FRACTION-LIKE RATINGS FROM PREFERENTIAL VOTING

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Abstract: A method is given for resolving a matrix of preference scores into a well-specified mixture of options. This is done in agreement with several desirable properties, including the continuity of the mixing proportions with respect to the preference scores and a condition of compatibility with the Condorcet–Smith majority principle. These properties are achieved by combining the classical rating method of Zermelo with a projection procedure introduced in previous papers of the same authors.

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Key words: Preferential voting, paired comparisons, continuous rating, majority principles, Condorcet–Smith principle, clone consistency, one-dimensional scaling, Zermelo’s method of strengths, Luce’s choice model.