
```
(defn outer-E [x M N]
  (-> (doquery :smc
              outer-query [x M])
      (take N)
      log-marginal))
```

```
(defn inner-E [x y M]
  (-> (doquery :smc
              inner-query [x y])
      (take M)
      log-marginal))
```

```
(defquery outer-query [x M]
  (let [z' (sample param-prior)
        experiment (setup-exp z' x)
        y (sample experiment)
        log-lik (observe* experiment y)
        log-marg (inner-E x y M)]
    (- loglik logmarg)))
```

```
(defquery inner-query [x y]
  (let [z (sample param-prior)]
    (observe (setup-exp z x) y)))
```
