Structural System Property: *atis*Inputness

(*Structural system properties* are those properties that are part of the theory and describe patterns of system and negasystem connectedness or partitions.)

Inputness, $\mathbf{I}_{\mathcal{p}}(\mathfrak{S})$, $=_{df}$ Partition obtained from the resulting transmission of *toput* components; that is, system components for which *system input control qualifiers* of *toput* components are "true."

$$\mathbf{I}_{\mathcal{p}}(\mathfrak{S}) =_{df} \{\mathfrak{x}|\ \mathfrak{x}\in\mathfrak{S}_{0} \wedge \exists\sigma(\sigma(\mathfrak{x}_{T_{\mathcal{p}}}\in T_{\mathcal{p}}) = \mathfrak{x}_{I_{\mathcal{p}}})\}.$$

Inputness is defined as the set of *system* components for which there exists a system-transmission function that results in the transmission of the toput components to input components.

$\mathcal{M}$: Inputness measure, $\mathcal{M}(\mathbf{I}_{\mathcal{p}}(\mathfrak{S}))$, $=_{Df}$ a measure of input components.

$$\mathcal{M}(\mathbf{I}_{\mathcal{p}}(\mathfrak{S})) =_{Df} |I_{\mathcal{p}}(\mathfrak{S})| \qquad (1)$$

$$\mathcal{M}(\mathbf{I}_{\mathcal{p}}(\mathfrak{S})) =_{df} \log_2(|I_{\mathcal{p}}(\mathfrak{S})|) \div \log_2(|\mathfrak{S}_{0}|) \qquad (2)$$

The choice of measure will depend on the application. Measure (1) is of value where the size of the input set is required for comparison, say, to the toput set; that is, a comparison of actual feedin is desired. Measure (2) is of value where a comparison to the system or between systems is desired that relates the amount of input as a fraction or percentage of the total system.