

$$\begin{aligned}
e^L &= x^L \mid \lambda x^L . e^L \mid e^L e^L \mid LE e^E \\
E^L &= []^L \mid E^L e^L \mid LE E^E
\end{aligned}$$

$$\overline{\vdash^L TST} \quad \overline{\Gamma, x^L : TST \vdash^L x^L : TST}$$

$$\frac{\Gamma, x^L : TST \vdash^L e : TST}{\Gamma \vdash^L \lambda x^L . e : TST} \quad \frac{\Gamma \vdash^L e_1^L : TST \quad \Gamma \vdash^L e_2^L : TST}{\Gamma \vdash^L e_1^L e_2^L : TST} \quad \frac{\Gamma \vdash^E e^E : TST}{\Gamma \vdash^L LE e^E : TST}$$

$$\begin{aligned}
\mathcal{E}[(\lambda x^L . e_1^L) e_2^L]^L &\rightarrow \mathcal{E}[e_1^L[e_2^L/x^L]] \\
\mathcal{E}[LE (\lambda x^E . e^E)]^L &\rightarrow \mathcal{E}[\lambda x^L . (LE ((\lambda x^E . e^E) (EL x^L)))] \\
\mathcal{E}[LE (EL e^L)]^L &\rightarrow \mathcal{E}[e^L]
\end{aligned}$$

Figure 0.1. Lazy model

$$\begin{aligned}
e^E &= x^E \mid v^E \mid e^E e^E \\
v^E &= \lambda x^E . e^E \mid EL e^L \\
E^E &= []^E \mid F e^E \mid (\lambda x^E . e^E) E^E \\
F &= E^E \mid EL E^L
\end{aligned}$$

$$\overline{\vdash^E TST} \quad \overline{\Gamma, x^E : TST \vdash^E x^E : TST}$$

$$\frac{\Gamma, x^E : TST \vdash^E e : TST}{\Gamma \vdash^E \lambda x^E . e : TST} \quad \frac{\Gamma \vdash^E e_1^E : TST \quad \Gamma \vdash^E e_2^E : TST}{\Gamma \vdash^E e_1^E e_2^E : TST} \quad \frac{\Gamma \vdash^L e^L : TST}{\Gamma \vdash^E EL e^L : TST}$$

$$\begin{aligned}
\mathcal{E}[(\lambda x^E . e^E) v^E]^E &\rightarrow \mathcal{E}[e^E[v^E/x^E]] \\
\mathcal{E}[EL (\lambda x^L . e^L)]^E &\rightarrow \mathcal{E}[\lambda x^E . (EL ((\lambda x^L . e^L) (LE x^E)))] \\
\mathcal{E}[EL (LE e^E)]^E &\rightarrow \mathcal{E}[e^E]
\end{aligned}$$

Figure 0.2. Eager model

$$\mathcal{E} = E^L$$