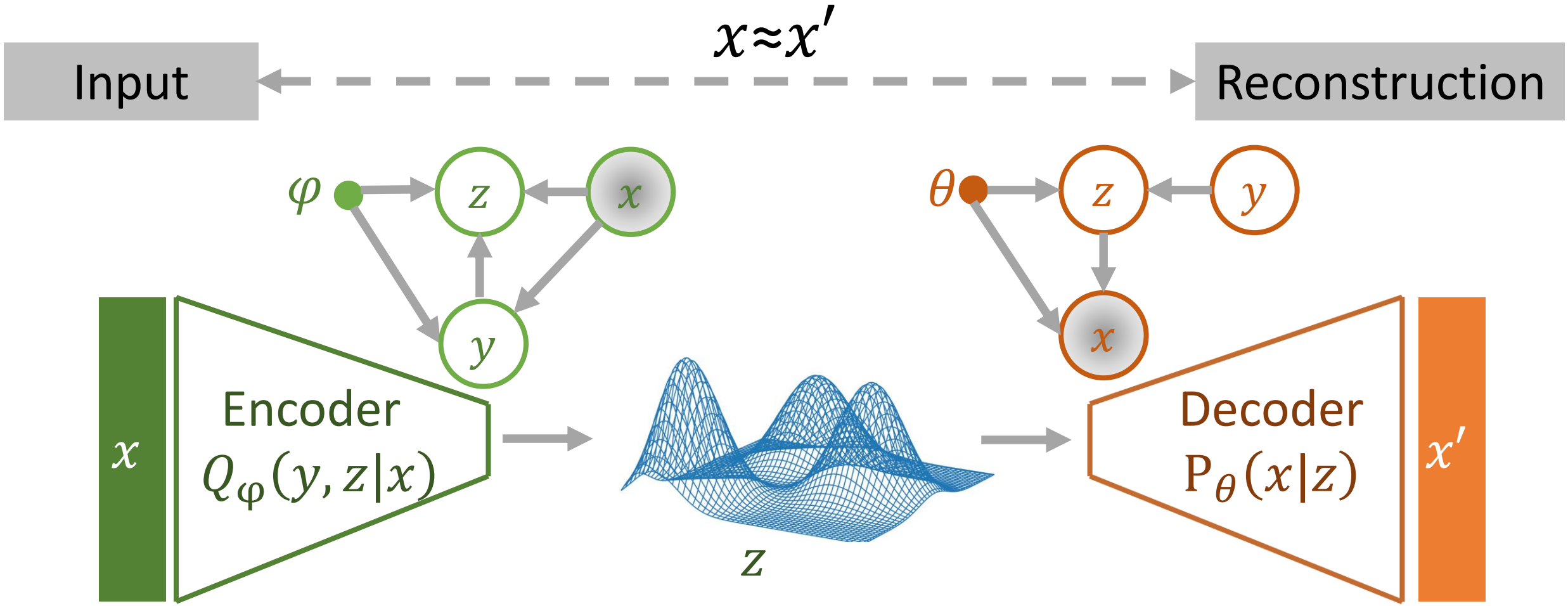

$$\mathcal{L}(\theta, \phi; x) = \mathbb{E}_{Q_\phi(y,z|x)}\left[\log P_\theta(x, y, z) - \log Q_\phi(y, z|x)\right]$$

$$\mathcal{L}(\theta, \phi; x) = \mathbb{E}_{Q_\phi(y,z|x)}\left[\log \frac{P(y)}{Q_\phi(y|x)} + \log \frac{P_\theta(z|y)}{Q_\phi(z|x,y)} + \log P_\theta(x|z)\right]$$

Entropy | Regularization | Reconstruction