Case Suffixes and Postpositions in Hungarian

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Abstract

This paper examines the morpho-syntactic puzzle of case suffixes and postpositions that Hungarian displays. Although these two categories show distributional similarities, they are distinguishable from a morphological and a syntactic point of view. Moreover, this language has defective postpositions which are in complementary distribution with case suffixes. I argue that there is no real argument for lumping case suffixes together with postpositions into the same syntactic category, as has been suggested in recent linguistics studies (Trommer, 2008; Asbury, 2007). I rather propose to treat case suffixes and postpositions as two different objects: case suffixes are inflectional material on nominal heads and postpositions as well as defective postpositions are independent words subcategorizing an NP. This distinction straightforwardly accounts for morphological and syntactic differences. Finally, the shared distributional properties between case suffixes, postpositions and defective postpositions are captured by means of the use of the MARKING feature.

1   Introduction

Hungarian displays an interesting morpho-syntactic puzzle of case suffixes and postpositions. Although these two categories show distributional similarities, they are distinguishable from a morphological and a syntactic point of view. In this paper, I focus on the similarities and dissimilarities between the two categories and show that an SBCG analysis (Sag, 2010) allows us to provide a descriptively adequate account of the phenomena and to capture their common syntactic behaviour.

2   Definitions

The delimitation of the category of case suffixes is a long-debated issue (Kiefer, 2000; Payne and Chisarik, 2000; Creissels, 2006). I define the class of case suffixes based on 3 criteria that ensure that the noun keeps noun properties after suffixation. Case suffixes may display the possibilities

   i. for the noun host to be modified (Kiefer, 2000; Payne and Chisarik, 2000);

  ii. for the case suffix to occur with a possessive suffix (Creissels, 2006);

 iii. for the case suffix to be combined with the demonstrative (Creissels, 2006).

This definition leads to a category containing 17 elements[1].

As for the class of postpositions, I adopt the analysis of É.Kiss (2002), who limits the category of postpositions to items

i. taking a caseless NP as argument;

ii. realizing morphologically their pronominal argument;

iii. that get duplicated when used with the demonstrative.

This class is then composed of 34 elements [2].

3 Description of the data

3.1 Differences

3.1.1 Gradient phonological integration

Case suffixes, but not postpositions, are prosodically bound forms and are mono-syllabic. More precisely, if we consider six criteria, we observe that the relevant morpho-phonological properties define a scale rather than a binary distinction, as shown in Table 1. Four of these six criteria correspond to the phenomena of internal sandhi occuring with affixation (Creissels, 2006):

- Vowel harmony: the vowel of several suffixes is selected according to the vowels that the nominal base contains.

(1) a. *ház-ban* b. *kert-ben*
house-INE garden-INE

- Link vowel (LV): the link vowel appears between the nominal base and some suffixes when the base ends with a consonant.

(2) *börönd-ö-t*; *könyv-e-t*
book-LV-ACC suitcase-LV-ACC

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[1]Accusative (ACC) *-t*; Dative (DAT) *-nak/-nek*; Instrumental (INS) *-val/-vel*; Causal-final (CAU) *-ért*; Translative (TRA) *-vá/-vé*; Inessive (INE) *-ban/-ben*; Superessive (SUP) *-n*; Adessive (ADE) *-nál/-nél*; Sublative (SUB) *-ra/-re*; Delative (DEL) *-ról/-rõl*; Illative ILL *-ba/-be*; Elative (ELA) *-ból/-bõl*; Allative (ALL) *-hoz/-hez/-höz*; Ablative (ABL) *-tól/-tõl*; Terminative (TER) *-ig*; Essive (ESS) *-ként*; Temporal (TEM) *-kor*.

