

$$\begin{aligned}\nabla_{\theta^\mu} J &\approx \mathbb{E}_{s_t \sim p^\beta} \left[\nabla_{\theta^\mu} Q(s, a | \theta^Q) \Big|_{s=s_t, a=\mu(s_t | \theta^\mu)} \right] \\ &= \mathbb{E}_{s_t \sim p^\beta} \left[\nabla_a Q(s, a | \theta^Q) \Big|_{s=s_t, a=\mu(s_t)} \nabla_{\theta^\mu} \mu(s | \theta^\mu) \Big|_{s=s_t} \right]\end{aligned}$$