

# Scaling up Expectation Maximization

$$\max_w p(X \mid w) = \int p(X \mid T, w) p(T) dt$$

Latent Variable model — use EM! But E-step is intractable

Need to compute  $p(T \mid X, w)$

$$\log p(X \mid w) \geq \mathcal{L}(w, q)$$

$$\underset{w, q}{\text{maximize}} \quad \mathcal{L}(w, q)$$