

A Wholesale Late Merger Approach to Clitic Doubling

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1 Introduction

Research on clitics and clitic doubling (CD) has been voluminous, in part because it has been notoriously troublesome to establish reliable diagnostics for CD (vs. agreement). Consider object clitic doubling as in the Amharic example in (1), where a clitic on the verb is coreferent with an *in situ* object.¹

- (1) Lämmä wiffa-w-in ayy-ä-w.
Lemma.M dog-DEF.M-ACC see.PFV-3MSG.S-3MSG.O
'Lemma saw the dog.' (Baker and Kramer, 2018, 1036)

The core classes of analyses of CD are that (doubled) clitics are either pronominal arguments of the verb, or that they are agreement morphemes arising on some functional head (or, that they belong to some more nuanced designation).² The literature has made it sufficiently clear that *all* instances of clitic doubling cannot be reduced to either agreement or pronominal forms (which is perhaps unsurprising given the large range of cross-linguistic variation in empirical patterns). But the fact that clitic doubling cannot be reduced to (solely) Agree relations raises a serious question of how these morphemes can co-occur with *in situ* objects if they are not agreement morphemes: if the clitic is a pronominal argument of the verb, it would be expected to be in complementary distribution with a coreferent *in situ* lexical DP argument.³ Extensive research has shown, however, that pronominal clitics can in fact co-occur with *in situ* arguments (see fn 2).

This short squib notes that recent approaches to this problem (specifically, Kramer

¹Amharic is an SOV Ethiosemitic language spoken in Ethiopia.

²For an overview of the history of work on the issue, see van Riemsdijk (1999) and Anagnostopoulou (2017). For agreement-theoretic analyses of object markers, see Suñer (1988), Riedel (2009), Roberts (2010), Zeller (2014, 2015). For pronominal incorporation analyses, see Baker (2003), Baker and Kramer (2018), Sikuku et al. (2018), Letsholo (2013). And various analyses deal with the co-occurrence of clitic and DP in CD by claiming that both originate as part of the same DP argument: for so-called "Big-DP" analyses (where clitics originate in a recursive DP structure with the object DP) see Uriagereka (1995), Belletti (1999), Cecchetto (2000), Bax and Diercks (2012); §3 below outlines a more recent approach based on Matushansky's (2006) m-merger approach to head movement, where a DP object shifts to the edge of *v*P and undergoes m-merger with *v* (Kramer, 2014; Harizanov, 2014), so CD is essentially spellout of multiple copies of the DP.

³Due to the θ -criterion: if a clitic is an argument of the verb, that thematic role can only be saturated once, so it's not clear how the object DP would receive a thematic role.

2014 and Harizanov 2014) have been relatively successful, deriving many properties of clitic doubling from independently necessary theoretical mechanisms like an m-merger approach to head movement (Matushansky, 2006), basic properties of Agree (Chomsky, 2001), and object shift (Vikner, 2017). On these accounts, an object DP moves to the edge of vP and undergoes m-merger with the v head. CD is therefore an instance of pronouncing multiple copies of the DP, where one is the full lexical DP and one is a reduced version that appears as an object clitic on the verb.

The major exception to the success of these accounts is that Kramer’s (2014) and Harizanov’s (2014) accounts assume a mechanism that reduces the higher copy of an object DP to a smaller form (the clitic), a mechanism that is otherwise theoretically unmotivated (referred to as *Reduce* in §2 here, following Baker and Kramer 2016). In this squib I suggest that this can be resolved via a previously unexplored prediction of Takahashi and Hulsey’s (2009) notion of *Wholesale Late Merger*, a proposal to account for reconstruction properties of A- and A’-movement. I propose that the lexical content of DP objects in CD (NP restrictors of D) undergoes late merger *in situ* in object position after cliticization has occurred. Therefore, at the point of cliticization in the derivation there is no full lexical NP inside the DP object introduced in the derivation (only a D head), and therefore no *Reduce* operation is necessary in our theory.

2 Clitic are pronouns (Baker and Kramer, 2018)

Baker and Kramer (2018) (B&K) claim that doubling object markers (OMs) in sentences like (1) in Amharic (and many other languages) are fundamentally pronouns, as opposed to being the spellout of phi-features valued via an Agree relation. Their claim is based on the fact that clitic-doubling is impossible with certain kinds of objects, specifically: wh-phrases (2), universally-quantified DPs (3), and anaphors.