[2] *alá* 'to under'; *alatt* 'under'; *alól* 'from under'; *mögé* 'to behind'; *mögött* 'behind'; *mögül* 'from behind'; *mellé* 'to next to'; *mellett* 'next to'; *mellõl* 'from next to'; *elé* 'to before'; *elõtt* 'before'; *elõl* 'from before'; *felé* 'towards'; *felõl* 'from'; *fölé* 'to above'; *fölött* 'above'; *fölül* 'from above'; *köré* 'round'; *körül* 'around'; *közé* 'between'; *között* 'in between'; *közül* 'from between'; *által* 'by'; *ellen* 'against'; *helyett* 'instead of'; *szerint* 'according to'; *iránt* 'towards'; *miatt* 'because of'; *nélkül* 'without'; *után* 'after'; *végett* 'because of'; *óta* 'since', *folytán*.

- Lengthening of *a* and *e*: the affixation of a number of suffixes triggers the lengthening of final vowel of the nominal base, if it is an *a* or an *e*.

(3) *alma*; *almá-ban*
apple apple-INE

- Selection of a suppletive stem

(4) *ló*; *ló-ban*; *lov-on*
horse horse-INE horse-SUP

The last two criteria concern the number of syllables of these items and their interaction with the demonstrative.

- The monosyllabicity of the item (Trommer, 2008): case suffixes are mono-syllabic, whereas postpositions are bisyllabic.

- The interaction with the demonstrative: postpositions beginning witha con-sonant and case suffixes both interact phonologically with the demonstra-tive[3].

(5) *ez*; *eb-ben*; *e* *mellett*; *ez* *allatt*
DEM DEM-INE DEM next.to DEM under

Given table 1, only one property distinguishes case suffixes from postpositions: the monosyllabicity. However, in section 4, I will show that the essive *ként*, which is monosyllabic, should be reanalysed as a postposition, leading to the conclusion that it is not possible to draw a clear distinction between case suffixes and postpo-sitions on the basis of phonological properties.

3.1.2 Derivational properties

Postpositions, contrary to case suffixes, can host the derivational suffix *-i* and thus give rise to adjectives.[4]

(6) *a polc mögött-i könyv*
the shelv behind-ADJR book
'the book behind the shelv'

(7) **a János-ról-i könyv*
the János-DEL-ADJR book
'the book about János'

---

[3]As noted by Creissels (2006), when the demonstrative is followed by a postposition beginning with consonant, the final 'z' of the demonstrative can:

- either be elided, as expressed by the Hungarian spelling (*e mellett*)

- or be assimilated to the initial consonant of the postposition (*em mellett*)

[4]The *-i* suffix is glosed ADJR.

	A	B	C	D	E	F
interaction with demonstrative	+	+	+	+	+	−
monosyllabicity	+	+	+	+	−	−
lengthening of *a* and *e*	+	+	+	−	−	−
vowel harmony	+	+	−	−	−	−
link vowel	+	−	−	−	−	−
selection of a suppletive stem	+	−	−	−	−	−

A. accusative, superessive

B. dative, inessive, elative, illative, adessive, ablative, allative, delative, sublative, instrumental, transformative

C. terminative, causal-final

D. temporal, essive

E. postpositions beginning with consonant

F. postpositions beginning with vowel

Table 1: Gradient phonological integration

These *-i* suffixed words can host inflectional affixes, as adjectives usually do.

(8)   (*Melyik virág-o-k   a   legszebb-e-k?*)   *A   fá-k*
       which   flower-LV-PL the most.beautiful-LV-PL the tree-PL
       között-i-e-k
       between-ADJR-LV-PL
       'Which flowers are the most beautiful? The ones between the trees'

(9)   (*Melyik bolt-ban lát-t-ad   a   cipő-t?*) *A pályaudvar*
       wich   shop-INE see-PST-2SG the shoe-ACC the station
       mellett-i-ben.
       next.to-ADJR-INE
       '(In which shop did you see the shoes?) In the one next to the station'

3.1.3   Coordination

The behaviour of suffixes and postpositions with respect to coordination can be viewed as the consequence of their different morpho-phonological statuses: suffixes, being morphologically bound, do not have wide scope over NP coordination, whereas postpositions, as independent words, do.

(10)   *a ház és a garázs előtt*
       the house and the garage before
       'in front of the house and the garage'

(11)   **a ház és a garázs-ban*
       the house and the garage-INE
       'in the house and the garage' (intended meaning)

    Moreover, postpositions, in contrast with case suffixes, can be coordinated (examples (12) and (13)). Note that coordination between a postposition and a case suffix is not possible (example (14)).

