

最佳碩士論文獎佳作

測試通用文法：以音韻的人工文法學習為方法

Testing Universal Grammar in Phonological Artificial Grammar Learning

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Abstract

Steriade (2001) states that two general mechanisms responsible for phonological typology: analytic bias and channel bias (Ohala 1993). In Johore Malay (Onn 1976), nasality spreads rightward from a nasal consonant to and past vowels, glides, and glottals (e.g., $mã\tilde{\eta}ãp$, ‘pardon’), while being blocked by all other consonants (e.g., $[pə\etaã\tilde{w}ãsan]$, ‘supervision’) (“blocking pattern”). McCarthy (2009) notes that standard Optimality Theory (Prince & Smolensky 2004) has a surprising problem. Namely, standard OT predicts that rather than spreading until a blocker is reached, nasality will not spread at all if there is a blocker anywhere within a word (e.g. $[pə\eta awasan]$); $[mã\tilde{\eta}ãp]$) (the so-called “sour-grapes” pattern). To test for analytic bias, the present study tests the learnability of these two patterns.

McCarthy (2009) applies Harmonic Serialism (HS), where word forms are built step by step. Thus nasality in Johore Malay can spread from one segment to another, step by step, until a blocker is reached. This correctly predicts that the blocking type of nasal spreading is attested, while the sour-grapes type of nasal spreading is not. Since HS is claimed to be part of UG, the HS analysis implies that this cross-linguistic pattern is due to analytic bias. However, phonetic coarticulation also applies locally within words, and diachronic phonologization applies in a step-like fashion. Thus the sour-grapes pattern may be unattested merely because it cannot arise via channel bias. By contrast, if the non-existence of sour-grapes pattern is due to analytic bias, as McCarthy assumes, a grammar with a blocking type pattern is predicted to be easier to learn than a grammar with a sour-grapes pattern.

The present study used implicit and explicit artificial grammar learning to show that the sour-grapes grammar was learned better than the blocking grammar, contrary to the analytic bias explanation. The present study suggests that instead of analytic bias, this cross-linguistic favoring of blocking over sour-grapes grammars may be due to channel bias.