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Effects of Chinese phonetic-to-sound mapping: A Connectionist model

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Abstract: The Chinese phonetic-to-sound mapping has a variety of types according to the dimensions of consistency and homophony based on the lexical knowledge and sub-lexical information of the phonetic radical. Many previous studies focused on the sub-lexical information based the comparison across the dimension of consistency. The current simulation attempted to address these effects in consideration of both the dimensions of phonetic-sound mapping. A feedforward neural was used to simulate the frequency effect and regularity effect. These findings reveal the importance of investigating the homophony of phonetic-sound mapping to build a theoretical framework capable of accounting for the lexical knowledge and sub-lexical information of the phonetic radicals in Chinese reading processing.