Clitic 'movement' in Ossetic

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The positioning of so-called 'second position' clitics in Ossetic has never been fully described or subject to formal syntactic analysis. In this paper we present a formal account of clitic positioning in Ossetic within LFG. Our analysis is of interest not merely from the perspective of Ossetic studies, but also from a formal and typological perspective: Ossetic provides evidence for clitic (re)positioning of a type which to our knowledge has not previously been described or analysed.

The influence of prosody on the linear position of 'second-position' clitics and the possibility of 'Prosodic Inversion' (Halpern, 1995) has been the subject of recent work in LFG, for example Bögel et al. (2010), Lowe (2011). It is controversial for two reasons: prosodic influence on syntax endangers the principle of grammatical modularity; and 'prosodic inversion' looks suspiciously like 'movement'.

In this paper we build on a model of clitic positioning developed by Lowe (2015) within the LFG architecture proposed by Dalrymple and Mycock (2011). In this model, prosodic influence on syntactic positioning is indirect and mediated via the string, thus preserving modularity; clitic 'movement' is accounted for in terms of a mismatch in the 'π' mapping between the s(yntactic)-string and the c-structure, and is heavily constrained using Optimality Theory (OT). This means that there is no such thing as 'movement' of clitics either in the prosody or in the syntax, although it is possible for the c-structure to analyse clitics in a different linear position from their position in the s-string.

The Ossetic data regarding clitic positioning to a large extent mirrors the data found in other languages better known for their 'second-position' clitics: for the most part, clitic positioning can actually be accounted for according to ordinary syntactic rules, but a few specific contexts strongly suggest that prosodic constraints must also be taken into account.

In general, the Ossetic clitic cluster follows the first XP in the clause (1). We argue that the clitic cluster appears in, or is adjoined to, C, and that clause-initial XPs preceding the clitic cluster appear in Spec,CP.

(1) *[žawər-ə* ***=dʒm*** *rɜšuʁd* ***=dʒm*** *čənz]* ***=dʒm*** *ba-zərd-t-a* ***=dʒm***
Zaur-GEN thee.ALL beautiful thee.ALL bride thee.ALL PV-speak-TR-PST.3SG thee.ALL
'The beautiful bride of Zaur called **for you**.'

In Ossetic, the VP cannot appear in Spec,CP, but must appear within the S complement of C. In certain discourse contexts, it is possible for nothing in the CP to appear to the left of the clitic cluster, and for the verb phrase to immediately follow the clitic cluster. When this happens, there are two main possibilities: if the verb phrase begins with one or more (proclitic) particles, the clitic cluster surfaces following one or more of the particles, but before the verb stem itself (2). If no particles precede the verb stem, the clitic cluster surfaces after the verb stem (3).

(2) *sə* *(=****šɜm****)* *nɜ* *(=****šɜm****)* *wəd-i* **=****šɜm****,* *aχɜm* *nɜ-j*
what they.ALL NEG they.ALL be-PST.INTR.3SG they.ALL such NEG-is
'There is nothing that **they** did not have (lit. that to them there was not).' (spoken text)

(3) *nə-ffəšt-a* ***=jɜ*** *gardantə* *miχal*
PV-write-PST.3SG it.GEN G. M.
'It was Mikhal Gardanov who wrote **it** down.'

This is very similar to the situation in Pashto, discussed by Bögel (2010) and Lowe (2015), except that there is not the extra complication of 'endoclisis' (there is one verbal prefix in Ossetic which can be separated from the verb stem by the clitic cluster when the verb is clause initial, but we analyse this 'prefix' as a separate verbal stem forming a complex predicate with the lexical verb, so 'endoclisis' is not required).

However, there is an additional constraint on clitic positioning in Ossetic which is typologically unparalleled, to our knowledge, and particularly challenging to analyse. When a conjunction appears to the left of C in an Ossetic CP, i.e. to the left of where the clitic cluster adjoins, the clitic cluster is constrained to appear immediately following the conjunction (4). This is the case not only if there is an XP unambiguously appearing in Spec,CP (5, cf. 1), but even if the conjunction in question appears embedded *inside* the XP in Spec,CP (6).

(4) *ɜž* *šə-štad-tɜn* *[ɜmɜ* *(=šən)* *žaχt-on* *(*=šən)]*
I PV-stand-PST.INTR.1SG and they.DAT say-PST.TR.3SG
'I stood up and told them…'

(5) *ɜmɜ* *=dʒm* *[žawər-ə* *rɜšuʁd* *čənz]* **=dʒm* *ba-zərd-t-a*
and thee.ALL Zaur-GEN beautiful bride thee.ALL PV-speak-TR-PST.3SG
'The beautiful bride of Zaur called for you.'

