Nominal Agreement and Case in Down Syndrome

Ongoing research on the language of individuals diagnosed with Down Syndrome (henceforth DS) for the past twenty or more years has pointed towards an impairment in their inflectional system (Rice et al. 2005). This paper examines the nature of agreement and case marking in nominal environments in Cypriot Greek (henceforth CyG) individuals diagnosed with DS and explores the source of the DS linguistic impairment.

Tense/agreement marking is reported impaired for English and German individuals diagnosed with DS. Ring and Clahsen (2005) in accounting for the results by Laws and Bishop (2003) and Eadie et al. (2002), as well as the results from their study, make a distinction between marked (inflected for tense, case or agreement) and unmarked forms (no tense, case or agreement marking), such that only the bare stem of a word is used. Ring and Clahsen (2005) for English and Schaner-Wolles (2004) for German conclude that their DS participants had a preference for using unmarked forms. However, when they would use marked forms, they used them correctly, as did their mental aged-matched controls, without any mistakes. Therefore, the nature of the impairment is not an incorrect acquisition of the inflectional system, but rather the treatment of the inflectional system as non-obligatory. However, even though tense, agreement and case are reported to be impaired in the DS literature very little has been done on nominal agreement and case in languages with rich inflectional morphology, and more specifically Greek and CyG DS.

In this study I examine nominal inflectional environments: agreement and case within a DP (1) as well as cross verbal full (1) and partial agreement (2). The afore-mentioned environments are tested in 4 different ways with 4 experiments. The experiments include spontaneous speech: story-telling, and interviewing, as well as controlled speech: repetition and sentence forming based on videos shown to the participants to target certain structures. Twenty CyG individuals diagnosed with DS participated in this study.

Preliminary Results indicate that inflectional marking (both agreement and case) in nominal phrases in DS is controlled by a “switch” set for +/-marked. More specifically, DS individuals either mark the nominals appropriately (3) or use an unmarked form for them. By unmarked I mean that they use the “default” or unmarked form of the inflectional paradigm (4). For instance, for seven out of eight inflectional nominal classes in Greek (and CyG) there is one grammatical case that has a different from than the other three. So when they have to use the “marked” case (i.e. the one that is different from the other three cases) they sometimes apply case and agreement correctly and other times (most usually) they use the form which can be used for the other three cases but preserve gender and number1. Finally, when they have to use the unmarked form to assign case to a nominal phrase, they either use the form appropriately (5), or use the bare root of the nominal (6) which results to an ungrammatical outcome. In terms of gender, neuter is treated as the unmarked gender.

Notice that each form is bi-polar for DS individuals: marked forms have the option between +/- marked, and unmarked forms have the option between –marked or bare root. Therefore, I propose that these preliminary results suggest that DS individuals treat agreement and case as modifiers rather than heads, the way individuals with naturally developed languages do. More specifically, they seem to perceive inflectional marking related to the two aforementioned domains as optional; they can and do use it when appropriate but they also treat it as non-obligatory in cases where it is required. Since there is minimal mis-application of inflected forms the “mistakes” they make are not random but are rather governed by their perception of the inflectional marking in terms of +/- marked where either is possible for any given situation. Evidence from their phonological system provides further support to this hypothesis.

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1 In Greek as well as CyG a nominal suffix does not only encode case. Gender as well as number (and person, if pronominal) are marked by this single suffix. Moreover, nominals are divided into inflectional classes according to gender and the inflectional ending they take.
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Examples

1. [o γalan-os uran-os]DP en efkol-os
   na zoyrafi-s-ti
   SUBJ be.drawn-PRF-PAST-PASS-3SG
   ‘The blue sky is easy to be drawn.’ Full agreement

2. Ta δendr-a ke o θamn-os ine olo-prasin-a
   ‘The trees and the bush are completely green.’ Partial agreement

3. γalan-os uran-os efkol-o(s) (n)a *x|(z)ο(γ)(ra(f)s)-tī 3.
   blue-MASC-SG-NOM sky-MASC-SG-NOM easy-MASC-SG-NOM SUBJ be.drawn-(PRF-)PAST-PASS-3SG
   ‘The blue sky is easy to be drawn.’ AI

4. Naming the guests who attended his birthday party:
   Ita(n) ... o Kok-o(s) (o) Ko(s)ta(s) 4.
   ‘There was .... Koko, Costa.’ NS

5. i or-a e*τ(κ)si.
   the-FEM-SG-NOM time-FEM-SG-NOM six
   ‘At six o’clock.’ ED
   ........

6. (ks)pn-o (i) or(-a) eksi 5.
   wake.up-IMPF-PRES-1SG (the-FEM-SG-NOM) time(-FEM-SG-NOM) six
   ‘I wake up at six o’clock.’ ED

References


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2 Bracketed phonemes indicate omission. An asterisk before a phoneme indicates wrong use of a phoneme.
3 For correct production see example (1).
4 It must be clarified that the outcome of this utterances is not due to a difficulty in producing final –s.
5 Both (5) & (6) are produced by the same DS participant talking about his everyday routine. It is proposed that (5) is not a case of self-correction for (6) for two reasons: (5) is produced before (6) and further conversation takes place in between.