$$PMI(w, l) = log\left(\frac{P(l|w)}{P(l)}\right)$$

brigand: $oncein\ l_7$

$$PMI(\text{"brigand"}, l_1) = \log\left(\frac{0}{-1}\right) = -\infty$$

$$\text{PMI}(\text{"brigand"}, l_7) = \log\left(\frac{1}{0.1}\right) = \log(10)$$

	Label 1	Label 2
the	1	1
cat	1	0
hat	0	1

$$\text{PMI}(the, l_1) = log\left(\frac{1/2}{1/2}\right) = log(1) = 0$$

$$\text{PMI}(cat, l_1) = log\left(\frac{1}{1/2}\right) = log(2) = 1$$

$$\text{PMI}(hat, l_1) = log\left(\frac{0}{1/2}\right) = log(0) = -\infty$$