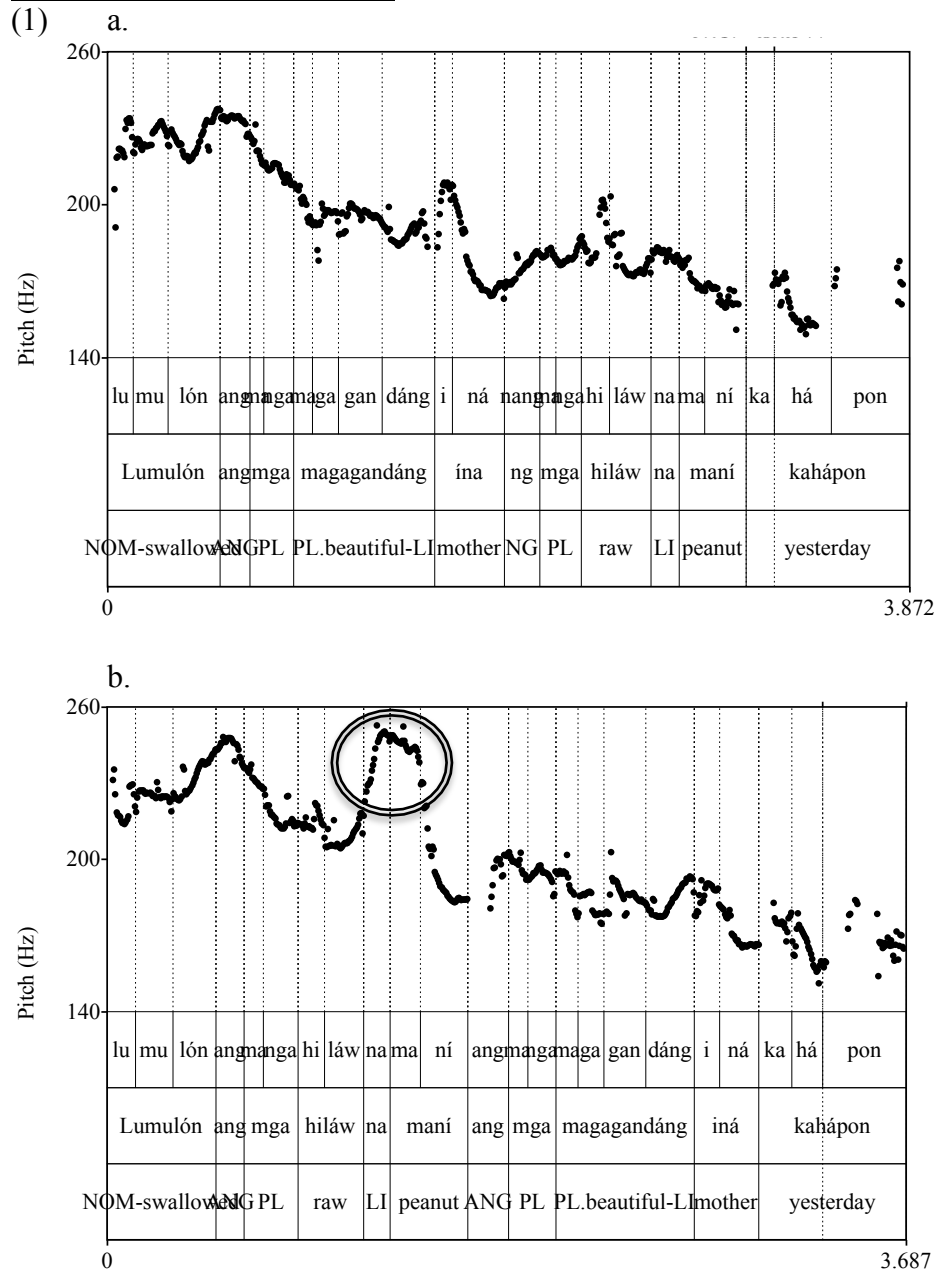


### Tagalog Prosody and Scrambling

**Overview** Tagalog speakers typically pronounce internal arguments with higher pitch than an external argument would have in the same position in the sentence. The generalization holds even when word order is altered by scrambling. Interestingly, the contrast is blind to the effects of Tagalog's 'voice' system; boosted pitch is found on internal arguments and not on external ones, regardless of which argument is cross-referenced by 'voice' morphology on the verb. I hypothesize that the pitch differential is one manifestation of Tagalog nuclear stress.

**Scrambling and pitch peaks** (1a) is VSO, while (1b) is VOS:



‘The beautiful mothers swallowed the raw peanuts yesterday’

The circled pitch peak in (1b) is on the scrambled object in VOS order, and is higher than any corresponding peak in (1a). The contrast in (1) is representative. Four native speakers were asked to read sixteen transitive sentences, eight of which had VSO order and eight VOS order,

together with 50 fillers. The average pitch peak heights on the verb and on the two DPs are given in (2):

(2)	Verb peak	first DP	second DP
VSO	278.5	243.7	228.4
VOS	278	260.2	220

The averages in (2) reveal a trend that holds for all four speakers: in VOS order, the first DP has a higher pitch, and the second DP a somewhat lower pitch, than in VSO order. The greater distance in pitch between the DP peaks in VOS order is statistically significant ( $p=0.0056$ ). A similar contrast holds in ditransitives. In the averages in (3), representing data from 3 speakers on 48 ditransitive examples (24 in each of two 'voices'), the subject's pitch peaks are boldfaced:

(3)	Verb peak	first DP	second DP	third DP
V S IO DO	273.2	<b>244.8</b>	243.8	231.7
V S DO IO	293.3	<b>250.4</b>	252.7	242.4
V IO S DO	291.2	255.3	<b>232.1</b>	235.9
V DO S IO	262.4	261.5	<b>238.7</b>	245.4
V IO DO S	285.7	256.9	253.7	<b>217.6</b>
V DO IO S	280.3	269.3	256	<b>219.8</b>

Here the contrast is clearest when the subject is the second or third DP: subjects in such positions have reliably lower pitches than objects (and are closer in height to subsequent pitches). No similar contrast holds between the two objects, in any position.

**Defining 'subject'** The data cited above treat Schachter's (1976) 'actor' as the 'subject': the 'subject' is the nominal that would be the subject of an English translation in the active voice. This aspect of Tagalog prosody seems not to be sensitive to the Tagalog 'voice' system; there is, for example, no corresponding boost on nominals which are (or are not) 'topics', the nominals cross-referenced by the 'voice' morphology on the verb. Objects are reliably higher-pitched than subjects, regardless of which is the 'topic'; there are no statistically significant differences in the pitches of topic vs. non-topic objects, for example, as either the first or the second DP.

**Nuclear stress?** The pitch distinction between internal and external arguments is reminiscent of the distribution of nuclear stress in many languages, which is typically on objects rather than subjects. If the higher pitch on Tagalog objects is a manifestation of nuclear stress, then Tagalog nuclear stress is reassuringly straightforward. Tagalog scrambling, like English wh-movement (Bresnan 1972), would apply to a structure in which nuclear stress has already been placed, preserving the underlying position of nuclear stress:

- (4) a. We talked to John's **mother**.  
 b. Whose **mother** did you talk to?

On the other hand, Tagalog scrambling is unlike Basque scrambling (Arregi 2002) or Persian object shift (Kahnemuyipour 2009), both of which alter the position of nuclear stress.

### **References**

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