(12)   *a ház előtt és mögött*
       the house before and behind
       'in front of and behind the house'

(13)   **a ház-tól és -ből*   (14)   **a ház-ban és mellett*
       the house-ABL and -ELA   the house-INE and next.to

3.2   Common properties

3.2.1   Combinatorial property

Both postpositions and case suffixes appear on the right edge of an NP (examples (15) and (18)); they are strictly adjacent to the head noun (examples (17) and (20)). If the head noun is elided, both are adjacent to the rightmost element of the NP (examples (16) and (19)).

(15) *a kék ház-ban*
the blue house-INE
'in the blue house'

(18) *a kék ház mellett*
the blue house next.to
'next to the blue house'

(16) *a kék-ben*
the bleu-INE
'in the blue'

(19) *a kék mellett*
the blue next-to
'next to the blue'

(17) **az utca majdnem-ben*
the street almost-INE
'almost in the street'
(intended meaning)

(20) **a ház majdnem mellett*
the house almost   next.to
'almost next to the house'
(intended meaning)

3.2.2 Demonstrative agreement

Case-marked NPs as well as postpositional phrases (PPs) can combine with a demonstrative (noted DEM in the examples). In this case, they are both obligatorily repeated after the demonstrative.

(21) *eb-**ben** a szép   ház-**ban***
DEM-INE the beautiful house-INE
'in this beautiful house'

(22) *e   **mellett** a szép   ház **mellett***
DEM next.to the beautiful house next.to
'next to this beautiful house'

3.2.3 Grammatical and predicative uses

Both postpositions and case suffixes (except the accusative suffix) can be used as predicative complements of the copula and are thus fully contentful. Additionally, according to Kiefer (2000), all case suffixes, except the temporal suffix, can be subcategorized by a head. Moreover, according to Szende and Kassai (2001), seven postpositions can introduce a subcategorized dependent of a head (*ellen*, *eďtt*, *elől*, *után*, *iránt*, *mellett*, *alól*). Thus, their different morphological statuses do not correspond to different uses in the language.

4 Reanalysis of the essive *ként*

Considering the 3 differences between case suffixes and postpositions, the essive *ként* should be reanalysed as a postposition. From a phonological point of view, the essive does not show any affixal properties (cf. table 1). Moreover, using the online Hungarian National Corpus[5], we observe that the essive can host the derivational suffix *-i* (example (23)).

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[5]HNC: `http://mnsz.nytud.hu/index_eng.html`

(23) [...] *amely-ek a növény **drog-ként-i*** *elhasználás-á-ra*
which-PL the plant drug-ESS-ADJR using-3SG-SUB
utal-nak
make.reference-3PL
'[...] which make reference to the using of the plant as drug'

Finally, using the HNC, we find occurences of the essive suffix with possible wide scope over coordination (example (24)).

(24) Bloch Móricz, aki aztán később Ballagi Mór név-en **neves**
Bloch Móricz who then later Ballagi Mór name-SUP renowned
szótáríró és **tanulmányíró-ként** is ismer-t [...]
lexicographer and essayist-ESS also know-PST.3SG
' Móricz Bloch, who has later been known as Mór Ballagi and a renowned lexicographer and essayist [...]'

Under this new analysis, monosyllabicity cannot be viewed as a criterion to distinguish between case suffixes and postpositions. This reanalysis should be an issue for the analysis of Trommer (2008). According to his paper, case suffixes and postpositions are both functional heads belonging to the same morphosyntactic category (adposition), and monosyllabic adpositions are integrated into the Phonological Word of their nominal lexical head because they are prosodically too small. As an independent monosyllabic adposition, the essive does not fit into Trommer's theory of the Phonological Word.

5 Person-marked postpositions and defective postpositions

Hungarian postpositions realize their complement as a person suffix, whenever the complement has a pronominal form (cf. Table 2). In that case, the nominative pronoun is optional (examples (25) and (26)). These *person-marked postpositions* cannot combine with NPs headed by a noun (example (27)).

