Formal Ways of Analyzing Variation

Variation in the structure of subordinate clauses and the instability of V-to-T in Scandinavian

Caroline Heycock, University of Edinburgh (heycock@ling.ed.ac.uk)
Joel Wallenberg, Newcastle University (joel.wallenberg@ncl.ac.uk)

In this paper we aim to show that a formal model of acquisition—specifically, the variational acquisition model of Yang (2000, 2002)—can provide an account of the loss of V-to-T in the Mainland Scandinavian languages and Faroese that is consistent both with recent studies of the acquisition of V-to-T (Heycock et al. 2010; Waldmann 2008) and with what is known about the time-course of this change, which involved extended periods of variation in V-to-T (Sundquist 2002). Further, we explore whether alternative models of acquisition/transmission yield the same results, and discuss the implications of finite population models for utterances and speakers.

We argue that the loss of V-to-T in a number of Scandinavian languages crucially depends on the variation between Embedded Verb Second (EV2) and non-EV2 orders that is found in all the Scandinavian languages. The crux of our analysis is that if a learner is exposed to the output of a system with the properties of Icelandic (SVO, V2, V-to-T, EV2) and one that is similar except that it is V-in-situ (in the relevant respects the system of the standard Mainland Scandinavian languages), the V-in-situ grammar provides more unambiguous evidence for itself to the learner than the V-to-T grammar, precisely because of the variable presence of EV2 (which, even in the contexts that allow it most freely, and even when discourse factors such as “main point of utterance” or “speaker assertion” are taken into account, is not obligatory, but always alternates with non-V2 order (Julien 2010; Wiklund et al. 2009)). In all environments in which EV2 is excluded, wherever there is a marker for the position of the verb, each grammar produces unambiguous output signalling its presence. However, in environments in which EV2 is included, wherever there is a marker for the position of the verb, each grammar produces unambiguous output signalling its presence. However, in environments in which EV2 is possible, all the output of the V-to-T grammar can be parsed by the V-in-situ grammar (e.g. Verb–Neg order, as in (2), being parsed as embedded V2), while the V-in-situ grammar produces outputs that cannot be parsed at all by the V-to-T grammar (i.e. embedded contexts with Neg/Adv–Verb order, as in (3)). Given the learning model of Yang (2000), this advantage of the V-in-situ grammar will inevitably lead to the eventual elimination of the other grammar.

It is crucial to this analysis that EV2 is available as a variant in the V-in-situ grammar, but that the non-EV2 order is also present. In fact, it follows from the model that the less often the EV2 option is actually used for production by the V-in-situ grammar, the greater the advantage of that system (and the faster its rise). In this paper we will discuss the ramifications of this aspect of the model, and also compare it to alternative models of acquisition/transmission. Finally, we consider the implications of finite populations models, and discuss under what assumptions the initial variation between V-to-T and V-in-situ systems might arise in the absence of language contact.
Examples

(1) Så ringer jeg og sier at jeg (kommer) ikke (kommer) på torsdag. Then I call and say that I (come) not (come) on Thursday
'Then I call and say that I won’t be coming on Thursday.'
Norwegian (Julien 2010)

(2) så at the hadhe icke tijdh til at äta. so that they had not time for to eat.
‘so that they didn’t have time to eat.’

(3) Så at han icke nu meer kunde vppenbarligha gå in ythi stadhen...so that he not now more could openly go in into place-the
‘So that he could no longer openly go to that place.’
Swedish Gustav Vasa Bible, date: 1526/1541: Mark 6:31, 1:45 (cited from
Fornsvenska Textbanken 1.0, Lars-Olof Delsing, University of Lund, pro-
ject2.lu.se/fornsvenska)