Structural System Property: *atis* Outputness

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

**Outputness**, $O_p(\mathcal{S})$, =df Partition obtained from the resulting transmission of *fromput* components; that is, negasystem components for which *negasystem output-control qualifiers* of *fromput* components are “true.”

$$O_p(\mathcal{S}) = \{ x | x \in \mathcal{S} \setminus \mathcal{O}_p \wedge \exists \sigma (\sigma(x_{F_p} \in \mathcal{F}_p) = x_{O_p}) \}.$$  

**Outputness** is defined as the set of *negasystem* components for which there exists a system-transmission function that results in the transmission of the *fromput* components to output components.

**$\mathcal{M}$**: **Outputness measure**, $\mathcal{M}(O_p(\mathcal{S}))$, =df a measure of output components.

1. $\mathcal{M}(O_p(\mathcal{S})) = \{|O_p(\mathcal{S})|\}$  
2. $\mathcal{M}(O_p(\mathcal{S})) = \log_2(|O_p(\mathcal{S})|) / \log_2(|\mathcal{S}_o|)$

The choice of measure will depend on the application. Measure (1) is of value where the size of the output set is required for comparison, say, to the *fromput* 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 output as a fraction or percentage of the total system.