



We have seen that Learning, Knowing, Understanding and Interpretation are inextricably linked and overlap each other to a very large degree. It is impossible to talk meaningfully about any one of them except in reference to all of the others. So it is with various Ways of Knowing.

How are the rudiments of perception, language and logic inextricable from the fine microstructure of the brain?

How do we make sense of our biologically driven emotions and predispositions?

How much of what we are and what we know is innate, or genetically determined, and how much will always remain to be learned?

Homo perspicax — ACTIVE SENSE PERCEPTION

Seven senses

Active vision—saccades

Color

Optical illusions

A musical ear

Umwelt

Extending our sensory range using technology

Homo agnoscens — RECOGNITION

Problems of recognition

Consciousness as *qualia*

What is it like to be a bat?

Edelman's *Neural Darwinism*

Self determination

The primacy of pattern recognition

Wittgenstein's family resemblances

The paradox of Meno

Can a machine think?

Homo memor — MEMORY

Memory

Homo loquens — LANGUAGE

Dwelling in language

Is there a language instinct?

Deacon's co-evolution of language and the brain

The messiness of everyday speech

The Map is not the Territory

In praise of the poetic voice

Pidgins, creoles and sign languages

Narrative and emplotment

Non-linguistic forms of representation

Animal language

Gorilla language and personhood

Homo logicus — REASON

Our predisposition for systematic thinking

Meaning and the general significance of things



Andrew Brown (2009) *Figure*. Oil pastel, ink and charcoal on paper.

Induction and continuity

Analytical vs. Synthetic knowledge

Deductive logic and syllogisms

Informal fallacies

Models

Bronowski's path from metaphor to algorithm

Occam's razor

What babies know—*a priori* knowledge

Locke's *tabula rasa*

Hume's impressions

Knowledge as justified—true—belief

Descartes and radical doubt

***Homo ardens* — EMOTION**

Fired up

Damasio's *Feeling of What Happens*

Tension and release

The “big five” personality traits

The madding crowd

***Homo credens* — FAITH**

***Homo imaginus* — IMAGINATION**

***Homo intuens* — INTUITION**

Seemingly effortless, self-evident insights

Polanyi's Tacit Knowledge