jk-means

1 Generative Model

For $i = 1 \dots n$,

$$\begin{aligned}
(w_1, \dots, w_K) &\sim Dir(\alpha, \dots, \alpha) \\
Pr(u_{i1}, \dots, u_{iK}) &= \frac{1}{\binom{K}{J}} \\
m_i &\sim Multi(w_1 u_{i1}, \dots, w_K u_{iK}) \\
y_i &\sim G(\theta_{m_i})
\end{aligned} \tag{1}$$

where $(u_{i1}, \dots, u_{iK})$ is a random sample vector with J 1's and $(K - J)$ 0's.