Morphological reversal in Amadiya (Neo-Aramaic) as late agreement

Overview: Morphological reversal is a pattern where some morphological contrast is reversed between two environments (Baerman 2007). For example, in Hebrew, gender marking on adjectives is -a for feminine and null for masculine, but numerals take exponents with the opposite pattern—null for feminine and -a for masculine. I address one such morphological reversal, found between perfective and imperfective aspect in the agreement system of Jewish Amadiya (Neo-Aramaic), and propose a morphosyntactic account of this pattern that does not make use of any special ‘reversal’ mechanism. In particular, I propose that agreement reversal results from v (an agreement locus) staying in situ in perfective aspect but raising to Asp in imperfective aspect, thereby changing the set of agreement targets available to v.

Background: Baerman (2007) defines morphological reversal as in (1):

(1) a. There is an alternation between exponents A and B whose associated values are switched between context 1 and context 2, and
b. Each context implies the other, i.e., the paradigm found in context 2 constitutes the mirror image of the paradigm in context 1, and vice versa.

Baerman identifies six different instances of morphological reversals and argues that the best way to theoretically account for them is to say that speakers learn a proportional analogy that acts in the morphological component, along the lines of (2) (based on Hetzron 1967):

(2) a. A represents B : B represents Y :: B represents X : x
b. x = A represents Y

(2) allows for an asymmetry in an alternation, where one side represents the primary alternation, (2a), and the other is subordinate, (2b). When the subordinate component, (2b), is represented in the analogy (and not lexically restricted), the result is morphological reversal.

Morphological reversal in Amadiya: Amadiya instantiates true morphological reversal in subject and object agreement between imperfective and perfective aspect (Hoberman 1989, Baerman 2007, Doron and Khan 2012). Amadiya has several basic verb stems formed by root-and-pattern morphology, including perfective, imperfective, perfect, infinitive, and imperative (Hoberman 1989). Agreement morphology follows the verb, and there are two agreement paradigms, the S-suffixes and L-suffixes. S-suffixes are adjacent to the verb stem and truly affixal, while L-suffixes, on the other hand, are clitics (Doron and Khan 2012).

The reversal across perfective and imperfective aspect is illustrated in (3) (Hoberman 1989, p. 98, mis-glossing corrected; verb base and agreement bolded):

(3) a. ?e baxta gi-mpaît-a-lu ?anna gure.
   this woman PRES-remov.IMPF-S.3FS-L.3MPL these men
   ‘This woman removes these men.’

b. ?e baxta mpuît-i-la ?anna gure.
   this woman hear.PFV-S.3MPL-L.3FS these men
   ‘This woman removed these men.’

With the imperfective verb base, (3a), the subject is marked as an S-suffix (adjacent to the verb base) while the object is clitic-doubled, appearing on the verb-periphery as an L-suffix. With the perfective verb base, (3b), it is the subject that is clitic-doubled (L-suffix), while the object is marked with an S-suffix adjacent to the verb base. This reversal can also be
seen in the following pair, which holds agreement morphology constant but changes the verb base, (4). The result is a reversal of subject and object roles (Hoberman 1989, pp. 35-36):

(4) a. k-\text{pat}x\ -\text{an} -\text{na}\quad b. \text{ptix} -\text{an} -\text{na}

\begin{align*}
&\text{PRES- open.IMPF} -\text{S.1FS} -\text{L.3FS} \\
&\quad \text{‘I open her.’}
&\text{open.PFV} -\text{S.1FS} -\text{L.3FS} \\
&\quad \text{‘She opened me.’}
\end{align*}

The agreement sequence -an-na expresses first person acting on third in (4a) but third person acting on first in (4b). As Hoberman (1989) and Doron and Khan (2012) show, subjecthood diagnostics consistently pick out the agent, regardless of aspect, such that this agreement reversal cannot plausibly be due to passivization or otherwise altering argument structure.

**Problems with a morphological analysis:** A morphological analysis like Baerman’s cannot account for certain properties of Amadiya, including (i) the relation of agreement in the perfective (which he takes to be subordinate, (2b)) to agreement on other verb bases; (ii) asymmetries between perfective and imperfective aspect apart from agreement (e.g., an impersonal construction in the perfective), and (iii) the reversal of clitic-doubling (a syntactic phenomenon, see e.g., Alexiadou and Anagnostopoulou 1997) between aspects.

**Analysis:** I propose that Amadiya’s reversal results from head-movement displacing an agreement locus. Specifically, T and v are agreement loci (\(\varphi\)) in Amadiya; agreement with v results in an S-suffix, while agreement with T triggers clitic-doubling. In the perfective, V raises to v but no further, since Asp in perfective aspect in Neo-Aramaic is inactive (Kalin and van Urk 2014). In this position, v’s agreement locus can target only the object, (5a). In the imperfective, V raises to v, and this complex (including v’s \(\varphi\)) raises to Asp, which is now active. From this higher position, v’s agreement locus targets the subject, (5b). Clitic-doubling T agrees with whatever is left: the subject in (5a) but the object in (5b).

(5) a. \begin{center}
\begin{tikzpicture}
    \node (T) at (0,0) {T};
    \node (AspP) at (2,0) {AspP};
    \node (vP) at (2,1) {vP};
    \node (Sbj) at (0,-1) {Sbj};
    \node (VP) at (2,-1) {VP};
    \node (Obj) at (2,-2) {Obj};
    \draw (T) -- (AspP);
    \draw (AspP) -- (vP);
    \draw (Sbj) -- (AspPFV);
    \draw (v) -- (V+v);
    \draw (VP) -- (V+v);
    \draw (V+v) -- (AspIMPF);
    \draw (AspIMPF) -- (Obj);
\end{tikzpicture}
\end{center}
b. \begin{center}
\begin{tikzpicture}
    \node (T) at (0,0) {T};
    \node (AspP) at (2,0) {AspP};
    \node (vP) at (2,1) {vP};
    \node (Sbj) at (0,-1) {Sbj};
    \node (VP) at (2,-1) {VP};
    \node (Obj) at (2,-2) {Obj};
    \draw (T) -- (AspP);
    \draw (AspP) -- (vP);
    \draw (Sbj) -- (v);
    \draw (v) -- (V+v+AspIMPF);
    \draw (V+v+AspIMPF) -- (Obj);
\end{tikzpicture}
\end{center}

**Implications:** The syntactic account of reversal presented above fits within a larger typological picture of variation within Neo-Aramaic and provides a starting point for accounting for other differences that correlate with this reversal. Further, in a framework in which agreement is ‘late’ (either post-syntactic or triggered in the syntax, but not necessarily upon merge), it is expected that head movement could alter agreement configurations, as in (5). Finally, this morphosyntactic account opens the door for a reanalysis of other reversals.