

THE PERCEPTUAL DIMENSIONS UNDERLYING THE CLASSIFICATION OF THE SHAPES OF CHINESE CHARACTERS

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Reading Chinese characters involves the perception of each character's shape, pronunciation, and meanings. The present study focuses on the form perception of Chinese characters. Using a course-to-fine grouping method to classify Chinese characters, a similarity scale was established through the analysis of multi-dimensional scaling (MDS). Two sample groups of Chinese characters of seven categories, three ranges of stroke counts (low, medium and high) were used. The occurrence frequency of all characters was held constant at a medium level. Font and aspect ratio of the characters were varied. The MDS results revealed three main axes for classifying Chinese characters: horizontal/vertical, close/open, and square/not-square. Aspect ratios and sample groups had no effect on the similarity judgment, whereas fonts had an effect on the second and third dimensions. A feature-based analysis failed to explain the results. It seems that the similarity judgment of Chinese characters is more likely to be based on the holistic structure of each character, rather than on the analysis of its feature components.

Keywords: Chinese character, feature analysis, similarity scale, holistic processing, multidimensional scaling, MDS.