Perceptual Hypothesis... Space ← Time

Tonight you will be subjected to a test in human channel capacity and pattern recognition through redundancy. Through the associational qualities of the human mind, one can easily monitor two or more totally unrelated channels of information, and thus "discover" coincidental relationships. However, if one is to be able to monitor a number of inputs, it is necessary that the attention paid to any single input be but a fraction of the whole possible. Therefore, to make sense of one line of development in a single channel, the information must be somewhat redundant, in that if part of the message is missed, the sense must be constructible from the context. If the redundancy is too low, and the information is presented in a very concise form, if a small bit of the message is missed, the whole sense might not be clear.

Scansion in general always has in common the exchange of a dimension in time for a dimension in space, or vice versa. For example, a sentry guarding a fort scans all directions. Let us say that he gets around to the northwest corner only once every 30 minutes. But he is able to monitor all of the directions, although with 30 minute intervals for each. If the sacrifice in constancy of attention is compensated for by the number of inputs monitored, the system works. Scanning picks out the new or significant information from the vast display of redundant, unchanging information. It is through scansion that one's eye is drawn to a bird flying into one's field of vision. It is through scansion that one hears a tune or chord as an abstract universal, regardless of the pitch. The alpha waves of your brain are electrical activity generated by a sweep of scansion through the cerebral cortex, by which all sensory and motor nervous connections are monitored for stimulation. The television camera and tube work on the principle of scansion. The field is scanned 30 times a second, with the glowing of the phosphorescent screen fooling the human eye into seeing a whole picture.

Perception and learning are mutually dependent. New learning is contingent upon the discovery of some sort of order and regularity in experience. Redundancy facilitates learning, making prediction possible. In neural terms, the more often a given neuronal circuit is employed, the more permanent grows that particular passageway for the incoming signal, to be more easily conducted through the network. This is the process of facilitation—I like to think of it like building a road through the jungle: the first man through must use a machete to cut his path, but each man following finds the pathway better defined, until finally it becomes like an asphalt highway—permanent, so that it will remain intact even if left idle for a long while. Nevertheless, as the great cybernetic wizard Warren McCulloch said, "All nervous activity is either incremental or decremental." —dimitri devyatkin
music arranged by the composer: Tibetan Ritual Music, Equatorial African Music, Supremes.

score for the new 60 cycle composition 10 April 1972 at The Kitchen: five tapes are played in sequence or in counterpoint - they were made on the Buchla Modular Electronic Music Synthesizer using the following patching system:

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filter out 6 outs \rightarrow 4 inputs \rightarrow \text{To audio mixer (60 hertz generating frequency)}

\text{voltage control mixer} 10 outs \rightarrow 4 inputs \rightarrow \text{To audio mixer}

2 pulse outs \rightarrow \text{Timing pulse gen.}

3 against 2 rhythmic relationship

2 sine-wave generators

"leak" into filter module

[high frequency in 3:4 relationship with 60 cycle fundamental]
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each of the five tapes explores a different constituent of the above patch, i.e. the 60 cycle drone is predominant on tape 1, the high frequency sine waves are predominant on tape 2, etc.

an audio mix of the five tapes will take place during the concert following the pre-determined score for the overall work

\[\text{\textit{Musician's Signature}}\]

NYC 1972