$p(\mathbf{z} \mid \boldsymbol{\theta}) f(\mathbf{z})$ 

 $\int_{D} p(\mathbf{z} \mid \boldsymbol{\theta}) f(\mathbf{z}) d\mathbf{z}$ 

 $\tilde{p}(\mathbf{z} \mid \boldsymbol{\theta}) =$