

	Match	Detach	Comments
$Q$	$\sigma(< W_{\cdot,j}^{(0,0)}, x >)$	$\sigma(< W_{\cdot,j}^{(0,0)}, x >)$	$W^{(0,0)}$ remains the same, so do $Q$
$P_{H X}^{\text{DBN}}$	$\sigma(< W_{\cdot,j}^{(0,0)}, x >)$	Unknown	When match, equals exactly to $Q$ , as well as RBM “up”, when detach, becomes intractable.
$P_{X H}^{\text{DBN}}$	$\sigma(< W_{i,\cdot}^{(0,0)}, h >)$	$\sigma(< W_{i,\cdot}^{(0,0)}, h >)$	Defined solely on $W^{(0,0)}$ , no matters how upper layers change
$P_H^{\text{DBN}}$	$= P_H^{\text{RBM}} _{W^{(0,0)}}$	hopefully improved	New RBM fits previous <i>estimation</i> of <i>posterior</i> . (See below).
$\mathbf{KL}[Q  P_{H X}]$	0	$> 0$	When match, $Q = P_{H X}^{\text{RBM}} = P_{H X}^{\text{DBN}}$