The functional unit of Japanese word naming: Evidence from masked priming

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Theories of language production generally describe the segment to be the basic unit in phonological encoding (e.g. Dell, 1988; Levelt, Roelofs, & Meyer, 1999). However, there is also evidence that such a unit might be language-specific. Chen, Chen and Dell (2002), for instance, using a preparation paradigm found no effect of single segments. To shed more light on the functional unit of phonological encoding in Japanese, a language often described as being mora-based, we report the results of four experiments using word reading tasks and masked priming. Experiment 1 using Japanese kana script demonstrates that primes, which overlapped in the whole mora with target words, sped up word reading latencies but not when just the onset overlapped. Experiments 2 and 3 investigated a possible role of script by using combinations of romaji (Romanized Japanese) and hiragana, and again found facilitation effects only when the whole mora overlapped, but not the onset segment. The fourth experiment distinguished mora priming from syllable priming and revealed that the mora priming effects obtained in the first three experiments are also obtained when a mora is part of a syllable (and again found no priming effect for single segments). Our findings suggest that the mora and not the segment (phoneme) is the basic functional phonological unit in Japanese language production planning.