Initial accent and head-finality in Japanese

Some studies of language typology have pointed out that languages with head-final order (e.g. object-verb) tend to have stress (or accent) on the left of a word (or a compound) (e.g. Germanic languages (Bally 1944), Munda languages (Donegan and Stampe 1988), cf. Plank 1998). Japanese, which has the strict head-final word order, is a counterexample to this generalization according to the traditional studies of Japanese phonology, which assumes a pitch fall on the antepenultimate or penultimate mora as the accent of a word (cf. Korean, which has head-final word order and arguably left-edge word stress (Lee, H. 1989, Lee, H-Y. 1990). In this paper, I argue that Japanese words have the strength accent on their initial mora in addition to the (optional) pitch fall accent on the antepenultimate mora, and that Japanese supports the generalization that head-final languages have lefthand word-stress.

Some studies have pointed out that the "accent" of the first word, which I argue is a realization of stress, is preserved in compounds in Japanese dialects including Tokyo Japanese. Hayata (1999) argues that Japanese and East Asian languages around Japan have a general prosodic pattern in compounds, $T_1 A_1 + T_2 A_2 \rightarrow T_1 A_2$: the tone of compound is either the tone of the first word or the accent of the second word. Matsumori (2016) argues that the most archaic type of compound accent in the Japanese and Ryukyuan dialects is the one where the accent of the "first" member of compounds is preserved (cf. Kubozono 1996). She also argues that even Tokyo Japanese keeps some traces of this older compound accent may well keep the basic pattern of word accent that might have been lost in historical changes.

Duannu (2008) proposes a two-accent model of Japanese, including Tokyo and Osaka Japanese: the first accent is always on the first syllable, and the second (optional) accent is the traditional pitch fall accent. Duannu argues that this model solves three problems for the traditional one-accent model, namely, (i) the high percentage (51.7%) of unaccented words in Japanese vocabulary (Yokoyama 1979) compared to the obligatory stress accent in other languages, (ii) the conflict between the left-prominent compound stress rule (1) and the right-prominent compound accent rule (2) in Tokyo Japanese, (iii) the complication in the tonal assignment analysis by Pierrehumbert and Beckman (1988).

Revising Duanmu's idea that Japanese has two accent positions for a word, I argue that Japanese has two types of accents in a word, an obligatory strength on the initial mora and an optional pitch fall on the (ante) penult mora, which are generally observed in Altaic languages (cf. Poppe 1965). This model, strength and pitch accent (S&P Accent), solves the problems for Duanmu's two-accent model: (i) the lack of the initial tone in words of an accent on the second mora (*tama* 'go 'egg' 0-H'-L (two-accent model) $\rightarrow \underline{tama}$ 'go (S&P) (the initial low as the initial strength accent)) and (ii) the violation of the culminativity of stress (Hayes 1995) (two accents in a word (two-accent model) \rightarrow two types of accent in a word serving different functions (S&P)). The analyses of accents in compounds are shown in (3).

We can conclude that similarly to Korean and Altaic languages, Japanese is not a counterexample to the generalization that head-initial languages have initial stress or accent in words and compounds. This study also shows that it is important to investigate the nature of accent such as stress and pitch in languages and dialects from a typological perspective.

Data

(1)	a.	ХХ.	b.	Χ
		$[A [B C]] \rightarrow (A)($	BC)	$[[A B] C] \rightarrow (ABC)$

(2) In a compound [A B], A loses accent (if it had one originally), and B gets the compound accent (even if B does not have one originally).

(3)		One-accent model	Two-accent model	S&P model
	Underlying	sha'kai + se'edo	sha'kai + se'edo	<u>sha</u> 'kai + <u>se</u> 'edo
	Surface	shakai-se'edo	sha'kai-se'edo	<u>sha</u> kai + se'edo
		'social system'		
	Underlying	kyooiku + seesaku	ky o' oiku + s e' esaku	<u>kyo</u> oiku + <u>se</u> esaku
	Surface	kyooiku-se'esaku	kyo'oiku-se'esaku	<u>kyo</u> oiku + s e' esaku
		'educational policy'	lucational policy'	
	Underlying	a' Npo + jooyaku	a' Npo + j o' oyaku	<u>a</u> 'Npo + <u>jo</u> oyaku
Surface		aNpo-j o' oyaku	a' Npo-j o' oyaku	<u>a</u> Npo-j o' oyaku
		'security treaty'		

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