



UNLOCKING
CONSCIOUSNESS



BRIAN MIND FORUM

Appendix 024

DEFINITIONS

INFORMATION AND INTELLIGENCE

**INFORMATION IS THE IDENTIFICATION OF PATTERNS OF OBSERVATIONS,
patterns that mean things
INTELLIGENCE IS THE IDENTIFICATION AND PROCESSING OF PATTERNS OF
ACTIVITIES, patterns that do things.**

MEMORY, MEANING AND KNOWLEGE

**MEMORY IS THE MEANS BY WHICH WE RECORD THE PAST SO THAT WE
CAN IMPROVE THE PRESENT AND PREDICT THE FUTURE.**

*Memory is static, or potential information
Intelligence is active, or kinetic Information*

**THE MEANING OF INFORMATION IS THE COCKTAIL OF SENSATIONS,
IMPRESSIONS, FEELINGS, PERCEPTIONS AND EMOTIONS GENERATED BY
THE HORMONES IN THE ENDOCRINE SYSTEM.**

**KNOWLEDGE (Epistemology) IS THE INDENTIFICATION AND
ACCUMULATION OF PATTERNS OF MEANINGS**

INTELLIGENCE

**The first glimmering of intelligence are about a mechanism to respond to
events. Thus, the first expression of intelligence is
A MEANS OF COPING WITH THE UNEXPECTED.**

ANCIENT INHERITED SURVIVAL INTELLIGENCE:
THE EVOLUTIONARY BASIS OF ALL INTELLIGENCE IS THE ABILITY TO

RESPOND TO INCOMPLETE INFORMATION FAST

THE DESCRIPTION, PROCESS, THE MECHANISM AND DEFINITION OF
GENERAL AND REACTIVE INTELLIGENCE

GENERAL and REACTIVE INTELLIGENCE IS THE RELATIVE QUALITY AND EFFICIENCY OF THE EXTENDED AUTONOMIC FUNCTIONS OF THE CENTRAL NERVOUS SYSTEM THAT COORDINATES, MANAGES AND OPERATES THE PHYSICAL SYSTEMS OF THE BODY: THE ENDOCRINE, CARDIOVASCULAR, IMMUNE AND ENTERIC SYSTEMS AND THE DEXTERITY OF ALL THE MUSCLES.

IN PARTICULAR, THE BRAIN, MIND MONITORS AND ANALYSES ALL THE SENSORY INPUTS FROM THE SURROUNDING ENVIRONMENT, COMPREHENDS THE SIGNIFICANCE AND MEANING OF INCOMPLETE INFORMATION, AND RESPONDS WITH THE MOST EFFICIENT REACTION AVAILABLE, AS FAST AS POSSIBLE, TO OUTWIT PREDATORS AND THE PEERHOOD, TO RELATE TO OTHER PEOPLE AND CONTROL BEHAVIOUR.

IT PROVIDES THE FRAMEWORK FOR ALL THE LEARNED SKILLS TO OPERATE, GROW, DEVELOP AND BE EXECUTED. IT ALLOCATES RESOURCES AND ORGANISES ALL THE ORGANS AND SYSTEMS OF THE BODY TO BEHAVE AND FUNCTION AS ONE COOPERATIVE, COORDINATED, SYNCHRONISED WHOLE PROVIDING THE MEANS TO COPE WITH THE WORLD AND SURVIVE.

THESE ANCIENT BACKGROUND SKILLS HAVE FACILITATED THE ABILITY TO
LEARN AN EVER-WIDENING PANOPLY OF
SPECIFIC INDIVIDUAL INTELLIGENT SKILLS.

THEY INCLUDE THE EFFICIENCY OF THE BRAIN TO DEVELOP, GROW AND EXECUTE NEURAL SYSTEMS TO IDENTIFY, OBTAIN, RETRIEVE AND PROCESS THE MEANING OF INFORMATION TO EXTEND KNOWLEDGE. TO RECOGNISE THE SOUND PATTERNS OF WORDS, PHRASES, MUSIC AND THEIR MEANING; THEN, MORE RECENTLY, THE OPTICAL PATTERNS OF WRITTEN WORDS, PHRASES AND THE VISUAL ARTS; ASSEMBLE WORDS AND PHRASES TO SPEAK, WRITE AND CONTEMPLATE CONCEPTS, IDEAS AND FORMULAE COGENTLY AND LOGICALLY. TO THINK, MAKE DECISIONS, SOLVE PROBLEMS, INNOVATE, IMAGINE, SPECULATE AND PREDICT THE POSSIBLE FUTURE COURSE OF EVENTS.

A DEFINITION OF CREATIVE INTELLIGENCE: THINKING OF NEW IDES, CONCEPTS AND SOLUTIONS.

THIS NEURAL PROCESSING IS THE EFFICIENCY AND CAPACITY TO PAUSE, EXTRAPOLATE EXISTING INFORMATION, EXPLORE, EVALUATE AND COMPARE ALTERNATIVE SOLUTIONS TO IDENTIFY NEW, BETTER MORE EFFECTIVE AND EFFICIENT RESULTS: RECOGNISE THIS AS AN IMPROVEMENT; AND ORGANISE THIS LATEST INFORMATION IN A COHERENT MANNER THAT IS UNDERSTANDABLE AND USEFUL TO OTHERS

OBSERVATION, FEED-BACK AND REPETITION ENABLES THIS 'LIBRARY' OF SPECIFIC LEARNED INTELLIGENT ABILITIES TO BE CONTINUOUSLY IMPROVED, EXPANDED AND EXECUTED MORE EFFICIENTLY.

