



UNLOCKING
CONSCIOUSNESS



BRIAN MIND FORUM

Appendix 017

Characteristics of Personhood, Personality and Emotions

Describing personhood draws together a number of concepts: perhaps central is what we each individually think of ourselves: our emotions, perceptions, impressions, feelings, sensations: how we react and behave: sense of right and wrong, good and bad: the accumulation of all our experiences. Could we sum this up as the characteristics of our personality?

All this is very close to our consciousness of being a person, an individual: being alive. In the simplest animals we can observe basic emotions of hunger, thirst, fear, anger, attraction, drive to reproduce. Most complex we can include morality, ethics and conscience.

How do these all come about? What are the mechanisms? How much can we initiate, how much is automatic? How much control do we have?

Background

The Greeks argued that bad traits were always in conflict with good: anger and desire restrained by virtue, honesty and caring: emotion battling reason. Freud suggested calling the good traits the *superego*, the bad the *id* and our conscious (intelligent) selves holding both in check the *ego*. None had the advantage of using computers, which manage fine without any of all this whatever. And indeed the value to us of computers in this case, is the very fact that they process information in ever more sophisticated ways – and are forecast to do so much more – without any personality, emotions or conscience whatever. This highlights for us the differences.

We can argue that very little happened between Plato and Freud. The general idea of four *humours* attributed to Hippocrates and Galen survived for nearly two millennia. A person's personality was a balance of yellow bile making people irascible: black bile making them melancholy and pessimistic: phlegm, leading to a calm temperament: and high levels of blood making people cheerful, optimistic and passionate.

The endocrine system

The major breakthrough in the twentieth century was the discovery of the family of glands and the whole communications system of hormones, which are chemical substances produced in the body by glands that control and regulate the activity of all cells or organs. They are transported in the blood stream and are essential for every activity of life, including the processes of digestion, metabolism, growth, reproduction, and mood control. Many hormones, such as neurotransmitters, are active in more than one physical process. See Appendix 004.

Central Nervous and Cardiovascular Systems

We can now go so far as to separate out two quite separate but interconnected hardware / software systems. The physical structures of the central neural system, which includes the brain - the hardware, and the electrochemical signaling system transmitting patterns of messages across the whole network - the software Secondly we have the cardiovascular system of arteries and veins, the blood and lymph flows, which distribute nutrients like amino acids and oxygen, collect waste and transport the hormones, neurotransmitters, messenger molecules – the endocrine members and other chemicals in complex combinations. We can also mention the immune system that transmits signals through the central nervous system and repair and defend substances through the cardiovascular system.

We are gradually beginning to associate particular glands and their hormones with specific sensation and emotions. For instance, adrenalin from the adrenal glands was the first to be recognised as putting the whole body into high alert to cope with a crisis: serotonin helps mend wounds, Dopamine gives us a sense of euphoria, pleasure: testosterone is associated with sexual arousal. As we study this subject, as so often, the more we discover the more we realise there is to learn.

Not only is the hormonal communication system responsible for orchestrating all our emotions, but also is very much involved in generating the sensations, perceptions, feelings and impressions associated with all the information input from the sensory organs and thus the meaning of the patterns of information associated with our eyes, ears, skin, taste and smell. Even the thought of something frightening makes us shiver involuntarily, a good memory can generate euphoria: thought of food stimulate hunger, even activate the saliva glands.

Guy Claxton in his groundbreaking book *“Intelligence in the Flesh”* quotes the work of American Psychologists Paul Ekman and Jaak Panksepp to outline some eleven pairs of emotional modes. They site distress followed by comfort modes: recovery from exhaustion and illness followed by the joy of returning to normal: disgust and withdrawal followed by re-engagement: fear followed by the relief of survival: anger, which if the outcome is successful leading to triumph. Sorrow, then the rediscovery of the zest for life: shame and hopefully forgiveness: desire and perhaps the kind of happiness associated with satisfaction: enquiry and the thrill of discovery: care mode hopefully generates the contentment of a job well done: anxiety and its resolution one way or another.

Out of this mass of activity we derive a sensation of the current events in the external world and an impression of how we feel now.

Representation of information

We know that the representation of visual images in the brain is not a small picture, nor is a beautiful piece of music a tune buried somewhere among the neurons. In a computer all these 'images' are patterns of bits of information structured in a very rigid format that we have invented so that what we put into our programs we can process, store and extract. We know the brain mind does not have a coding system like this at all.

