We chose the following way for extending the definition of a slight skew distribution.

We plotted the six values of the Cumulative Distribution Function (CDF) defined by James et al. (1984) for A=5.

\[
F(i) = \sum_{j \leq i} p_j, \quad i=1,\ldots,5
\]

\[p = (0.05, 0.15, 0.2, 0.35, 0.25)\]

\[F(0) = 0\]

We then used linear interpolation to define the CDF for the other points in the interval [0,5]. The resulting CDF is displayed in the following Figure.
The shape of this CDF is used for any number of categories, A, by rescaling the abscissa to be of length A. Thus, we define for \( i=1,\ldots,A \)

\[
P[i] = \text{CDF}\left(\frac{5i}{A}\right) - \text{CDF}\left(\frac{5(i-1)}{A}\right).
\]

This definition produces for \( A=7 \) the probabilities (0.035, 0.079, 0.114, 0.143, 0.229, 0.221, 0.179) and the resulting variance is 2.785.