

1. The reason why it is a drawback is because $\Pr(B)$ may be too high so that the data of $\Pr(B|A)$ have little value. For example, most people have drunk milk so that the information that most people drinking juice drinks milk is meaningless. Considering lift, if there is too much B, lift will not be too high, because the support will be high. And So does the conviction.
2. Conf: Since $\Pr(a)$ isn't equal to $\Pr(b)$, so $\Pr(ab)/\Pr(a)$ isn't equal to $\Pr(ab)/\Pr(b)$. so conf isn't symmetrical.
 Lift: $\text{lift}(a|b) = n \cdot \Pr(ab) / \Pr(b) \cdot \Pr(a) = \text{lift}(b|a)$, so it is symmetrical
 $\text{Conv} = (n \cdot \Pr(a) - \Pr(a) \cdot \Pr(b)) / (n \cdot \Pr(a)) - n \cdot \Pr(ab)$
3. Confidence = $\Pr(ab) / \Pr(a) = 1$, correct
 Lift = $\text{conf}(a \rightarrow b) / \Pr(b) = 1 / \Pr(b)$
 Incorrect
 $\text{Conv}(a \rightarrow b) = (1 - \Pr(b)) / (1 - \text{conf}(a \rightarrow b))$, since the denominator = 0, so correct