

- Let $s_i \in \mathcal{S}$ denote a state of a system (model)
- Let $e_i \in \mathcal{E}$ denote an event that affects a system (model)
- Let $\tau : \mathcal{S} \times \mathcal{E} \rightarrow 2^{\mathcal{S}}$, denote a state transformer function
- Hence, an actor interacting with a system generates a *trace*:

$$s_0 \xrightarrow{e_0} s_1 \xrightarrow{e_1} s_2 \xrightarrow{e_2} s_3 \dots s_n \in \mathcal{T}$$

- And induces a corresponding institutional trace:

$$s'_0 \xrightarrow{e'_0} s'_1 \xrightarrow{e'_1} s'_2 \xrightarrow{e'_2} s'_3 \dots s'_m \in \mathcal{T}$$