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Ping Ye* (pingye7@gmail.com), Mathematics Department, Quincy University, 1800 College Ave., Quincy, IL 62301, and **Bhaskar Bhattacharya**. *A Study on Tests of Symmetry with Ordered Alternatives in Higher Dimensional Contingency Tables.*

The major facet of this paper is to explore statistical testing procedures of partial symmetry versus various biases in higher dimensional tables, especially for three-dimensional cases. The maximum likelihood estimates of the cell probabilities and the asymptotic distribution of the likelihood ratio test statistic have been studied for the cases of partial symmetry and proportional symmetry. Simulation studies are used to investigate the sizes and powers of the tests. The methodologies developed are applied on real data sets. (Received July 30, 2011)