

System Type: *atis*AutopoieticSystem

(System type is part of the metatheory and describes configurations and properties that characterize a specific system.)

Autopoietic system, ${}_{AT}\mathfrak{S}$, =_{df} an autonomous system that is self-producing.

$${}_{AT}\mathfrak{S} =_{df} \mathfrak{S} \mid \mathfrak{S} = {}_{Au}\mathfrak{S} \wedge (A_T: \mathcal{L}_{AT} \times {}_{Au}\mathfrak{S} \rightarrow {}_{AT}\mathfrak{S}_{OP} \mid (\mathcal{I}({}_{Au}\mathfrak{S}, {}_{AT}\mathfrak{S}_{OP})) \wedge {}_{Au}\mathfrak{S} \cap {}_{AT}\mathfrak{S}_{OP} = \emptyset$$

Where ‘ A_T ’ is a production process of the autopoietic system; ‘ \mathcal{L}_{AT} ’ are the controls for the production process; and ‘ ${}_{AT}\mathfrak{S}_{OP}$ ’ is the autopoietic system output.

Autopoietic system is a system; such that, the system is autonomous, and there is a production-process function from the product of the production process controls and the autonomous system to the autopoietic system output, such that the autonomous system and autopoietic system output are isomorphic and disjoint.

Autopoiesis is a process of system self-production.

Examples: Corporations that franchise their stores attempt to do so as an autopoietic system; that is, they try to make every new unit the same as all the others. Societies may be autopoietic when they try to extend their own societal organization—culture, values, beliefs, etc.—onto another society. The “westernization” of the world is an autopoietic process. School expansion may be an autopoietic process whereby a successful school system attempts to replicate that experience.