Structural System Property: *atis*Centralness

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

Centralness, ${}_{C}\mathbb{S}$, $=_{df}$ a *partition*, $\mathcal{Y} = (\mathcal{V} \subset \mathcal{G}_{\mathcal{O}}, \mathcal{R} \subset \mathcal{G}_{\mathcal{A}})$, characterized by affect-relations incident to non-adjacent-end-components one of which is primary-initiating.

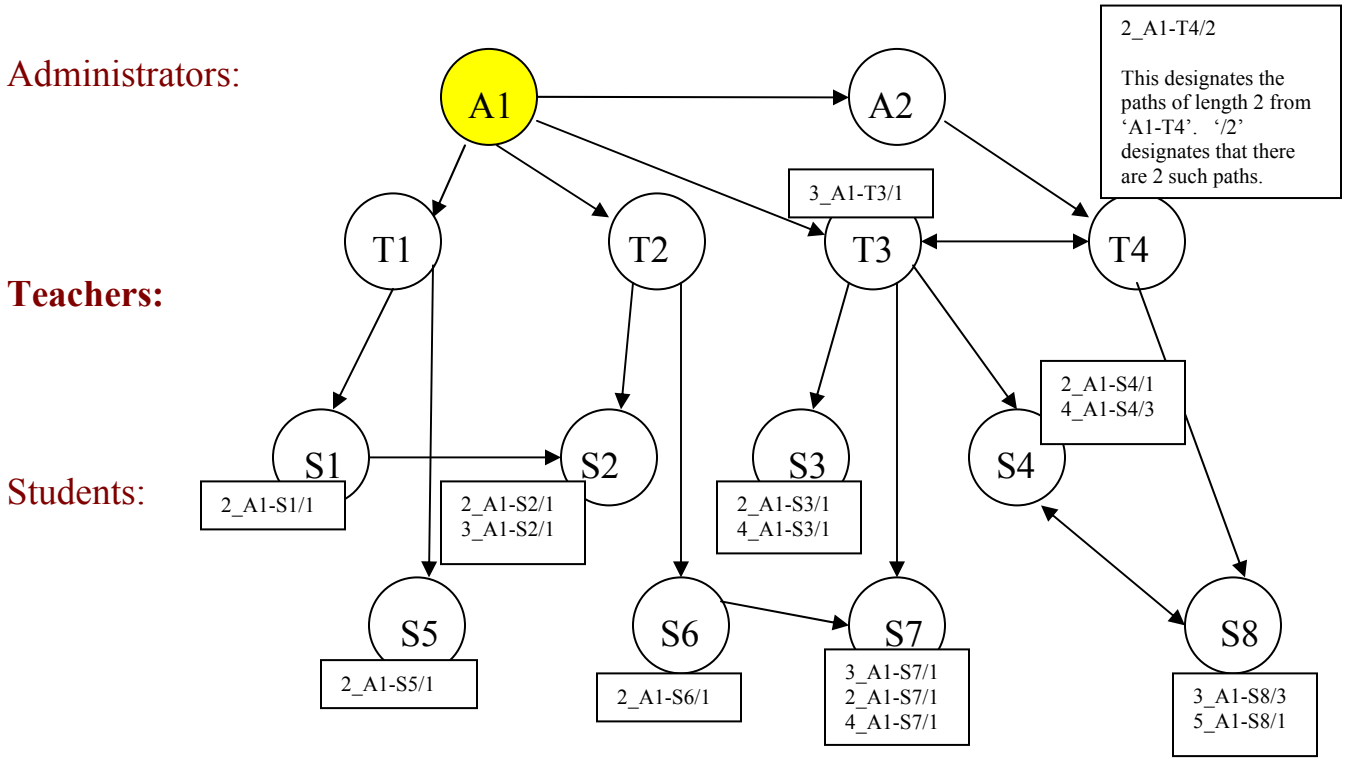
[NOTE: Do not confuse ***Centralness*** with the ***Center*** of the graph. They are not the same.]

$$ {}_{C}\mathbb{S} =_{df} \mathcal{Y} \mid \forall \mathbf{u},\mathbf{v} \in \mathcal{Y}(\mathcal{V}) \exists \mathbf{e} \in \mathcal{Y}(\mathcal{R})[\mathbf{e} = ({}_{PI}\mathbf{u},\mathbf{v}) \supset \ell_{PI}(\mathbf{e}) > 1] $$

$\mathcal{M}$: **Centralness measure,** $\mathcal{M}({}_{C}\mathbb{S})$, $=_{df}$ a measure of the path-length of primary-initiating, non-adjacent component affect-relations.

$$ \mathcal{M}({}_{C}\mathbb{S}) =_{df} \{[\sum_{i=1,\ldots,n} (\sum_{j=1,\ldots,m} | \ell(\mathbf{e}) \mid \ell_{PI}(\mathbf{e}) > 1|_{j})_{i}] \div \mathbf{C}\} \times 100 $$

Centralization in a School System



Affect Relation: *Controls Activities of*

In this system, there is 1 component that *Controls Activities of* other components with respect to *Centralization*. Since there is only 1 affect-relation and 14 components, then the total possible affect relation paths is $\boldsymbol{P}[\mathcal{Z}(\mathfrak{S}_0)] = 236{,}975{,}181{,}590$; and therefore, $\mathbf{C} = \log_2(\boldsymbol{P}[\mathcal{Z}(\mathfrak{S}_0)]) \approx 37$. There are 61 paths related to *Centralization*, as can be determined by adding the numbers to the right of the '/'.

Therefore: $\mathcal{M}(_C\mathfrak{S}) \approx 161.44$.