

1 Preliminary definitions

Definition 1 (Enact Rule). *An enact rule is a pair (y, x) where (i) y is a logical formula and x is an expected enactment effect, expressed as an identifier followed by $n \geq 0$ arguments.*

Definition 2 (Enact Specification). *An enact specification \mathcal{E} is a set of enact rules.*

Definition 3 (Institutional state). *The institutional state I is a set of facts representing properties of all the institutional components of the system (constitutive rules, norms, sanctions, etc.).*

It is assumed that (i) the term y of an enact rule (x, y) is evaluated with respect to a representation of I ; (ii) this representation is always consistent; (iii) if $i \in I$, then $\{i\}' \cup I = I \rightarrow i' = i$.

2 Enactment dynamics

$$\frac{\exists_{(y,x) \in \mathcal{E}} I \models y\theta \quad x\theta \notin E}{E \longrightarrow E \cup x\theta} \quad (1)$$

Informally, if a formula y , under a substitution θ , is true with respect the current institutional state, then the current enact effects include the x , under θ .

$$\frac{\exists_{(y,x) \in \mathcal{E}} x\theta \in E \wedge I \not\models y\theta}{E \longrightarrow E \setminus x\theta} \quad (2)$$