

Structural System Property: *atis* Weakness

(Structural system properties are those properties that are part of the theory and describe patterns of system and negasystem connectedness. The structural properties define the topology of the system, and every affect relation defines a topology on the system.)

Weakness, ${}_{\text{WK}}\mathfrak{S}$, =_{df} a partition, $\mathfrak{y} = (\mathcal{V} \subset \mathcal{G}_0, \mathcal{R} \subset \mathcal{G}_A)$, characterized by components that are not directed-connected by incident affect-relations.

$${}_{\text{WK}}\mathfrak{S} =_{\text{df}} \mathfrak{y} \mid \forall \mathbf{u}, \mathbf{v} \in \mathfrak{y}(\mathcal{V}) \exists \mathbf{e} \in \mathfrak{y}(\mathcal{R}) [\mathbf{e} = (\mathbf{u}, \mathbf{v}) \supset \ell(\mathbf{e}) = 0]$$

M: Weakness measure, ${}_{\text{WK}}\mathfrak{S}$, =_{df} a measure of affect-relations that are not directed-connected.

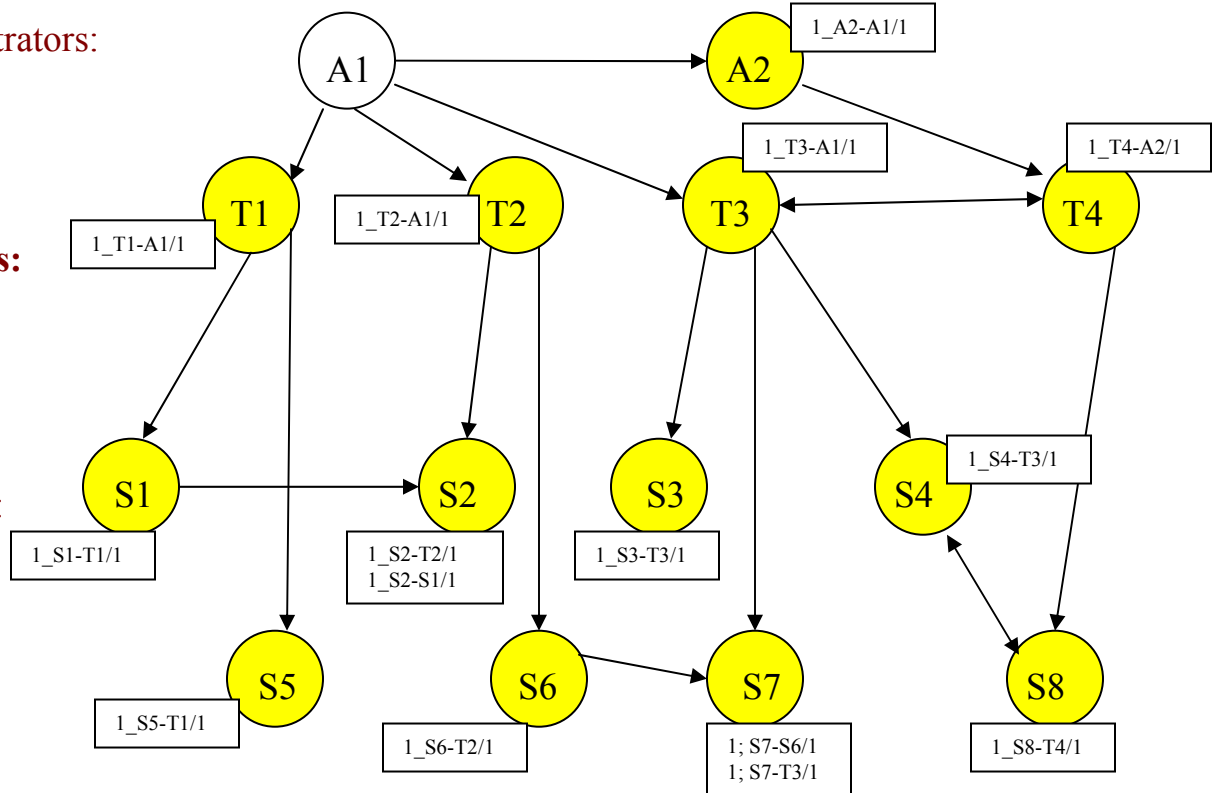
$$\mathcal{M}({}_{\text{WK}}\mathfrak{S}) =_{\text{df}} \left\{ \left[\sum_{i=1, \dots, n} \left(\sum_{j=1, \dots, m} |\ell(\mathbf{e}) \mid \ell(\mathbf{e}) = 0|_j \right)_i \right] \div \mathbf{C} \right\} \times 100$$

Weakness in a School System

Administrators:

Teachers:

Students:



Affect Relation: Controls Activities of

In this system, there are there are 13 components that *Control Activities* of other components with respect to *Weakness*. Since there is only 1 affect-relation and 14 components, then the total possible affect relation paths is $P[Z(\mathfrak{S}_0)] = 236,975,181,590$; and therefore, $C = \log_2(P[Z(\mathfrak{S}_0)]) \approx 37$. There are 15 paths related to *Weakness*.

Therefore: $\mathcal{M}_{WC}(\mathfrak{S}) \approx 39.70$.