CHALLENGING A WIDELY-ACCEPTED ACCOUNT OF VOWEL METATHESIS IN NAGOYA JAPANESE WITH NO REFERENCE TO PRECEDENCE

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To understand the nature of the language faculty as part of the program of research into the origins of human language, it is essential to establish which properties of human language make it species-specific. The Minimalist Program of Generative Grammar sees internal language as a computational system (CS) which generates an infinite number of hierarchically-organised (syntactic) objects, each of which underlies an array of instructions to two interfaces: the Sensory-Motor (SM) systems and the Conceptual-Intentional (CI) systems. In this model of the language faculty, a linguistic expression is constructed by taking lexical items from the lexicon and merging them to form a new object (e.g., $\gamma + \{\alpha, \beta\} \rightarrow \{\gamma\{\alpha, \beta\}\}$). The repeated application of Merge to its own derivatives generates an infinite number of recursively structured expressions, where precedence relations are not encoded between constituents (Hauser, Chomsky & Fitch, 2002; Chomsky, 2010). In this model, precedence relations are viewed as epiphenomenal, a by-product of linearisation taken at the SM interface.

To make all types of structure-building systematically coherent, Precedence-free Phonology (PfP: Backley & Nasukawa, 2020, and others) claims that CS takes not only morpho-syntactic objects but also phonological features called *elements* as its arguments. Then, through the merging of elements CS builds a hierarchical phonological representation for each morpheme before being stored in the lexicon. In this model, as in syntax, precedence is the natural result of computing and interpreting the head-dependent relations which hold between units in a structure. This paper challenges the common assumption that the analysis of phonological processes relies on precedence. It illustrates this by

focusing on the following type of vowel metathesis in Nagoya Japanese, which is typically analysed as a swapping process operating between two adjacent vowels *ai*, *ae*, *oi* and *ui*: the palatality of the second vowel becomes an on-glide to the first vowel, while the quality of the first vowel is preserved in the newly formed CV (see also Tanaka, 2022, for an analysis of vowel fusion in Tokyo Japanese).

Table 1. On-gliding of the second member of a sequence of two vowels ('→' = 'corresponds to').

	Tokyo Standard J.		*Nagoya J.*
a.	*um**ai*** 'delicious'	→	*um**ja:***
	*om**ae*** 'you, dear'	→	*om**ja:***
b.	*sug**oi*** 'amazing, great'	→	*sug**jo:***
	*zur**ui*** 'go home'	→	*zur**ju:***

Since PfP makes no reference to precedence relations, it rejects any analysis based on metathesis. Instead, it regards the process in question as coalescence, in which two sounds merge into one by combining their properties ('resonance' elements (|I| (dip), |U| (rump), |A|(mass), see Backley, 2011), as illustrated below.

Table 2. Element fusion and |I| salience (salient elements underlined).

	V_1		V_2		$V_{1,2}$	Traditionally described as	phonetically realised as
a.	|A|	+	|I|	→	|A<u>I</u>|	*ja:*	[æ:]
	|A|	+	|AI|	→	|A<u>I</u>|	*ja:*	[æ:]
b.	|AU|	+	|I|	→	|AU<u>I</u>|	*jo:*	[ø:]
	|U|	+	|I|	→	|U<u>I</u>|	*ju:*	[y:]

Fusion takes place between V_1 and V_2, which in PfP are structured hierarchically (V_1 is dominated by V_2) rather than ordered sequentially (Backley, 2021). In addition, a language-specific rule makes |I| (palatality) structurally dependent, meaning that it makes a bigger contribution to the acoustic signal of the fused structure and is therefore perceived as having greater prominence than other elements (THE PRINCIPLE OF PHONETIC REALISATION OF HEAD-DEPENDENCY STRUCTURE: Backley & Nasukawa, 2020). As a result, the structures |A<u>I</u>|, |AU<u>I</u>|, |U<u>I</u>| are realised as palatalized [æ:] [ø:] [y:] (rather than [a:] [o:] [u:]) (Harris, 1994; Backley, 2011). As a salient property, palatality may yield glide-vowel sequences such as [ja:] as phonetic variants in Nagoya Japanese. This analysis serves as a starting point for exploring other processes that have been accounted for in terms of precedence. The aim is to strengthen the claim that precedence is not a formal structural property anywhere in the language faculty.

References

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