

$$\begin{aligned}
& \text{pointwise predictive score} \\
& \underbrace{\hspace{10em}} \\
\text{WAIC} &= -2 \sum_{i=1}^n \log \underbrace{\int [y_i | \boldsymbol{\theta}] [\boldsymbol{\theta} | \mathbf{y}] d\boldsymbol{\theta}}_{\text{posterior predictive distribution}} + 2p_D \\
& \text{posterior predictive distribution} \\
p_D &= \underbrace{\sum_{i=1}^n \text{Var}_{\boldsymbol{\theta} | \mathbf{y}} (\log [y_i | \boldsymbol{\theta}])}_{\text{effective number of parameters}}
\end{aligned}$$