

- If  $D(p||q)$  or  $D(q||p)$  is small, then so is  $V(p, q) = V(q, p)$ .
- For a sequence of probability distributions  $q_k$ , as  $k \rightarrow \infty$ , if  $D(p||q_k) \rightarrow 0$  or  $D(q_k||p) \rightarrow 0$ , then  $V(p, q_k) = V(q_k, p) \rightarrow 0$ .
- That is, “convergence in divergence” is a stronger notion than “convergence in variational distance.”
- See Problems 23 and 24 for details.