(6) *[žawər ɜmɜ =mɜm alan]* *ɜrba-səd-əštə*
Zaur and me.ALL Alan PV-go-PST.INTR.3PL
'Zaur and Alan came to me.'

It does not matter how deeply embedded the conjunction is inside the constituent in Spec,CP:

(7) *bɜχ, k^{w}ət:ɜr =əl a-bad-tɜn, aftɜ =jɜ ba-mbɜršt-a, [[ɜdəχ ɜmɜ* ***=jəl***
horse as.soon.as it.SUPER PV-sit-PST.1SG thus it.GEN PV-understand-PST.3SG weak and it.SUPER
ɜnɜ-bon]$_{AP}$ lɜg]$_{NP}$ kɜj bad-ə, wəj
without-skill man that sit-PRS.3SG that.GEN
'As soon as I mounted the horse, it immediately understood that a weak and unskillful man was riding **it**.'
(Ossetic National Corpus)

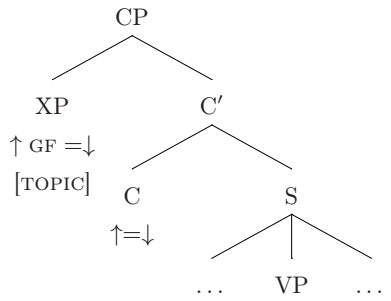
In such examples, it is not possible to analyse the clitic cluster *in situ* in c-structure terms: it would be all but impossible to state any constraint on the functional contribution of the clitics (clausal aspect information or clausal arguments) that would enable them to 'reach out' of their arbitrarily deeply embedded position inside Spec,CP and make their contribution at the clausal level. We argue that we see here not the widely discussed rightward 'movement' of clitics for prosodic reasons ('prosodic inversion'), but a leftward 'movement' due to the presence of (and requirement for adjacency to) a particular set of syntactic elements (the conjunctions). However, this is distinctly different from syntactic 'movement' such as would be assumed in transformationalist syntax. The positioning seen in (6) and (7) would be equally problematic for a transformationalist approach, since there is no syntactic motivation for movement to such an arbitrarily embedded position (not even in the widest possible transformationalist sense of 'syntactic').

We propose to analyse this typologically unparalleled positioning within the LFG framework of Lowe (2015) by means of a constraint on linear order in the s-string, preventing any s-string elements from appearing between the right edge of a conjunction and a following clitic cluster. In the c-structure, the clitic cluster can be analysed in its 'expected' position, (adjoined to) C, but the model permits mismatches in order between string and c-structure, such that the clitics are effectively analysed to the right of their surface position.

(8) C-str. (ex. 6): [$_{CP}$ [$_{NP}$ *žawər ɜmɜ alan*] [$_{C'}$ [$_{C}$ *=mɜm*] [$_{VP}$ *ɜrba-səd-əštə*]]]
S-string (ex. 6): [*žawər*] [*ɜmɜ*] [*=mɜm*] [*alan*] [*ɜrba-səd-əštə*]

Ex. (9) shows the c-structure we assume for Ossetic. In c-structure, clitics invariably appear in (or adjoined to) C. But in the linear order of the 'output', and in the s-string, there are four possibilities: 1. to the left of Spec,CP, if the CP is preceded by a conjunction; 2. inside Spec,CP, if a conjunction appears inside Spec,CP and there is no clausal conjunction to the left of Spec,CP; 3. 'in situ', i.e. in (or adjoined to) C; 4. within the VP. (There are further complications with left-dislocated phrases, which are treated in the full paper.) Possibility 3 requires no special analysis; 4 can be analysed in the same way as prosodic inversion in other languages (we follow the analysis of Lowe, 2015, for this). 1 and 2 are the previously undescribed and unanalysed possibilities. We show that all can be accounted for under our LFG-based model.

(9)



Both prosodic and syntactic factors contribute to the surface position of the clitics. We argue that the synchronic situation in Ossetic reflects an intermediate stage in an ongoing development that involves both syntactic reanalysis and lexicalization. The requirement for clitics to appear directly adjacent to conjunctions, regardless of syntactic structure, provides evidence of an incipient lexicalization of conjunction-clitic sequences as single words. At the same time, the frequent positioning directly after conjunctions can be explained historically in terms of prosody, but the prosodic conditioning has largely been renalysed in syntactic terms.

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