When endoclitics account for structure in morphology: a Sorani Kurdish case study

Morphologists debate whether morphological operations manipulate unstructured strings (Anderson, 1992) or layered representations (Lieber, 1992). Using data from Sorani Kurdish, **we argue that some structure is needed, even within a realisational approach**. Our analysis is couched within a variant of *PFM* (Stump, 2001). Sorani morphology mainly distinguishes itself through its intricate system of *endoclitic person markers* (henceforth **EPM**). Together with affixal person markers, they express subject and object agreement with morphological reversal (Baerman, 2007) between past and present tenses. Samvelian (2007) specifies the following EPM placement rules: (i) if the verb is not VP initial, the EPM is in clitic second position; (ii) if the verb is VP initial, the EPM is an endoclitic within the V. She states that the EPM always adopt (internal or external) second position. Her analysis holds for the verb forms she analyses, but not for the perfect tenses, where the EPMs seem to appear in 3rd (or 4th) position (3a–4b).

(1) xward **man** –in
EAT.STEM **P1PL** P3PL
"We ate them."

(2) na– **man** xward –in
NEG **P1PL** EAT.STEM P3PL
"We did not eat them."

This contradiction dissapears if the perfect tenses are analysed as periphrastic, which given the apparent presence of forms of the auxiliary *bûn* 'to be' in the perfect tenses is plausible: (i) the perfect appears like the combinatation of the participle (STEM + *–û*) and the present enclitic forms of *bûn*; (ii) the past perfect appears like a combination of a STEM and the past forms of *bûn*.

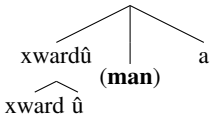
However, a periphrastic approach fails to explain placement of the EPM. First, there is a specific morph-placement due to the presence of specific persons in the argument-structure which sometimes forces the EPM not to occur after the predicative part of the "periphrastic form", but to attach at the end of the "auxiliary" (McCarus, 1958): (i) a third person singular subject marker always follows the object marker; (ii) be it subject or object, a first person singular marker always precedes any plural marker. Moreover, when the perfect tenses bear a negative polarity feature, EPMs are inserted in internal second position (5a, 6a). Also, the STEM and the *–bû* of the past perfect are never separated by any morph, i.e no morph ever inserts between the presumed predicative element and the auxiliary. Finally, in a lexicalist approach, elements treated within syntax do not undergo the same rules as morphs. They have to be words or word-like elements (cf. clitics). A bare STEM, such as *xward* in the past perfect tenses in (4) and (5), is an unlikely syntactic element.

Thus, **we argue that Sorani Kurdish perfect tenses are synthetic forms, but nevertheless show internal structure** which explains the EPM placement properties. We follow (Bonami and Samvelian, 2008) in stating a morphological `compact` operation creating morph-sequences opaque to the otherwise endoclitic EPM. This operation applies on the STEM-*û* and STEM-*bû* sequences of the perfect tenses thus creating word internal structure. It is this structure that is responsible for the otherwise incoherent behaviour of Sorani second position endoclitics: when confronted with compact units, EPM must attach on the outside; they do so in second position. Thus, our analysis allows for a homogeneous treatment of all Sorani verb forms and correctly accounts for the intricate EPM placement phenomena left unexplained until now. Hence **the properties of Sorani EPM argue in favour of partial internal morphological structure.**

$$\texttt{compact}\left(\left[\text{MORPHS } \langle \textit{xward, û} \rangle\right]\right) \longrightarrow \left[\text{MORPH } \langle \textit{xwardû} \rangle\right] \qquad \texttt{compact}\left(\left[\text{MORPHS } \langle \textit{xward, bû} \rangle\right]\right) \longrightarrow \left[\text{MORPH } \langle \textit{xwardbû} \rangle\right]$$

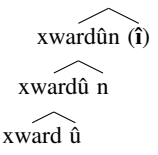
Present Perfect

(3) (a) xwardû**man**a



EAT-Û-**P1PL**-P3PL
*"***We** *have eaten them.*

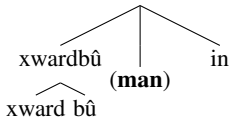
(b) xwardûnî



EAT-BÛ-P3PL-**P3SG**
*"***He** *has eaten them.*

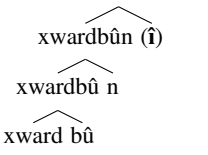
Past Perfect

(4) (a) xwardbû**man**in



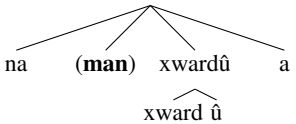
EAT-BÛ-**P1PL**-P3PL
*"***We** *had eaten them.*

(b) xwardbûnî



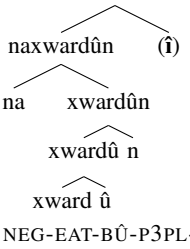
EAT-BÛ-P3PL-**P3SG**
*"***He** *had eaten them.*

(5) (a) na**man**xwardûa



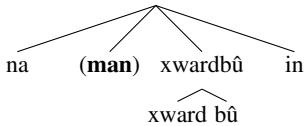
NEG-**P1PL**-EAT-Û-P3PL
*"***We** *have not eaten them.*

(b) naxwardûnî



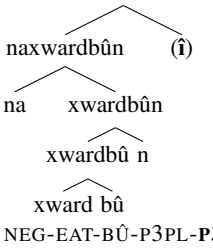
NEG-EAT-BÛ-P3PL-**P3SG**
*"***He** *has not eaten them.*

(6) (a) na**man**xwardbûin



NEG-**P1PL**-EAT-BÛ-P3PL
*"***We** *had not eaten them.*

(b) naxwardbûnî



NEG-EAT-BÛ-P3PL-**P3SG**
*"***He** *had not eaten them.*

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