

Diversity is measured by the entropy index, formally defined as follows:

$$E = \sum_{r=1}^n p_r \ln \left(\frac{1}{p_r} \right)$$

where p_r refers to racial-ethnic group r 's proportion of the population in a geographic unit and n indicates the number of groups under consideration. The maximum value of E (the natural log of n) occurs only when all groups are of equal size. Since there is no fixed upper bound, a population consisting of more equal-sized groups will produce a higher E score than one consisting of fewer equal-sized groups. An E of 0 (complete homogeneity) means that the population comprises a single group. Dividing E by its maximum value standardizes it to a 0-1 range. We have multiplied the standardized scores by 100 so that 0 equals the lowest level of diversity and 100 the highest.