

Structural System Property: *atis* **Fromputness**

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

Fromputness, $F_p(\mathfrak{S})$, =_{df} Partition of *system* components for which negasystem fromput control qualifiers are “true.”

$$F_p(\mathfrak{S}) =_{df} \{\mathbf{x} \mid \mathbf{x} \in \mathfrak{S}_0 \wedge \exists P(\mathbf{x}) \in \mathcal{L}'_C [f(\mathbf{x})(F_p \times_{F_p} \mathcal{L}'_C) = \tau]\}.$$

Fromputness is defined as the set of *system* components for which there exist negasystem control-qualifiers such that there is a function from the product of the fromput components and the negasystem control qualifiers that are “true.”

\mathcal{M} : Fromputness measure, $\mathcal{M}(F_p(\mathfrak{S}))$, =_{Df} a measure of fromput components.

$$\mathcal{M}(F_p(\mathfrak{S})) =_{df} |F_p(\mathfrak{S})| \tag{1}$$

$$\mathcal{M}(F_p(\mathfrak{S})) =_{df} \log_2(|F_p(\mathfrak{S})|) \div \log_2(|\mathfrak{S}_0|) \tag{2}$$

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