(25) *(én) mellett-em*; **(én) mellett*
I next.to-1SG I next.to
'next to me'

(26) *(ő) mellett-e*; **(ő) mellett*
he/she next.to-3SG he/she next.to
'next to him/her'

(27) **A ház mellett-e*; *A ház mellett*
the house next.to-3SG the house next.to
'next to the house'

	Person-marked postpositions		
	'next-to'	'after'	'to before'
1SG	*mellett-em*	*untán-am*	*elé-m*
2SG	*mellett-ed*	*untán-ad*	*elé-d*
3SG	*mellett-e*	*untán-a*	*elé*
1PL	*mellett-ünk*	*untán-unk*	*elé-nk*
2PL	*mellett-etek*	*untán-atok*	*elé-tek*
3PL	*mellett-ük*	*untán-uk*	*elé-jük*

Table 2: Person-marked postpositions paradigms

	Defective postpositions		
	'in'	'on'	'to in'
1SG	*benn-em*	*rajt-am*	*belé-m*
2SG	*benn-ed*	*rajt-ad*	*belé-d*
3SG	*benn-e*	*rajt-a*	*belé*
1PL	*benn-ünk*	*rajt-unk*	*belé-nk*
2PL	*benn-etek*	*rajt-atok*	*belé-tek*
3PL	*benn-ük*	*rajt-uk*	*belé-jük*

Table 3: Defective postpositions paradigms

Furthermore, following Creissels (2006), I consider that Hungarian displays defective postpositions, i.e. postpositions that appear only as hosts of person suffixes and cannot combine with non-pronominal NPs (example (28)). They are postpositions since they behave morphologically along the same pattern as *person-marked postpositions* (cf. Table 3) and have the same distributional properties (examples (29) and (30)) .

(28) **A ház   benn(e)*
      the house in
      'in the house' (intended meaning)

(29) *Ott van a bolt és mellett-e   a ház*
      there is   the shop and next.to-3SG the house
      'There is the shop and next to it the house'

(30) *Ott van az erdő   és benn-e a ház*
      there is   the garden and in-3SG the *house*
      'There is the garden and inside the house'

Note that postpositions and defective postpositions can be coordinated as shown in (31), whereas postpositions and case suffixes cannot, as we have seen in example (14).

(31) *benn-ünk és   mellett-ünk*
      in-1PL   and next.to-1PL

	1SG	2SG	3SG	1PL	2PL	3PL
nominative	*én*	*te*	*ő*	*mi*	*ti*	*ők*
accusative	*engem(et)*	*téged(et)*	*őt*	*minket*	*titeket*	*őket*

Table 4: Nominative and accusative personal pronouns

 'inside us and next to us'

  There are only two paradigms of personal pronouns in Hungarian: one for nominative, the other for accusative (Table 4). The other case suffixes are in complementary distribution with the defective postpositions. Indeed, where case suffixes cannot appear (**én-ben*), a defective postposition is used (*benn-em*)[6]. This is true only for 12 case suffixes, since *transformative*, *terminative* and *temporal* have no corresponding defective postposition and cannot be employed with a pronominal NP.

  Thus, Hungarian displays

 i. 35 postpositions that mostly can be inflected with person suffixes,

 ii. 16 case suffixes, among which only the accusative has a pronominal form, and three suffixes have no person form,

 iii. 12 defective postpositions that are in complementary distribution with 12 case suffixes.

6 An SBCG account

In the Hungarian grammatical tradition (Kenesei et al., 1998; Szende and Kassai, 2001; Rounds, 2001), postpositions and case suffixes are considered as two different objects, whereas, in recent linguistic studies (Asbury, 2007; Trommer, 2008), they tend to be analysed as realizing the same underlying syntactic category. In this paper, I consider case suffixes as inflectional material appearing on nominal heads, thus accounting for derivational- and combinatorial-specific properties. I use the MARKING feature (Pollard and Sag, 1994; Tseng, 1999, 2002; Van Eynde, 2001) to capture distributional similarities. Finally, I give an explicit analysis for defective postspositions, which accounts for their morphological and syntactic similarities to postpositions, and their distributional likeness to case-marked nouns.

