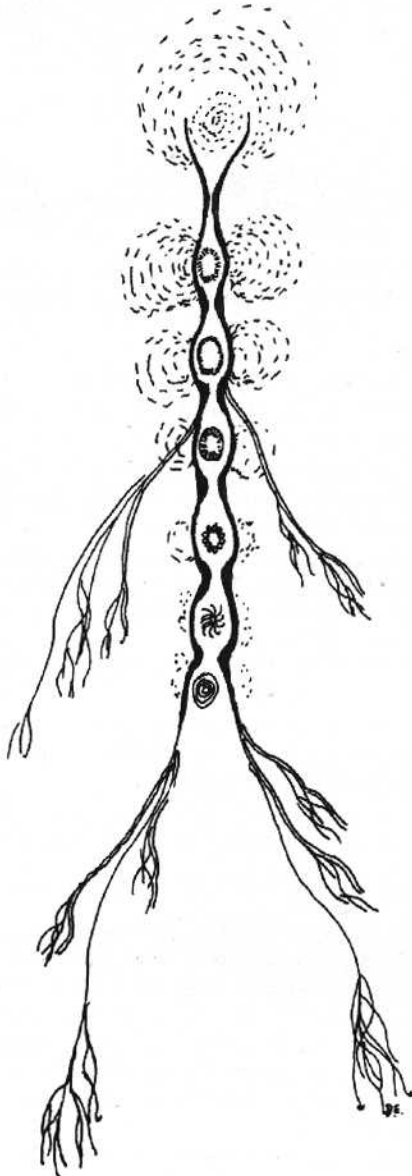


The Cerebral Cortex is believed to function as the clearing house in which all inputs and outputs, receptors and motor effectors respectively, are monitored. As an incoming sensory impulse enters the grid or field of scansion, it is directed towards its proper afferent, causing the movement of the corresponding motor neuron. The sacrifice is again in time—of a slight delay in the immediacy of response until the proper input is monitored, and the gain is in number of possible inputs.

The human brain is unique in the quality that it can draw an abstraction from a mass of data. Even our nearest Simmian progenitors are incapable of the simple association between stimuli received through different mode channels of the same object. Experiments have shown that a monkey cannot choose the shape of an orange held out of sight, upon being shown the visual representation. Therefore, neurophysiologists believe that it is in the human brain alone that there are "Cross-Modal Connections."



In the three instances of scansion in the human brain described above, the abstraction is a derivative of the total inputs. In the Optical Cortex, the eye is caused to respond to slight changes of an over-all sameness, like a fly flying in front of a white wall; it is the new, significant information to which the eye is drawn. In the Auditory Cortex, significant relationships between notes and chords are gleaned from the mass of sounds produced, explaining man's propensity to the 12-tone scale.

In the cerebral cortex, the abstraction made is the constant dichotomies to which man must be well adapted. To choose to do one thing is to choose not to do another. The human brain presents itself with reports as to the action of its inputs indicating reports from every receptor in the body. Certain stimuli have priority over others, but there is still a balance reached. For example, it seems likely that sudden pain is channeled through an express lane of the spinal cord, but that continuous pain can be modulated by diversion, emotions, and memories of prior experience. However, every receptor sends its signal whether activated or non-activated . . . There is a constant unchanging background. This constant scanned report from the receptors is called the generator current, and like the white wall behind the fly, it is the wall upon which significant new information is to be seen against.

We live in a world to which we are capable of transducing certain stimuli into electrical signals, and thereby we define our universe. For example, there is no known response of the human body to radio waves, although the list of stimuli to which we are receptive grows continuously: i.e. gyroscopic deflections, wind, infrared radiation, and ultra violet light. In the Renaissance, early experimenters with bats were given no support, and were even considered crazy when they said that they believed there to be sounds which the human ear was incapable of hearing. A telephone is a simple transducer. The charcoal granules colliding in the mouthpiece from the vibrations caused by your voice change the audible sound into an electrical signal, and then the earpiece translates the electrical signal back into sound. A transducer is a device which changes one form of energy into another, an essential component of any communicating or control system. Our receptor neurons act as transducers in that they indicate intensity of the stimulus through the frequency of the all-or-nothing impulse. The stimulus is changed from whatever form it arrived into an electrical signal. The myth that there are only five senses should be stricken. There are different receptors for the following stimuli: touch/pressure, gravity/motion, light, sound, blood pressure, blood oxygen level, and chemical substances, both gas (smell) and in solution (taste). Why is oxygen an odourless, tasteless, invisible, silent, weightless substance. Because we lack the capabilities to perceive it except for the carotid body in the circulatory system, which triggers response from the respiratory system to change the oxygen level in the blood. Imagine if we were differently constructed, or imagine the people occupying the distant galaxies. It is entirely explainable through survival of the fittest that these sensory devices are actually best adapted to the local environment, but imagine life on a planet with a much larger sun, causing entirely different ratios of all energies. Imagine the video these people would have!