

Transcribing prosody of Korean spontaneous speech

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This study presents an alternative approach to transcribing Korean prosody, spontaneous prosody in particular. Two main ideas have been used; firstly, showing that stress and pitch are closely related (Bolinger, 1958), and secondly, the theory that the distinctive feature of prosody is a *configuration* (Bolinger, 1951). In addition to these two ideas, *register* is retained as distinctive feature, in order that the significant contrastive manner of melody can be considered for the transcription. The main advantage of this approach is that it is not necessary to divide the transcription, so as to be either phonologic or phonetic; in any event, they go together during the transcription. The phonetic realization is transcribed by movement feature, i.e., *rising* and *falling*. The phonologic representation is the hierarchy structure, which is shown via the binary relation of prosodic units, as marked by contrastive melody contour. The transcription of Korean speech implies that the grammatical morphemes at the end of the lexical word are stressed (statistically significant in read speech), and consequently the contrastive contours are realized by these grammatical morphemes (Kim, 2012).

For these purposes, a television debate¹ was recorded for the spontaneous speech corpus. Two speakers from five were chosen to be extracted from the total corpus, 100 minutes, thus leaving approximately 20 minutes. The speakers had Seoul dialects. Most of the grammatical morphemes marking the case and the topic were transcribed.

An example of an extracted visualized sentence is shown in Fig. 1. Seven grammatical morphemes, accompanied by the contour movement arrows, highlighted the grammatical morphemes. When this sentence was presented only by text, the meaning is not clear, even though it sounds perfectly like Korean native speech (which is not actually a surprise as regards a spontaneous speech corpus). Transcription, in relation to stressed syllable movement, becomes more interesting when it comes to the hierarchy structure, as shown via binary contrastive relation.

The hierarchy structure of the example, in Fig. 2, shows that the first level, (L1), divides the sentence into two global prosody movements: *Crescendo* and *Decrescendo*. The second level, (L2), is composed of three units where distinctive feature represents the gradual amplification of the final contour of each unit ([-/+ ++Amp]. The third level, (L3), is characterized by contrastive contour. The *falling* contour, which contrasts from *rising*, is the case for the two binary branches (locative/genitive and accusative/nominative). The first prosodic unit, where there are three grammatical morphemes, the melody contour (*rising*) shows an enumeration, which is marked by the comitative grammatical morpheme, and where the relation between the three words is not contrastive but equal.

This study underlines the reason for revisiting the Bolinger's configuration theory, for the purposes of prosodic transcription. This is not in order to justify his work – which at the time was considered as being too phonetic, and lacking in phonologic abstraction, but because, as this study shows, an abstraction of hierarchy structure does seem to exist.

References:

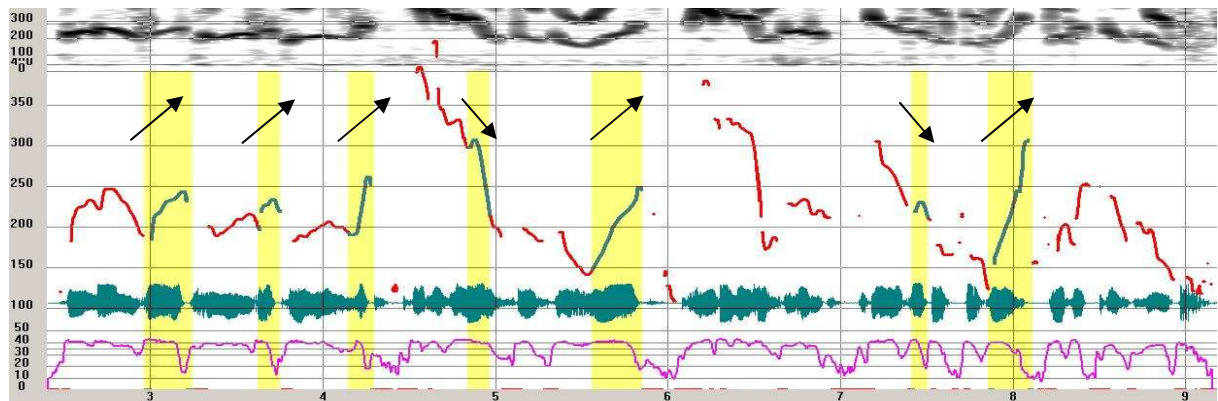
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¹ Munhwa Broadcasting Corporation (10 May, 2007), 100 분 토론 '100 minutes debate'.

Fig. 1

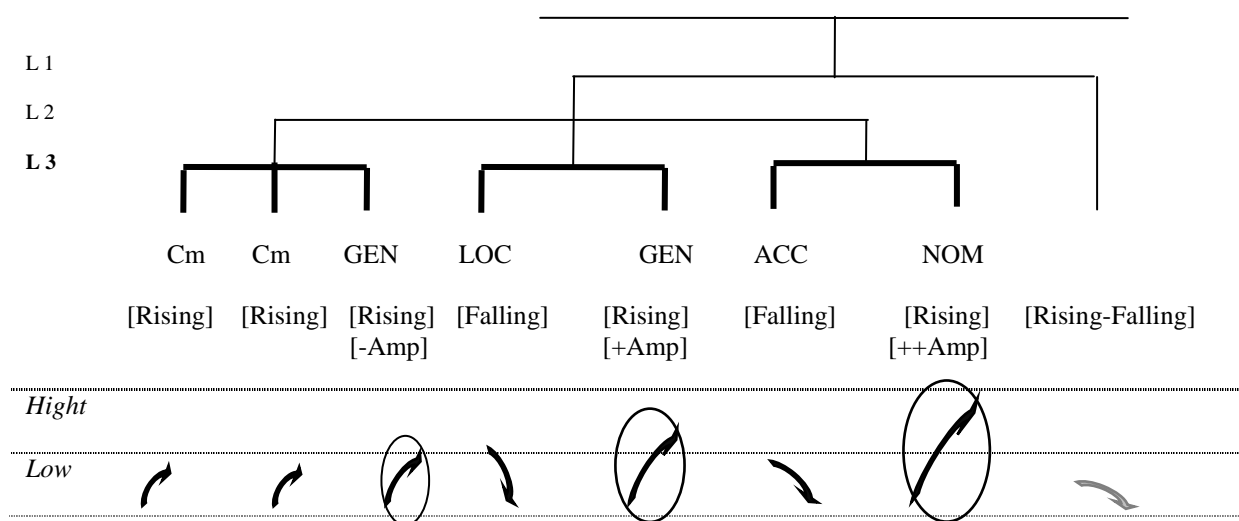


<kwukmin-**kwa** tangwen-**kwa** tayuywen-**uy** thwuphyopwupwun-**ey** issese-**uy** hyencang-eyse wase han thupyo-**lul** kacta-**ka** waykokhayse ha-n-ta >
 people-**Cm** member-**Cm** MP-**GEN** vote-**LOC** considering-**GEN** locally-**LOC** come.do-**RL** vote-**ACC** taking-**NOM** faking.do-**P-Dec**²

'The ratio of the public vote, which was locally voted by the electorate is distorted by Members of Parlement and by the government.'

Fig. 2

Prosody hierarchy structure and contour transcription:



² Cm : comitative, GEN : genitive, LOC : locative, RL : relative marker, NOM : nominative, P : present tense, Dec : declarative