‘expected reward’ on a second by second basis (8) and provides the driving force to seek things, pursue goals, and have experiences. It also makes sure that we learn from experiences by a reinforcement mechanism.

We are wedded to this system.

It also provides us with a multitude of attachments that we feel and have come to believe we cannot do without. When we are having trouble getting what we want or feel in danger of losing what we cherish, we have an ‘aversive’ experience-the dark side of the dopamine reward system. This will happen regularly (“you can’t always get what we want”). When the reward we seek is as ‘expected’ (as per evaluation by the reward network) when we finally get it, the pleasurable dopamine response is reduced. The evolutionary calculus is: why invest more effort into something that has already been obtained?

Can you see what is happening? Only new or unexpected reward gives you that “thrill”—therefore you get up again and seek something new. In the end you realize “I can’t get no satisfaction.”

The dual action of the DMN and the reward system provide fuel required for the maintenance and support of the experience of a ‘Self’ that is intuitively so convincing that we don’t much doubt or examine its obvious reality. However, there is a problem with that notion.
This was first diagnosed by a psychiatrist living about 500 years B.C. in Northern India. He was obsessed with a desire to identify the causes of pervasive human suffering and to find a way to cure it. His name was Gautama Shakyamuni. We now know him as the Buddha.

He determined by closely examining the content of his conscious mind that no evidence for a ‘Self’ could be found. Rather, the content of consciousness is consistent with a different model of the mind. The content of consciousness is shifting from second to second and the illusion of a permanent ‘Self’ is composed of bundles of sensory and internal experiences which are invested with salience and ‘reward’.

We become oblivious to the transitory and impermanent nature of these mental phenomena and our brain constructs the illusion of a permanent self with inalienable rights such as the pursuits of happiness. In fact, we believe that this ‘Self’ is so solid that it is virtually indestructible in the form of a ‘Soul’.

The Buddha taught that the reification of mental states into a ‘Self’ has grave consequences for our clarity of thought and emotional wellbeing.

We forget that the fabric of our life has three threads woven into it (I am quoting from the Stanford Encyclopedia of Philosophy):

—suffering, impermanence and non-self—that will lead in the course of normal interactions with the environment, to appropriation (the identification of certain elements as ‘I’ and ‘mine’).

This leads in turn to the formation of attachments, in the form of desire and aversion, and the strengthening of ignorance concerning the true nature of sentient existence.

The ultimate truth about sentient beings is just that there is a causal series of impermanent, impersonal psychophysical elements.

Since these are all impermanent, and lack other properties that would be required of an essence of the person, none of them is a self.

But given the right arrangement of such entities in a causal series, it is useful to think of them as making up one thing, a person.

Buddha's own teachings, in the form of several philosophical arguments for non-self. Best known among these is the argument from impermanence (S III.66–8), which has this basic structure:

1. If there were a self it would be permanent.
2. None of the five kinds of psychophysical element is permanent.

There is no self.

Instead of seeing the mind as the persisting bearer of such transient events as occurrences of cognition, feeling and volition, he treats ‘mind’ as a kind of aggregate term for bundles of transient mental events.
These events being impermanent, they too fail to account for diachronic personal identity in the way in which a self might be expected to.

Stanford Encyclopedia of Philosophy

More than 2000 years later, during the time of the European Enlightenment, David Hume made a similar diagnosis in the section “Of personal identity” in Book I of A Treatise of Human Nature:

Although some philosophers believe we are continuously aware of something we call the self, when we look to our experience there is nothing to substantiate this belief. We are never, says Hume, aware of any constant invariable impression that could answer to the name of self. What we experience, rather, is a continuous flow of perceptions that replace one another in rapid succession.

And here is the famous passage from the same book that echoes what the Buddha said about the ‘Self’:

Hume says: “For my part, when I enter most intimately into what I call myself, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch myself at any time without a perception, and never can observe anything but the perception. When my perceptions are removed for any time, as by sound sleep; so long am I insensible of myself, and may truly be said not to exist. And were all my perceptions removed by death, and could I neither think, nor feel, nor see, nor love, nor hate after the dissolution of my body, I should be entirely annihilated.


I may venture to affirm of the rest of mankind, that they are nothing but a bundle or collection of different perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement.


….. nor is there any single power of the soul, which remains unalterably the same, perhaps for one moment. The mind is a kind of theatre, where several perceptions successively make their appearance; pass, re-pass, glide away, and mingle in an infinite variety of postures and situations.


The Buddha and David Hume lived before the advent of Neuroscience.
Living in the 21st century, we can begin to “naturalize” the discoveries they made using philosophical and contemplative insight alone. The claims they made are extraordinarily challenging to the “Western Mind”, long conditioned by Platonic and Christian tradition.

Giving up the notion of the ‘Self’ and the ‘Soul’ will be painful, like giving up on a long term investment of incredible treasures (think of all the cathedrals in Europe) and declaring it—along with blood, sweat and tears (think of persecutions, inquisitions and religious wars—a sunk cost.

In an upcoming blog I will examine whether the condition diagnosed by Hume and the Buddha is treatable given our current knowledge of the mind/brain.