0.1 Abstract Syntax

$test \in memes \quad test$

0.2 Helping Functions

$$(1) \qquad \mathcal{N} : n \to \mathbb{Q}$$

$$(2) \qquad \begin{aligned} &ancestors : Name_s \to Name_s^* \\ &ancestors(s) = s \cup ancestors(s_{parent}) \end{aligned}$$

0.3 Environments

$$(3) \qquad sta \in Sta = Name_s \rightharpoonup (\underbrace{Rea^*}_{Reactions} \times \underbrace{Stmt}_{\substack{Transition \\ Statements}} \times \underbrace{Var}_{\substack{Variable \\ Environment}})$$

$$(4) \qquad fam \in Fam = Name_s \rightharpoonup (\underbrace{Names_\varepsilon}_{Parent} \times \underbrace{Names_\varepsilon}_{\substack{Default \\ Child}} \times \underbrace{Names_\varepsilon^*}_{Children})$$

$$(5) \qquad var \in Var = Name_v \rightharpoonup Loc$$

$$(6) \qquad sto \in Sto = Loc \rightharpoonup Val$$

0.4 Phase Transitions

$$\text{(PHASE-READ)} \qquad \frac{\begin{array}{c} test \\ tester \\ test \\ tester \end{array}}{sta \vdash \langle john \rangle \to \langle john' \rangle} \textbf{ where } \begin{array}{l} john' = memes \\ john' = memes \\ john' = memes \\ john' = memes \end{array}$$