6.1 Case suffixes

Hungarian nouns and adjectives can host a plural suffix, possessive suffixes and a case suffix. The plural suffix and the possessive suffixes belong to the same

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[6]Spencer and Stump (ms) provide an analysis, in the Paradigm Function Morphology theory, for defective postpositions that links case suffixes and defective postpositions as realizations of a single lexeme. Such an analysis, though probably preferable, cannot directly be implemented in HPSG/SBCG.
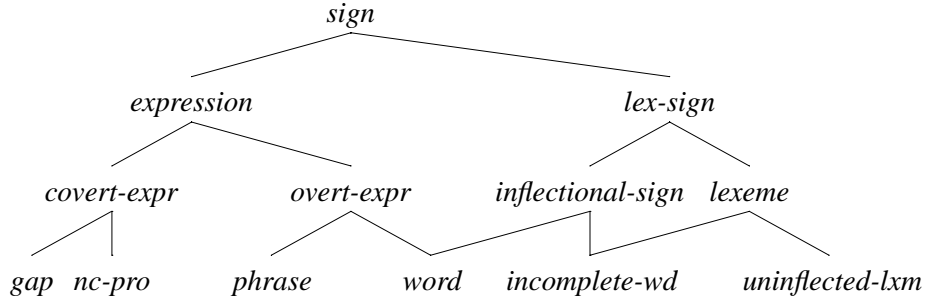
sign

expression   *lex-sign*

covert-expr   *overt-expr*   *inflectional-sign*   *lexeme*

gap   *nc-pro*   *phrase*   *word*   *incomplete-wd*   *uninflected-lxm*

Figure 1: Hierarchy of sign

infl-cxt

. . .   *noun-adj-cxt*

poss-pl-cxt   *case-cxt*

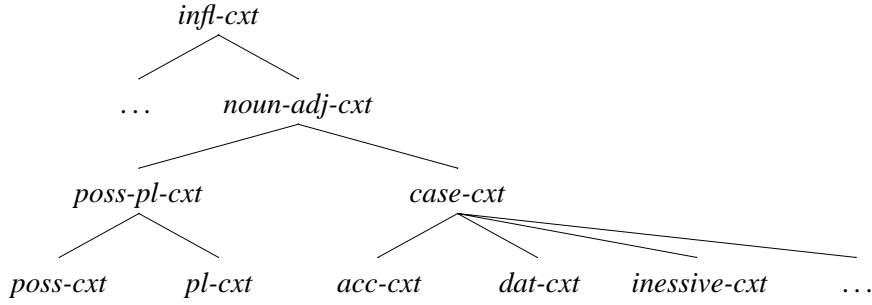*poss-cxt*   *pl-cxt*   *acc-cxt*   *dat-cxt*   *inessive-cxt*   . . .

Figure 2: Partial hierarchy of inflectional-cxt

position class. So we can have: *noun*-(PL)-(CASE) (*ház-ok-ban*, house-PL-INE) or *noun*-(POSS)-(CASE) (*ház-am-ban*, house-POSS.1SG-INE). In order to account for this, I postulate the hierarchy of *sign* adapted from Sag (2010) and presented in figure 1, as well as the partial hierarchy of *inflectional-cxt* sketched in figure 2.

On one hand, the inflectional construction for plural and possession, *possessive-plural-cxt*, is satisfied only by *uninflected-lexeme* and produces an *incomplete-word*, as shown in (32). On the other hand, *case-cxt*, presented in (33), can be satisfied by *lexeme*, ensuring that case suffixes appear either directly on the noun or after possessive or plural suffixes.

