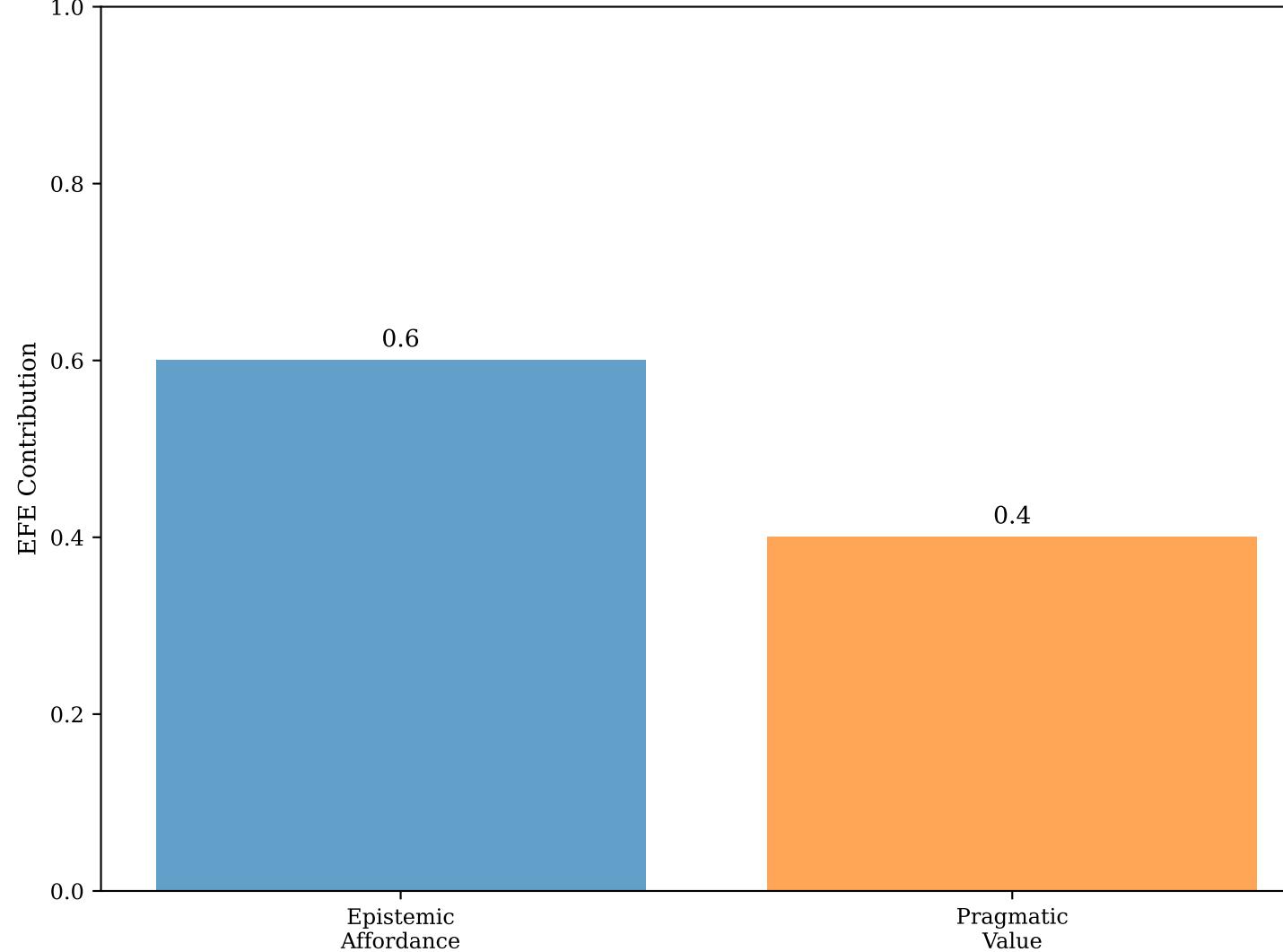


## Expected Free Energy (EFE) Decomposition



## Mathematical Formulation

$$\mathcal{F}(s, \pi) = \sum_{\tau=t+1}^T \mathbb{E}_{q(s_\tau)} [\log q(s_\tau) - \log p(s_\tau | \pi)]$$

$$+ \sum_{\tau=t}^T \mathbb{E}_{q(s_\tau)} [\log p(o_\tau | s_\tau) + \log p(s_\tau) - \log q(s_\tau)]$$

$$\text{EFE}(\pi) = G(\pi) + H[Q(\pi)]$$