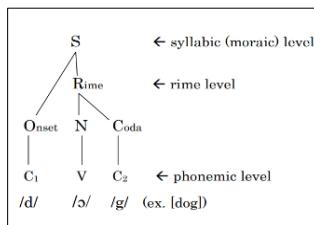


Developmental Dyslexia and Syllabification: Rime-oriented vs. Mora-oriented Languages in Comparison

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Developmental dyslexia, stemming from a neurobiological anomaly, is a specific learning disability that affects only literacy skills. It is believed to involve a particular problem in language acquisition whereby phonological awareness gets affected (Bentin 1992). Phonological awareness may refer to levels of awareness including awareness of phoneme, that of rime, and that of syllable (see figure below).



For reading English, the rime awareness, exploiting the unit rime, seems to play a key role (Kessler & Treiman 1997, 2001; Goswami 1999). However, cross-linguistic studies have shown that the prevalence of phonological dyslexia differs from language to language (Wydell & Butterworth 1999). Most apparent are alphabetic (phonemic) languages with opaque orthography, of which English is representative (prevalence = 12% or more), then those with transparent orthography such as German, Dutch, Spanish, and Italian (about 7%), and the least apparent are rime-less moraic [CV] languages, of which Japanese is representative (less than 1%).

Focusing on the most contrastive two types of languages (the rime-oriented English and the mora-oriented, rime-less, Japanese), this paper presents a purely structural, phonological analysis that would explain how the variation in the dyslexic prevalence arises. First, a mora-basic hypothesis is strengthened, that a mora ([CV]) is formed by automatic, synchronized, co-articulation, thus it forms the elementary frame of language. This hypothesis conforms to the following facts: (1) [pa] is utterly basic, that it is the initial phase for ordinary child language acquisition and the final phase of language loss (Jacobson & Halle 1971); (2) nascent readers of even English blend CVC words (e.g. "cat") more efficiently as CV+C [ca+t] than C+VC [c+at] (Cassady & Smith 2004); (3) the child language of even English is mora-oriented (e.g. [mʌmi] for "mam", [dɔgi] for "dog"), and (4) the majority of the world languages are mora-oriented.

In order to acquire proper English reading skills, then, one must develop the rime awareness that makes it possible to exploit the unit rime. English children must undergo mental prosodic restructuring from synchronized mora-orientation [CV.CV (dɔ.gi)] to non-synchronized rime-orientation [C.VC (d.ɔg)]. A failure to do so manifests as an impairment called phonological dyslexia. In fact, phonological English dyslexia is marked by an overproduction of mora-units in the absence of rime-units (Katada & Schneider-Zioga 2010; Schneider-Zioga 2012). For reading rime-less moraic languages such as Japanese, such a restructuring is not necessary, thus phonological dyslexia does not overtly surface. ESL teachers, however, should be cautioned about the fact that the dyslexic symptoms manifest in the students' English learning.

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