

# Prosodic Erosion as a Diagnostic of Grammaticalisation in Isolating Languages: Tone and Stress in Sinitic

Lisa Lim & Umberto Ansaldo

Department of English Language & Literature  
National University of Singapore  
{limalim; ansaldo}@nus.edu.sg

## Abstract

This paper is concerned with the aspect of prosodic reduction typically observed in grammaticalised items within languages of the isolating, tonal type. In particular, it focuses on the prosodic features of grammaticalised morphemes in Mandarin, Cantonese and Hokkien (Min), and introduces three types of common prosodic erosion found in these languages, namely (a) reduction to neutral tone or tonal loss, (b) weakened stress, and (c) contraction involving tonal reduction.

## 1. Introduction

Although definitions of grammaticalisation vary, it is generally agreed, and is also implicit in one of the earliest definitions, that grammaticalisation involves a concurrent weakening of semantic content and phonetic form [5]. Typical examples of the type of processes that grammaticalisation tries to capture can be seen in the following:

- (1) I am going to → I am gonna
- (2) I will → I'll

These examples show at least two processes: the process of fusion or phonological erosion, where *going to* reduces to *gonna* in (1), and *will* reduces to the contraction *'ll* in (2); as well as semantic bleaching, or at least a change in meaning in the items *going* and *will* which, from verbs indicating the events 'to go' and 'to want', respectively, become general markers of intention or future action.

What is therefore usually observable in languages like English, i.e. of the mildly agglutinating type, is that independent morphemes

can fuse, and lexical items become grammatical items. In Givon's words [2], "today's morphology is yesterday's syntax".

In languages of the agglutinative or fusional type, the phonological concomitance of this morphologisation process can be characterised as reductions or erosions. Vowels, consonants, stress or tone can be lost. When the different elements involved lose the word boundary, the phonological reduction leads to morphologisation [3]. However in highly isolating, tonal languages, where syllable boundaries are discrete and phonotactic constraints rule out reduced syllables of the kind observed elsewhere, the material available for reduction is often restricted to suprasegmental features, and the morphologisation process cannot easily be observed.

This paper is not concerned with whether there are processes of phonological reduction unique to grammaticalisation [c.f. 1]. It is obvious that attrition and phonetic loss are always involved in linguistic change. This paper argues that there are prosodic reductions and erosions that can be seen as typical diagnostics of grammaticalised morphemes in languages of the isolating, tonal type. In this sense, this study hopes to contribute to the ongoing debate concerning the theoretical status of grammaticalisation as a framework for language change.

## 2. The case of isolating, tonal languages

In isolating, tonal languages such as Sinitic, we can observe at least three types of common prosodic erosion typical of grammaticalised items: (a) reduction to neutral tone or tonal loss, (b) weakened stress, and (c) contraction involving tonal reduction.

## 2.1 Tonal reduction or loss

In the following Mandarin examples, we see that the grammaticalised morpheme *guo* in (4) is assigned a neutral tone, a reduction from *guo4* in (3) where it is a main verb.

(3) *ta1 guo4 ma3lu4*  
she pass road  
'She crosses the road'

(4) *wo3 chi1 guo fan4*  
I eat EXP rice  
'I have eaten'

In Cantonese, which, like Min, has no neutral tone option for tonal reduction, it has been argued that the low-falling tone 4 in *jau4* 'by', derived by grammaticalisation from *jau2* 'let', is a case of tonal reduction [7], the directionality of high-rising to low-falling being in accord with universal articulatory principles. A counter-argument is that if any tone is to be the neutral tone in Cantonese, it would be the mid-level tone 3, having relative tonal neutrality (Matthews, p.c.), and which also incidentally is the tone for a range of grammatical morphemes [4].

This study shows instances validating both accounts, with the main point being that all varieties of Sinitic mentioned above use tonal reduction for grammaticalised morphemes.

## 2.2 Weakened stress

In the following Mandarin examples, *zai4* in (6) where it is now a locative marker has weakened stress, compared to in (5) where it is a main verb and has normal stress.

(5) *wo3 zai4 jia1*  
I be.at home  
'I am at home'

(6) *wo3 zai4 jia1 kan4 shu1*  
I LOC home read book  
'I'm reading at home'

Again, in this study, similar instances of weakened stress are presented for varieties of Cantonese and Min.

## 2.3 Contraction with tonal loss

The third process of erosion can be seen in the following example from in Cantonese. This shows a contraction of two morphemes with the loss of the first tone. The grammaticalised item cannot mean 'not good' but simply means 'don't' (Matthews, p.c.).

(7) *m4 ho2 → mo2*  
NEG good don't

Contraction processes of grammaticalising forms are well-attested to in the history of Sinitic varieties. However, we focus on the reduction of the suprasegmental features involved.

## 3. Conclusions

As is often the case, suprasegmental features have been highly neglected within diachronic linguistics, and this certainly applies to grammaticalisation studies as well. This study is a first step towards establishing a typology of prosodic reductions seen in grammatical morphemes typical of isolating, tonal languages.

The nature of reduction and erosion in languages of isolating morphology is an important question for the theoretical status of grammaticalisation studies severely criticized in recent works (cf. [6]). It is obvious that, if we cannot account for the emergence of grammar in isolating languages within the framework of grammaticalisation, the universal validity of such a framework will be undermined. Our paper presents a possible way of reconciling isolating tonal languages within this framework by suggesting that separate aspects of the grammaticalisation process can proceed independently. In the case of isolating morphology we have to allow for the fact that phonological erosion and morphological reduction will not be the dominant diagnostics of grammaticalised constructions.

Finally, besides the cases of phonological reduction that this paper focuses on, acoustic investigations reveal phonetic erosion in terms of metrical prominence and duration. This could be interpreted as a first stage of phonological reduction and would be the natural continuation for a better understanding of the role of prosody in diachronic typology.

#### 4. References

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