GENERAL AUTONOMIC INTELLIGENCE IS THE DRIVING MECHANISM OF EVOLUTION

THE PERSONAL 'LIBRARIES' OF EVER MORE EFFICIENT, LEARNED, SPECIFIC AND INDIVIDUAL APPLICATIONS OF INTELLIGENT SKILLS AND ABILITIES ARE THE DRIVING FORCE OF CIVILISATION

NEURAL MODULES (NEURULES)

A syllable is a hierarchy of phonemes. A word is a hierarchy of syllables. A phrase is a hierarchy of words. A speech, instruction, concept or idea is a hierarchy of phrases. Knowledge is a hierarchy, or pattern, of phrases.

NEURONS GENERATE MEANING

A neuron can do one job and one job only. It can transmit a single standard electrochemical signal down its axon(s), and nothing else. Networks of neurons transmit patterns of energy. These patterns stimulate the glands of the endocrine system to secrete the mix of hormones that generates the sensations that makes information meaningful.

POTENTIAL INFORMATION

The presence of a neuron in a particular position in a neural network, capable of receiving signals and transmitting signals at that strategic position to contribute to the execution of a particular function, is what we understand as *memory – potential information*.

KINETIC INFORMATION

When a neuron in particular position in a neural network is activated and contributes its signal to the execution of a function, we understand it to be *intelligence – kinetic information*.

IN ADDITION

INTELLIGENCE IS THE RELATIVE EFFICIENCY OF THE APPLICATION OF ENERGY TO ENABLE PATTERNS OF NEURAL INSTRUCTIONS, OR ALGORITHMS, TO STORE AND PROCESS INFORMATION TO MAKE DECISIONS, SOLVE PROBLEMS AND CREATE KNOWLEDGE THAT DEFINES OUR CULTURE (defined by Mathew Arnold as 'the study of perfection' or by Oscar Wilde as 'sacrosanct and sublime').

DEFINITIONS OF CONSCIOUSNESS, AWARE AND AWAKE

CONSCIOUSNESS, UNCONSCIOUSNESS AND SUBCONSCIOUSNESS ARE ALL ONE CONTINUOUS SET OF NEURAL PROCESSES, OPERATING 24/7 THROUGHTOUT OUR LIVES. STREAMS OF ELECTROCHEMICAL SIGNALS TRANSMITTED OVER THE NEURAL NETWORKS CAUSE THE GLANDS OF THE ENDOCRINE AND OTHER SYSTEMS TO SECRETE PATTERNS OF HORMONES, WHICH GENERATE ALL THE SENSATIONS AND EMOTIONS THAT GIVE MEANING TO INFORMATION.

FUNCTIONS OF THE MIND.

BEING AWAKE OR ASLEEP (OR ANYWHERE ALONG THAT GRADIENT) IS GOVERNED BY THE LEVEL OF ENERGY IN THE NEURONS. THIS DETERMINES THE TENSION ACROSS THE SYNAPSES AND THE WIDTH OF THE SYNAPTIC GAPS, WHICH VARIES THE SPEED AND EFFICIENCY OF THE SIGNALS TRANDMITTED OVER THEM.

FUNCTIONS OF THE BRAIN.

Description of the Formation of Memory

Chapter two (p 2 of 12) describes how signals transmitted along axon and dendrite filaments generate electromagnetic fields. When two filaments transmit signals concurrently and are close enough for their electromagnetic fields to overlap, glia cells are attracted and form a temporary link, or '*Glia Bridge*'. These temporary, speculative glia bridges are capable to transmitting a signal from one filament to the other linking the two neurons together, and, therefore forming a new link in the structure of a neural network.

Where active neurons are further apart messenger molecules carry out a similar task and provide a path along which glia cells can form a temporary speculative glia bridge.

Some glia cells appear to be double synapses. The function of these glia bridges is to provide a scaffolding along which neurons can grow to form new permanent neural

links and structures, much like the process by which the first neurons grow in the foetus.

Whenever these glia bridges are activated – they are proving useful - they strengthen the link, either by re-enforcing an existing or a new synapse linking two filaments, or by fortifying the glia scaffolding, or the new neural link that has grown up that scaffolding.

If the new link or structure is not used – does not appear to be proving useful – the glia bridge or scaffolding may gradually dissolve, and no long-term memory is created.

Forming these new links and structures uses a considerable amount of energy. If someone is in a high state of emotion – the ambient hormone mix is strong amid a high level of neural activity providing a high level of energy for each activity, these bridge building functions can be foreshortened, and complete new neural links or whole structures are built quickly. Similarly, if the energy level is low, then these bridge building functions may never be completed.

The former is an example of a very intense experience – a first emotional experience for a young person, perhaps; while an example of the latter is a trivial event perhaps in an older person, and maybe associated with dementia

Statistics

The numbers of neurons in the central nervous system and in an average brain at birth and in maturity are, of necessity, just estimates. However, if the forecast of approximately a trillion new neuron links and structures in a mature brain is anywhere near right we can do one illuminating calculation. In every year, there are some 30 million seconds. In thirty years, therefore, nearly a billion seconds. This arithmetic suggests we grow an average of some thousand new neural links and structures every second.

In youth, probably more, while asleep probably less. Perhaps teenagers are growing a couple of thousand new neural links and structures each second of every day. Even if the over seventies are achieving quarter the rate, their brains are trying to cope with some two hundred and fifty new, or attempted new links and structures. Logic suggests it is quite possible that this generates overload and confusion that is a major contributor to all the forms of dementia and Alzheimer's problems.

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