- (2) Mann-in ayy-if? (*ayy-if-**iw**)
 who.M-ACC see.PFV-2FSG.S (*see.PFV-2FSG.S-3MSG.O)
 ‘Who did you (feminine) see?’

- (3) Lamma hullu-n-imm säw ayy-ä. (*ayy-ä-**w**)
 Lemma.M every-ACC-FOC person see.PFV-3MSG.S (*see.PFV-3MSG.S-3MSG.O)
 ‘Lemma saw everyone.’ (Baker and Kramer, 2018, 1037)

They point out that restrictions like (2) and (3) are particularly puzzling on an agreement analysis of object marking, as the DPs in question have phi-features and can trigger subject agreement when they are subjects; this in itself suggests that object marking is something different than agreement (in languages with these kinds of restrictions). After

showing that OMs in Amharic are plausibly pronouns according to a wide range of expectations about pronoun behavior, they show that the pronominal analysis of OMs can explain the clitic-doubling restrictions illustrated in (2) and (3). Following Kramer’s (2014) analysis of Amharic clitic doubling, see §3) they argue that the clitic is a pronoun (D) and is realized as part of a complex head with v , as shown in (4):

$$(4) \quad [{}_{vP} \ [{}_{VP} \ \text{OBJECT}_{DP} \ V] \ [{}_v \ v \ D]]$$

Here coreference with the object DP doesn’t generate a Principle C violation because no c-command relationship holds between the pronoun and its associated object. They point out, however, that this configuration is essentially a classic weak-crossover (WCO) paradigm, both in its configuration and its set of co-occurrence restrictions: WCO constructions allow co-occurrence of a non-c-commanding coreferent pronoun with lexical DPs, but disallow co-occurrence with quantified objects (5b,5c) and wh-phrases (5d).

- (5) a. His_k mother loves John_k.⁴
 b. ?*His_k mother loves everyone_k.
 c. ?*His_k mother loves nobody_k.
 d. ?*Who_k does his_k mother love?

B&K don’t propose a new theory of weak crossover, adopting Safir’s (2004) formulation, but argue that whatever explains the paradigm in (5) will necessarily explain the parallel facts in (2) and (3), assuming a relatively uncontroversial structure like that in (4).

3 Mechanism: Reduce

B&K focus on the pronominal aspect of the clitic and the patterns it can explain, allowing that there may be multiple theories of the precise derivation of CD that can generate the relevant structure. Kramer (2014) and Harizanov (2014) propose a derivation that generates a structure like (4) for Amharic and Bulgarian, respectively. To cover some relevant background, Matushansky (2006) proposed an analysis of head-movement that obeys the Extension Condition: heads move in the same way as phrases (to the edge of the root), from where they undergo a process of morphological merger (m-merger) which “takes two feature bundles and returns one,” forming a complex head (97). Matushansky suggests that cliticization can be analyzed similarly, but does not extend the account to CD. Kramer (2014) does: she claims that the Amharic OM is a reduced version of a full DP that has undergone object shift to Spec, vP and then undergone m-merger to form a complex head with v .

⁴B&K note that the relevant coreference requires a non-focus interpretation of *John* in this sentence.

- (6) a. $[_{vP} \nu [_{VP} V DP_k]] \nu$ **Agrees with DP**
 b. $[_{vP} DP_k [_{vP} V-\nu [_{VP} V DP_k]]]$ **Object DP undergoes object shift to Spec, ν P**
 c. $[_{vP} [_{vP} D_k-V-\nu [_{VP} \forall DP_k]]]$ **moved DP m-merged to ν**

