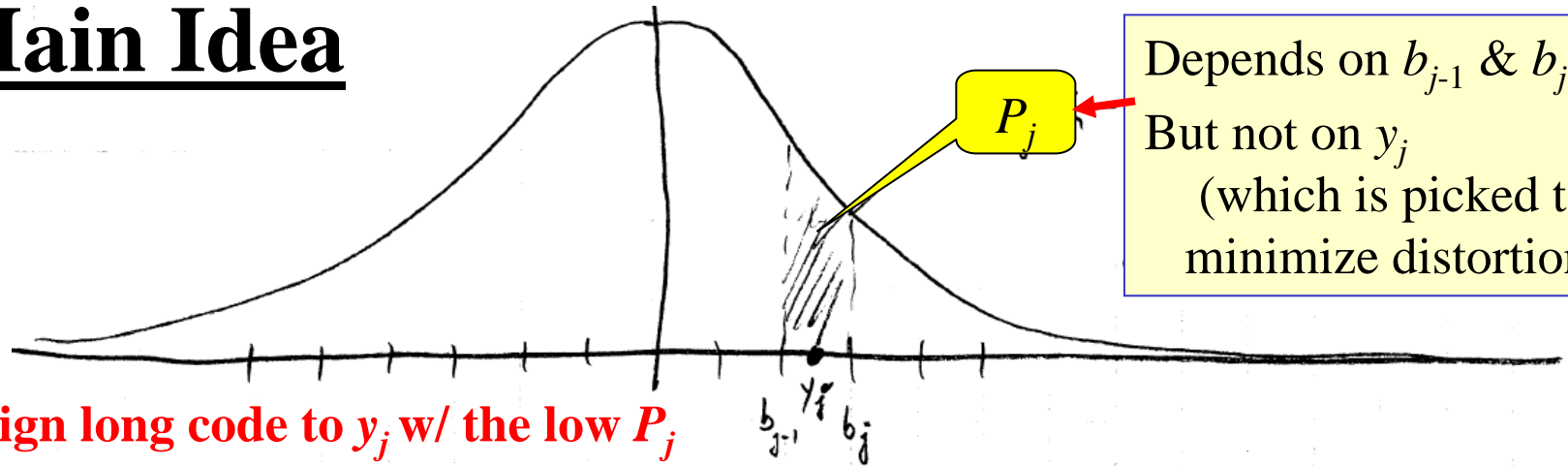


Ch. 9 Scalar Quantization

Scalar Quantizer w/ Entropy Coding

Main Idea

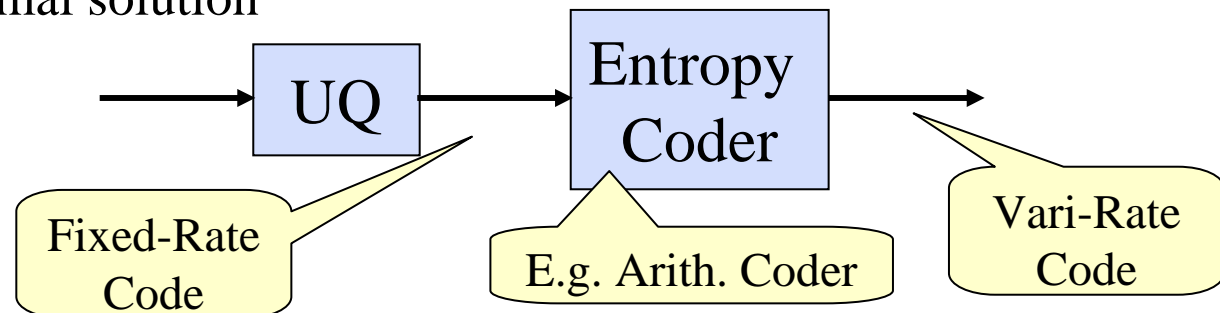


Assign long code to y_j w/ the low P_j

Problem: Given Rate Bound R_o
Choose $\{b_j\}$ & $\{y_j\}$ to min. Dist.
Subject to Rate $\leq R_o$

$$\min_{\{b_j\}, \{y_j\}} D(\{b_j\}, \{y_j\}) \quad s.t. \quad R(\{b_j\}) \leq R_o$$

Theory shows that optimal solution can be achieved using:



Performance of Four SQ Approaches

Gaussian Case

