These errors can also be viewed in a decision theory context. Assume the true class is $\overline{c_1}$. The Type I error is the error of assigning the object to the wrong class $P(c_2|c_1)$. We see that in Fig. 7.11 this is the area under the curve for c_1 to the right of the cutoff point. The second type of error, the Type II error, is to ''accept'' the object as belonging to group c_1 when in fact it belongs to group c_2. This is just $P(c_1|c_2)$, the area under the curve for c_2 to the left of the cutoff point. The total probability of misclassification is the sum of these areas.