This proposal captures a range of patterns. A persistent issue, however, is that it requires some kind of mechanism to allow a full copy of a DP to be realized as a pronoun/clitic; Harizanov and Kramer assume this to be possible within m-merger itself, but this is a significant empowerment of m-merger. Baker and Kramer (2016) explicitly address this issue, proposing a syntactic mechanism termed *Reduce* that eliminates all content from a phrase apart from its head.⁵ In CD, this means eliminating the NP complement of D, with the result that a minimal DP remains (D) that can undergo a merger operation with ν to become the complex head shown in (6). This approach has important consequences for Baker and Kramer: “First, and most importantly, it is different [from previous approaches] in that the clitic is interpreted as a pronoun distinct from its DP associate at LF ... Second, we get the fact that clitic doubling structures have two D-like elements—the clitic itself and the D inside its DP associate—not by semi-ad hoc enrichments of the structure, but by the copying that is part and parcel of movement within the minimalistic framework (Chomsky 1993)” together with the *Reduce* operation (Baker and Kramer, 2016, 22). The second piece of the quote is crucial, because their explanations for the restrictions on CD critically rely on the pronominal status of the object clitic.

To my knowledge, the internal mechanics of the Reduce + m-merger approach taken in Kramer (2014) and Harizanov (2014) have never been laid out as explicitly as it way by Baker and Kramer (2016), whose *Reduce* operation successfully accomplishes the end goal (together with m-merger): a pronominal copy of a lower DP is integrated with the verbal form. The only critique that I have to offer is that this mechanism is *new* and otherwise unmotivated, and the question is always whether we can generate the same empirical outcomes with independently necessary theoretical mechanisms. I propose that Takahashi & Hulsey’s (2009) *Wholesale Late Merger* in fact predicts that clitic doubling constructions ought to exist in exactly the form in (4).

4 Wholesale Late Merger approach to clitic doubling

In this section I show that a proposal to account (anti-)reconstruction properties of A- and A’-movement (*Wholesale Late Merger*) naturally extends to account for CD.

⁵Baker and Kramer (2016) is an earlier version of the paper that eventually appeared as B&K, the latter of which removed discussion of *Reduce*.

4.1 Late Merger, Wholesale Late Merger, and (anti-)reconstruction

It has been long-established that A-movement and A'-movement behave differently with respect to reconstruction (i.e. interpretation of the lower position of a moved element with respect to binding interactions): A'-movement is known to obligatorily reconstruct, whereas this is not the case for A-movement. Nonetheless, reconstruction puzzles persist. For example, (7) shows a distinction in reconstruction effects between A'-movement of a complex DP with a noun complement clause (7a) as opposed to a relative clause (7b).

- (7) a. ??/* [Which argument [that Rebecca_k is a genius]]_i did she_k believe t_i ?
b. [Which argument [that Rebecca_k made]]_i did she_k believe t_i? (Fox, 1999)

(7a) is thought to be unacceptable as a result of Condition C, as well as the obligatory reconstruction of A'-movement: because the *which argument* DP is necessarily interpreted in its base position for the purposes of binding, the R-expression *Rebecca* is illicitly bound by the subject pronoun *she*. This follows straightforwardly from the Copy Theory of Movement (Chomsky, 1993, 1995): A'-movement leaves a copy in its base position that is subject to binding conditions. The puzzle that arises, however, is how the R-expression *Rebecca* inside the relative clause in (7b) is able to escape this same fate. The R-expression *Rebecca* inside the relative clause (inside the A'-moved object) is only interpreted in its surface position, and does not reconstruct (an anti-reconstruction effect).

To address these facts, Lebeaux (1988) proposes that relative clauses are merged into the structure countercyclically, after the rest of the structure has been built (*late merger*). (7b) appears to bleed a Condition C effect because there is actually no underlying Condition C violation to avoid—the relative clause is merged at the structurally higher position of the DP, not in the lower position. Lebeaux's original proposal made a complement/adjunct distinction: only adjuncts undergo late merger.⁶ Takahashi and Hulse (2009) (henceforth, T&H) expand this notion of late merger to also include A-movement reconstruction (see (9)), proposing a process of *Wholesale Late Merger* (WLM): “late merger is permitted whenever an output representation can be interpreted in the semantic component (henceforth, the *LF interpretability approach*). A consequence of the LF interpretability approach is that, in addition to adjuncts, a restrictor of an operator/determiner can undergo late merger” (T&H, 388). This is illustrated in (8) (T&H, 388).

