In the paper reviewed above von Neumann obtained the distribution of \( \gamma = \sum a_i x_i^2 \), where the \( x \)'s are uniformly distributed over the sphere \( \sum x_i^2 = 1 \). The derivation made in that paper, however, depended on the assumption that \( m \) is an even integer. In the present note the author extends his results to cover the case in which \( m \) is an odd integer. He then shows how the result applies to the problem of determining the distribution of the following ratio for even values of \( n \)

\[
\frac{\sum_{i=1}^{n-1} (x_i - \bar{x})(x_{i+1} - \bar{x})}{\sum_{i=1}^{r} (x_i - \bar{x})^2},
\]

where \( x_1, \ldots, x_n \) are elements in a sample from a normal population and \( \bar{x} \) is the sample mean.

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