When we identify a stream of information from our five senses we recognise a pattern of sensations, impressions, feelings, emotional reactions that give us a sense of meaning to what is otherwise just bald information. Repetition adds to the connections building networks of networks of associations, relationships interlaced and interwoven. Over eighty or so years the volume of all these experiences – knowledge - is overwhelming, so perhaps massive three dimensional knowledge trees are economically stored as two dimensional diffraction patterns. If this is so recall of information can involve reconversion of diffraction patterns, which can require energy. If that energy is in temporary or long term shortage, reconversion may be a problem.

Language

There is an interesting conjecture that language may have developed in part, at least, to enable our long distant ancestors to communicate emotions, ideas, concepts and other abstract thoughts. Thus language was generated by the need to express and communicate the development of conscious experiences, rather than the conventional view that language came first and stimulated the development of consciousness.

This could explain why we have such difficulty defining, describing and even talking about qualia. We just have not invented the right language yet!

Creativity

Whether we are risk takers or risk adverse, confrontational or conciliators, adventurous or cautious has fascinated philosophers as much any other traits. Present thinking about 'creativity' is that it is high on most people's list of the most important attribute. Anyone can bone up on the past. Everyone can criticize, few can create. Jack Kerouac wrote that 'the best teacher is experience'. But one might respond 'it might depend on the experience and its outcome'. 'Openness to experience' might be more useful. 'The drive to explore' is arguably the single most important personal factor in predicting creative achievement

It is interesting that the primary role of the neurotransmitter dopamine is to make us 'want' things. Colin De Young at the University of Minnesota argues that 'the release of dopamine increases the motivation to explore. It increases psychological plasticity; to engage with new things and be comfortable with uncertainty; the discovery of new information.'

It could be argued that dopamine is the mother of invention. Perhaps tests for dopamine levels might be included in more comprehensive IQ tests?

Introversion and extraversion are very powerful opposing poles of personality.

Personality

Much work is in progress on defining what personality is, and we now know much more about how it is inherited, grown in the fetus and developed up to puberty and beyond.

One perspective might offer:- Subjectivity; showing emotion, point of view and perspective: Rationality; the ability to pause, reflect, evaluate alternatives, think and reason: Relationships; the capacity to form bonds, care for others, accept care: Narrative self; having a past and ambitions for the future: Autonomy; self control, make decisions for oneself.

Alternatively, and in addition another perspective might offer:- Openness to experience: Conscientiousness: Extroversion: Agreeableness, and Neuroticism (or emotionality).

Both offerings may say more about the authors than personality.

Then again we can list among our emotions and sensations:- Anger, Fury, Jealousy, Envy, Fear, Terror, Courage, Depression, Elation, Optimism, Pessimism, Frustration, Embarrassment, Contempt, Disdain, Nostalgia, Admiration, Indignation. Then there are:- Pain Pleasure, Warmth Cold, Joy Euphoria, Noise Silence, Smell Taste, Feeling, Light Dark, Heavy Light, Bright Shadow, Sharp Blunt, Focussed Fuzzy, Dry wet and Hot and cold, Tired, Relaxed, Comfortable.....

No doubt many people could add to this list. They are all compounded from the complex mix of our hormones. Binary systems can be used to code an almost unlimited range of values. Hormones are analogue. Each output can be of infinite strength and volume. Mixing and matching together the fifty or so substances we currently know about, in infinite combinations is more than enough to enable us to represent the widest range of sensations, impressions, and emotions.

Thus we *feel* the meaning of words and phrases (poetry is a good example). We *experience* the perception of visual images, taste, smell, touch, and the *emotion* generated by great music. We have a *sense* of the shapes and orientation of buildings and spaces.

Brought continuously together in 'real time' we have a concept of the surroundings of our world, our place in it, and our reactions to it. We are conscious of it all: great issues and minutiae.

Note. Hippocrates and Galen conceived of black and yellow bile. We think of that as being as simplistic as the world being composed of earth, air, fire and water; however, they were on the right track, and the first steps are always the most difficult. We may be replacing two types of 'bile' with multiple alternative chemical compounds and think ourselves enlightened. Maybe, our descendants will laugh at our hubris as they contemplate orders of magnitude greater complexity!

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