Repeated Play (cont.)

- M unknown
- for t = 1, ..., T:
 - Mindy chooses P_t
 - Max chooses Q_t (possibly depending on P_t)
 - Mindy's loss = $M(P_t, Q_t)$
 - Mindy observes loss $M(i, Q_t)$ of each pure strategy i
- want:

$$\frac{1}{T} \sum_{t=1}^{T} \mathbf{M}(\mathbf{P}_{t}, \mathbf{Q}_{t}) \leq \min_{\mathbf{P}} \frac{1}{T} \sum_{t=1}^{T} \mathbf{M}(\mathbf{P}, \mathbf{Q}_{t}) + [\text{"small amount"}]$$
actual average loss best loss (in hindsight)