- (8) a. Every argument seems to be correct.
b. Base Structure:
[_{XP} [every] correct] ->

⁶Lebeaux's explanation rested on an interpretation of the Projection Principle, that the arguments of a lexical item must be present throughout an entire derivation.

- c. Main clause merged:
 $[_{YP} \text{ seems to be } [_{XP} [\text{every}] \text{ correct }]] \rightarrow$
- d. Movement of Determiner:
 $[_{ZP} [\text{every}] [_{YP} \text{ seems to be } [_{XP} [\text{every}] \text{ correct }]]]$
- e. Merger of Restrictor with higher copy of Determiner:
 $[_{ZP} [\text{every} [\text{argument}]] [_{YP} \text{ seems to be } [_{XP} [\text{every}] \text{ correct }]]]$

While a relatively radical proposal, T&H are able to explain a fuller range of reconstruction and anti-reconstruction effects than was previously possible. For example, A-movement can also exhibit reconstruction effects; in (9) a bound reading of the variable is possible despite the fact that the DP containing the variable c-commands the quantifier after A-movement (based on Fox 1999, 161, Takahashi and Hulsey 2009, 391).

- (9) [Someone from her_k class]_i seems to [every professor]_k t_i to be t_i a genius.

Here the lower copy of the A-moved subject is interpreted in order to achieve the appropriate structural configuration for the bound reading; the availability of reconstruction with A-movement suggests that A-movement (like A'-movement) also leaves a copy of the moved element in its base position. Yet, A-movement still bleeds Condition C:

- (10) [John_k's mother] seems to him_k to be wonderful. (Lebeaux, 1988, 23)

WLM can account for A-movement's bleeding of Condition C effects by allowing the restrictor of the quantifier to be merged counter-cyclically, as sketched in (8). No Condition C effect emerges because the relevant R-expression is never bound by the pronoun.

A common characterization of these effects (apart from the late merger proposals) is that A-movement has the option between leaving a contentful copy or leaving a contentless trace of movement, whereas A'-movement always leaves a contentful copy (Fox, 1999; Sauerland, 1998). T&H claim that this disjunctive analysis can be avoided: all movement leaves a full copy of whatever content is moved, but *wholesale late merger* applies: sometimes DP-content is merged countercyclically, after movement has occurred. Their claim is that A-movement bleeds Condition C because the lower copy of the DP consists only of the D head; the R-expression in question is not merged until later in the derivation, and therefore no copy of the R-expression is subject to the illicit binding configuration.

But why does A'-movement necessarily reconstruct? T&H claim this is due to Case-licensing: an entire D-NP composite requires Case (not just a D head), and therefore NP complements of D must be merged structurally low enough that they can receive Case. WLM can in principle occur at any point in a chain, provided that that position is lower than (or equivalent to) a Case-licensing position. This explains why chains terminating in Case positions (A-movement) can bind from those positions, but chains terminating in

non-Case positions (A'-movement) must obligatorily reconstruct: merger of the NP complement of DP must happen before the final landing site of A'-movement, because Case-licensing necessarily happened below that position. The facts covered by T&H's proposals are quite complex and a full discussion goes beyond the scope of this squib.

4.2 An unexplored prediction of *Wholesale Late Merger*

Because T&H propose WLM in service of explaining (anti-)reconstruction effects of movement, they are understandably focused on instances of overt movement, i.e. where the higher copy of a DP is pronounced (since only a moved element can reconstruct, somewhat by the definition of reconstruction). However, there is nothing explicit in T&H's proposal that restricts against Late Merger *in situ*, where a chain originates.

My claim is that WLM may also apply *in situ*, respecting the same restrictions proposed by T&H (namely, regarding Case and interpretability). The question is where such a pattern might arise empirically. My claim is that clitic doubling is exactly that circumstance. To see how this would work, consider an alternative to the derivation proposed by Kramer (2014) in (6); in (11) the NP complement of D undergoes WLM *in situ* in the base position of the object:⁷

