The Indirect Nature of Endoclisis
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Overview: The purported existence of endoclisis (placement of a clitic in an intramorphemic position) poses serious questions for almost every theory of syntax and morphology, and is an operation that is impossible to model in a framework such as Distributed Morphology (DM). We consider data from Udi (Northeast Caucasian) and argue that what are claimed to be endoclitics in this language are actually second position clitics within the domain of the complex V^0. Instances where the clitic is unambiguously placed intramorphemically are shown to result from an additional metathesis operation, employed to repair a morphotactic violation. We further evaluate the status of endoclisis as part of UG with another reported case from Pashto (Indo-Iranian), and show that too is consistent with our proposal that UG does not directly permit endoclisis, but it can arise as a consequence of phonological operations (see Halle 2001 for a similar approach to infixation).

Udi person marker (PM) placement: PM clitics in Udi constitute the clearest instance of endoclisis in the literature. Harris (2002) shows that at times the PMs unambiguously appear intramorphemically, for instance in (1a) where the PM *ne* lies within the monomorphemic verbal root *beɣ*. As shown by Harris, the rules placing PM clitics in Udi must make reference to syntactic information, since they follow a ranked series of rules sensitive to tense-aspect-mood (TAM) information, (2), and focus, (3). In addition to appearing inside verbal roots, PM clitics also appear between the incorporated element (IncE) and light verb in complex verbs (4). Analyses given for this behavior (see Harris 2002, Anderson 2005) are uniformly representational, couched in Optimality Theoretic alignment constraints, such as Harris' in (5). This approach however entails that clitics are placed by the syntax directly inside morphemes with the cases in (1), hence endoclisis must be a basic operation of UG, see Harris' definition (6).

Proposal: Under basic DM assumptions, true endoclisis is impossible to model; doing so entails placing clitics inside a terminal node. The facts of (1) are therefore extremely challenging to the framework. We argue that these cases are not in fact true endoclisis, and the PMs are really enclitics made to look like endoclitics as the result of the combination of three quirks of Udi: (i) the elsewhere rule of PM placement, (7c), (ii) a rigid requirement of Udi that the verbal root be adjacent to TAM suffixes, and (iii) the availability of metathesis to repair violations to (ii) by moving intervening material lying between the stem and TAM suffixes. Specifically, we follow Harris in assuming a ranked list of placement rules given in (7), but propose only three rules to her seven. Where the clitic is not attracted by certain TAM suffixes, or focus, the elsewhere rule of (7c) places the clitic in second position of the complex head containing the verb. In cases of complex verbs, the PM then correctly appears between the IncE and light verb. With simplex verbs however, the clitic is placed between the root and the TAM suffix, an order not seen on the surface. In these cases, we propose that the PM intervening between root and TAM suffix induces a morphotactic violation which is flagged as subject to repair. Udi does not make available a morphological repair, so the structure is sent to phonology, where metathesis moves the clitic leftward from the offending position. This proposal follows the spirit of Rescue-by-PF theories of syntax (Chomsky 1972, Merchant 1999), where a grammatical violation does not immediately crash a derivation, as long as the violation is repaired at a later stage. Evidence that a phonological repair is responsible for displacing the clitic comes from exceptional cases where metathesis applies rightwards, placing the PM outside a TAM suffix, which otherwise does not attract the PM (PRES in (8) does not belong to the TAM categories in (7a)). In these cases leftward metathesis would lead to a violation of Udi onset phonotactics (*bz) and so metathesis moves the clitic in the opposite direction, resulting in verb+TAM adjacency.

Wider consequences: Endoclisis is a strikingly rare phenomenon, with Udi being probably its strongest exponent in the literature. Even more surprising is that there does not seem to exist any clitic which is always placed intramorphemically; all noted cases show the endoclitics behaving as an enclitic in various other environments. Other purported instances such as Sorani Kurdish (Indo-Iranian, Bonami & Samvelian 2008, Walther 2012) and European Portuguese (Anderson 2005) both involve intermorphemic placement within a word, and as such are not true cases of endoclisis. Pashto (Tegey 1977, Roberts 1997, Yu 2007) seems to be the only other clear instance of genuine endoclisis, shown in (9b) where the clitic *me* appears inside the monomorphemic verb *axistələ*. Our approach goes some way to explain this rarity; endoclisis cannot arise through direct intramorphemic placement because UG does not make this operation available. Instead, endoclisis must come about from a conspiracy of language specific morphological and phonological factors. We see this again in Pashto, where apparent endoclisis is driven according to the position of word stress (Roberts 1997), (9).

(1) a. pasčaɣ-un   ɣar-en   gölö   bẹ-**ne**-ɣ-sa   met'a-laxo [verb = *bẹɣ*- 'look at, watch']
         king-GEN   boy-ERG   much   look$_1$-**3SG**-look$_2$-PRES   this.GEN-on
         'The prince looks at this for a long time.'

     b. kaɣuz-ax   a-**z**-q'-e   [verb = *aq'*- 'to take']
         letter-DAT   receive-**1SG**-receive-AORII
         'I received the letter.'

(2) q'ačaɣ-ɣ-on   bez   tänginax   bašq'al-**q'un**
     thief-PL-ERG   my   money.DAT   steal-FUTII-**3PL**
     'Thieves will steal my money.'

(3) täzä   k'oǰ-**q'un**   biq'-e   išq'ar-muɣ-on
     new   house-**3PL**   build-AORII   man-PL-ERG
     'The men build a new house.'
NB - focus is immediately pre-verbal in Udi

(4) nana-n   bụɣa-**ne**-b-e   p'a   ačik'alšey   [(complex) verb = *bụɣa-b*- 'to find']
     mother-ERG   find-**3SG**-DO-AORII   two   toy   *find-do*-
     'Mother found two toys.'

(5)   Align-PM-*al/a* » Align-PM-FocC » Align-PM-IncE » Align-PM-Verbstem
= constraint for   (TAM)   (focus)   (complex verbs)   (simplex verbs)

(6) **Align-PM-Verbstem**
     Align (PM, R, Verbstem, R)
     "Align the right edge of the person marker to the right edge of the verbstem."

(7) <u>Udi PM placement rules</u>
     a. PM is enclitic to TAM categories Future II, Subjunctive I, II and Imperative.
     b. PM is enclitic to focus.
     c. PM is second position within the complex head containing V^0.
Application of Rule A bleeds application of B, and B bleeds C.

(8) a. bi-esa-**zu**   b. *b-**zu**-i-esa   [verb = *bi*- 'to die']
         die-PRES-**1SG**   die$_1$-**1SG**-die$_2$-PRES
         'I am dying'

(9) a. axistə́lə   **me**   b. á-**me**-xistələ   [Pashto]
         buy   **1SG**   buy$_1$-**1SG**-buy$_2$ [verb = *axistəlа* 'to buy']
         'I was buying them.'   'I was buying them.'
NB - the diacritic in (9) marks stress placement. Stress is either initial or penultimate here.

<u>References</u>
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