

Structural-Morphism System Property: *atis* **Monomorphismness**

(*Structural-morphism system properties* are those properties that are part of the theory and define the mapping-relatedness of object-set components.)

Monomorphismness, $\mathcal{X} =_{df} \mathcal{M}(\mathfrak{S}_1, \mathfrak{S}_2)$ two systems where the components of the first are related to one and only one component, but not necessarily all of the second.

$$\mathcal{X} =_{df} \mathcal{M}(\mathfrak{S}_1, \mathfrak{S}_2) \mid \sim \mathcal{P}(\mathfrak{S}_1, \mathfrak{S}_2) \wedge \forall \mathbf{x}(\mathbf{x} \in \mathfrak{S}_1 \supset \exists^1 \mathbf{y} \in \mathfrak{S}_2 (\mathcal{M}(\mathfrak{S}_1, \mathfrak{S}_2)))$$

Monomorphismness is defined as a morphism between two systems; such that, for all components of the first system, there is exactly one component of the second system to which it is mapped.

Monomorphism is a homomorphism that is an *injective function*; that is, a function that is *one-to-one*.

The following homomorphism, $f_{\text{mono}}: \mathcal{T} \rightarrow \mathcal{S}$, defines a *monomorphism*:

Object-Set \mathcal{T}

Object-Set \mathcal{S}