- (11) a. ***v* Agrees with DP/D**
 $[_{VP} \nu [_{VP} V [_{DP} D]]]$
- b. **Object DP/D undergoes object shift to Spec,*v*P**
 $[_{VP} [_{DP} D] [_{VP} V-\nu [_{VP} \forall [_{DP} D]]]]$
- c. **Shifted D m-merged to *v***
 $[_{VP} [_{VP} D-V-\nu [_{VP} \forall [_{DP} D]]]]$
- d. **Restrictor of D (lexical NP) undergoes late merger *in situ* inside VP**
 $[_{VP} [_{VP} D-V-\nu [_{VP} \forall [_{DP} D NP]]]]$

While the derivation is distinct, the resulting structure in (11d) is identical to the structures proposed by Kramer (2014) and Harizanov (2014) and assumed by B&K, as illustrated in (6c) above. Therefore, this account gains the same empirical coverage as B&K.⁸

Likewise, we encounter no problems from the process of WLM itself: the two constraining factors on WLM are that WLM must occur by the Case-licensing position, and

⁷(11) represents WLM applying after m-merger, but I do not in fact mean to make any particular claim about the timing of m-merger and WLM with respect to each other; all that matters on this account is that they occur *after* the object shift movement of the DP object.

⁸Detailed aspects of CD in various language would need to be reconciled with this account; for example, pronouns in Amharic are readily clitic-doubled, which would require the assumption that pronouns that can be doubled in such a way are D heads, which is reasonable but not uncontroversial.

that the interpretation of the sentence must be accessible by LF, which T&H ensure via an implementation of Fox’s (1999; 2002) Trace Conversion. How the DP-NP object structure in (11d) is Case-licensed depends somewhat on one’s implementation of Case-licensing. But suppose either Case-licensing can occur in that position after (or concurrent with) the application of WLM, or perhaps D is Case-valued and shares those features with NP under sisterhood upon WLM: either Case-licensing assumption can be accommodated relatively straightforwardly. And with respect to the *LF interpretability approach* to constraining WLM, the main concern was whether a predicate could appropriately compose with its arguments if an NP restrictor of a DP is merged in a higher position: here, WLM applies *in situ*, meaning that the predicate can compose with its object at LF in the usual way. In some senses this proposal is more extremely counter-cyclic than T&H’s proposal, as it “returns” to a lower part of the structure, whereas T&H assume WLM inside a DP that is being merged to the root. That said, both applications of WLM (T&H’s and that proposed here) propose a counter-cyclic merge operation that tampers with existing structures (which by definition runs counter to assumptions of strictly cyclic derivations, e.g. Chomsky’s 2001 Extension Condition).⁹

What I am arguing here is that WLM gives us the same structure (and therefore the same empirical coverage) as the *Reduce+m-merger* account, without empowering m-merger to reduce a DP to a D head (Kramer, 2014; Harizanov, 2014) and without a separate/distinct *Reduce* operation that is not demonstrably required elsewhere in our theory (Baker and Kramer, 2016). Instead, WLM can be directly applied to get the same outcomes for CD constructions.

5 Conclusions

Counter-cyclic derivations are troubling for a wide range of of theory-internal reasons; the core of our model consists of strictly cyclic merge-based derivation by phase (Chomsky, 2001), and it is unclear what role (if any) a counter-cyclic process ought to have in this model. One argument could simply be that counter-cyclic proposals are a stopgap placeholder for the “true” cyclic derivations of the relevant phenomena that we simply have not managed to formulate yet. Perhaps. But the central way of evaluating a proposal is to examine the empirical predictions that it makes. The claim here is that *in situ Wholesale Late Merger* is a prediction of the *Wholesale Late Merger* operation that is attested in a broad range of languages in a well-documented construction (clitic doubling) and that *in situ* WLM solves a long-standing question of how two instantiations of the same referential argument can co-exist in the same clause. If WLM is a part of our theory (which, certainly, is not a trivial assumption), the syntax of clitic doubling is no longer a puzzle; rather, it becomes a core prediction that natural languages in fact *ought* to have clitic dou-

⁹Thanks to Rodrigo Ranero for discussions on these points

bling constructions. The outstanding puzzle is then turned on its head: it is not why clitic doubling exists, but why some constructions in some languages disallow clitic doubling (only allowing a clitic to appear in the absence of an *in situ* lexical DP object). Exploring this question goes beyond the scope of this short squib, but if this proposal is correct, we will have significantly shifted the core research question around clitic doubling.

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