

## Do OV languages have simple syllable structure?

It has been pointed out that languages with object-verb order tend to have simple syllable structure (Lehmann 1973, Donegan and Stamp 1983, Gil 1986, Plank 1998). By checking data of a number of languages, we will show that this implicational universal does exist. We will also discuss why OV languages have simple syllable structure.

Haspelmath et al. (2005) (*WALS*) and its interactive reference tool give us a good sketch of the correlation between word order and syllable structure. However, they show that the number of the SOV languages with “simple syllable structure” is no more than 9 out of 134 SOV languages. Moreover, there are 49 SOV languages with “complex syllable structure”. 76 SOV languages with “moderately complex” syllable structure need to be reexamined.

We will argue that SOV languages do have simple syllable structure by considering (i) the definition of syllable complexity and (ii) phonological changes.

First, Maddieson (2005) in *WALS* defines CV as “simple” syllable structure, (C)CVC [Onset CC limited] as “moderately complex” and others such as CCVC [CC free], CCCV... and ...VCC as “complex.” However, syllable complexity should be defined on the basis of the number and variety of coda consonants. Hashimoto (1981) argues that both syllable structure and tone are simpler in north Asia than in south Asia as shown in (1). Southern languages have a wider variety of coda consonants than northern languages. Thai, an SVO language, has the most complex syllable, and Manchu, an SOV language, has the simplest syllable in these languages. However, both of them are classified as “moderately complex” in *WALS*. Japanese, another SOV language, is classified as “moderately complex” syllable. However, its syllable is (C)V(n), which is quite close to “simple” syllable structure (C)V.

Second, SOV languages of “(moderately) complex” syllable structure may have phonological changes such as epenthesis and deletion, which simplify syllable structure. For example, consonant clusters may be avoided by epenthesis of vowels as in (2a, 2b) and (3a) and by deletion of consonants (3b) in Hindi and Basque, which are classified as “complex” syllable structure in *WALS*, but should be called “moderately complex.”

Modifying the notion of syllable complexity as discussed above, we conclude that SOV languages have rather simple syllable structure. We will also point out that the correlation between SOV/SVO and syllable complexity holds in general if tone complexity is considered part of syllable complexity. Tone may be viewed as a variant of coda consonant. In fact SVO languages in Africa and south-east Asia have simple syllable and (moderately) complex tones.

The next question is: why do SOV languages have simple syllable structure? We will argue that simple syllable structure allows objects to incorporate to verbs to give agglutinative O-V structure without making consonant cluster. We assume that Kayne’s (1994) hypothesis that all languages are SVO in base structure (cf. Fukui and Takano 1998). If syllable structure is simple, objects can move to the left of the verb and incorporate into it (see Baker (1988) for incorporation). The resulting “compound” O-V has a sequence ..CV-CV.. which does not have consonant cluster and conforms to the phonological template in the language, as shown in (4). However, if syllable structure is complex with onset and coda consonants, incorporation would make unacceptable sequence such as ..CVC-CCV.. with consonant clusters in the middle, as shown in (5). Thus, simple syllable structure is a necessary condition for SOV order.

This study reveals an interesting relationship between phonology, morphology and syntax, and gives a principled answer to the question why movement takes place to derive different word order in certain languages.

**Data**

(1)

	Manchu	Gansu	Beijing	Nanshang	Guangzhou	Thai
# of tones	0	3	4	6	8 (9)	8
syllable	CV(n/ŋ)	CV(n/ŋ)	CV(n/ŋ)	CV(n/ŋ/t/k)	CV(m/n/ŋ/p/t/k)	CV(m/n/ŋ/p/t/k)
direction	North ←————→ South					



(2) Hindi

- a. pre:m -> pəre:m (CCVC -> CVCVC)
- b. krisn -> krisən (CCVCC -> CCVCVC)

(3) Basque <- Latin (borrowing) (Hualde and de Urbina 2003)

- a. liburu <- libru(m) (CVCVCV <- CVCCV)
- b. luma <- pluma(m) (CVCV <- CCVCV)

(4) V O -> O-V (Japanese)

yomu hon-o -> hon-o-yomu  
 read book-Acc CVCV-CVCV

(5) V O -> \* O-V (English)

read books -> \* books-read  
 CVCC-CVC

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