## Simulated Robot Learning Interactively

$P($ future $\mid$ state, action $)=\frac{1}{P(\text { state }, \text { action })}\langle P(\text { future } \mid \text { history, action }), P(\text { action } \mid \text { history }), P(\text { state } \mid \text { history })\rangle_{P(\text { history })}$


$$
P_{\text {opt }}(\text { state } \mid \text { history })=\frac{P(\text { state })}{Z_{S}(\text { history }, \lambda)} \mathrm{e}^{\frac{-1}{\lambda} E_{S}(\text { state, history })}
$$

