Postulate I. Unlearned Stimulus-response Connections (${}_{S}U_{R}$) (*1*, p. 47; *2*, p. 4)

Organisms at birth possess receptor-effector connections (${}_{S}U_{R}$) which under combined stimulation (S) and drive (D) have the potentiality of evoking a hierarchy of responses that either individually or in combination are more likely to terminate a need than would be a random selection from the reactions resulting from other stimulus and drive combinations.

Postulate II. Stimulus Reception (S and s)[1] (*2*, pp. 7 ff.)

A. When a brief stimulus (S) impinges upon a suitable receptor there is initiated the recruitment phase of a self-propagating molar afferent trace impulse ($\dot{s}'$), the molar stimulus equivalent ($\dot{S}'$) of which rises as a power function of time (t) since the beginning of the stimulus, i.e.,

$$\dot{S}' = 465{,}190 \times t^{7.6936} + 1.0, \tag{1}$$

$\dot{S}'$ reaching its maximum (and termination) when t equals about .450″.

B. Following the maximum of the recruitment phase of the molar stimulus trace, there supervenes a more lengthy subsident phase (s'), the stimulus equivalent of which descends as a power function of time (t'), i.e.,

$$S' = 6.9310(t' + .01)^{-1.0796}, \tag{2}$$

where $t' = t - .450''$.

C. The intensity of the molar stimulus trace (s') is a logarithmic function of the molar stimulus equivalent of the trace, i.e.,

Postulate IV. The Law of Habit Formation (${}_{S}H_{R}$) (*1*, pp. 102 ff.; *2*, pp. 29 ff.)

If reinforcements follow each other at evenly distributed intervals, everything else constant, the resulting habit will increase in strength as a positive growth function of the number of trials according to the equation,

$$ {}_{S}H_{R} = 1 - 10^{-.0305\dot{N}}, \tag{4} $$

where $\dot{N}$ is the total number of reinforcements from Z.

Postulate V. Primary Motivation or Drive (D) (*1*, pp. 226 ff.; *2*, pp. 33 ff.)

A. Primary motivation (D), at least that resulting from food privation, consists of two multiplicative components: (1) the drive proper (D′) which is an increasing monotonic sigmoid function of h, the number of hours of food privation; and (2) a negative or inanition component (ϵ) which is a positively accelerated monotonic function of h decreasing from 1.0 to zero, i.e.,

$$ D = D' \times \epsilon. \tag{5} $$

where

$$ D' = 37.824 \times 10^{-27.496\frac{1}{h}} + 4.001, $$

and

$$ \epsilon = 1 - .00001045h^{2.486}. $$