(32)   *poss-pl-cxt*:

$$\begin{bmatrix} \text{MTR} & [\textit{inflectional-sign}] \\ \text{DTRS} & \left\langle [\textit{uninflected-lexeme}] \right\rangle \end{bmatrix}$$

(33)   *case-cxt*:

$$\begin{bmatrix} \text{MTR} & [\textit{word}] \\ \text{DTRS} & \left\langle [\textit{lexeme}] \right\rangle \end{bmatrix}$$

Each subtype of *case-cxt* concatenates the appropriate suffix to the PHON of the noun or adjective base. It specifies an appropriate value for the MARKING feature. Moreover, I postulate the partial hierarchy of *category* sketched in figure 3: *adjective* and *noun* are both subtypes of *noun-adj* because they share inflectional properties, and *noun* and *postposition* are subtypes of *noun-post* since they have common derivational properties (in particular, derivation with *i* suffix). For exam-

ple, *inessive-cxt* is presented in (34)[7].

(34)   *inessive-cxt*:

$$
\begin{bmatrix}
\text{MTR} & \begin{bmatrix} \textit{word} \\ \text{PHON} \;\boxed{1} \oplus bAn \\ \text{SYN} \;\; \begin{bmatrix} \text{MARKING} \; \textit{inessive} \end{bmatrix} \end{bmatrix} \\[2em]
\text{DTRS} & \left\langle \begin{bmatrix} \textit{lexeme} \\ \text{PHON} \;\boxed{1} \\ \text{SYN} \;\; \begin{bmatrix} \text{CAT} \; \textit{noun-adj} \end{bmatrix} \end{bmatrix} \right\rangle
\end{bmatrix}
$$

non-verbal

noun-adj   *noun-post*
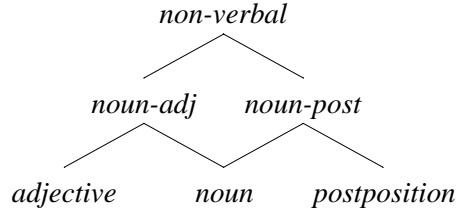
adjective   *noun*   *postposition*

Figure 3: Partial hierarchy for *category* type values

6.2   Postpositions

Postpositions are represented as lexemes[8] having a specific CAT value and an inherent MARKING feature, which takes the form of the postposition as value. Postpositions can be realized as *word* either by means of the *naked-post-cxt* or of the *person-marked-post-cxt*. As shown in (35), the *naked-post-cxt* takes a *uninflected-lexeme* as daughter and produces a mother that is a *word* but otherwise identical to the daughter. This construction is satisfied by a *lexeme* containing an argument with *non-pronominal* content, thus giving a *word* which combines syntactically with an NP that cannot be a pronoun.

(35)   *nkd-post-cxt*:

$$
\begin{bmatrix}
\text{MTR} & \begin{bmatrix} \textit{word} \\ \text{PHON} \;\boxed{1} \end{bmatrix} \\[1em]
\text{DTRS} & \left\langle \begin{bmatrix} \textit{uninflected-lexeme} \\ \text{PHON} \;\boxed{1} \\ \text{SYN} \; \begin{bmatrix} \text{CAT} & \textit{postposition} \\ \text{MARKING} & \textit{marked} \end{bmatrix} \\ \text{ARG-ST} \; \langle \text{CONT} \; \textit{non-pro} \rangle \end{bmatrix} \right\rangle
\end{bmatrix}
$$

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[7]In this paper, I simplify the morphological rules and do not account for the internal sandhi phenomena that occur with affixation. The notation *bAn* means that the vowel of the suffix undergoes vowel harmony.

[8]All the postpositions of Hungarian need to be *uninflected-lexeme* in the lexicon, in order to satisfy the derivational construction introducing the *-i* suffix (*i-deriv-cxt*).

As we saw previously, postpositions realize pronominal complements as person suffix with an optional nominative pronoun (cf. examples (25) and (26)). Considering that this is a case of optional pro-drop, I follow the treatment of Bonami and Samvelian (ms) for pro-drop in Persian. I use the *non-canonical-pronoun* type, which is a subtype of *covert-expr* (cf. hierarchy in figure 1). *nc-pro* is defined as having a *pronominal* value for the feature CONT. Then, if an argument is of type *nc-pro*, it is not syntactically realized and it has a *pronominal* content.
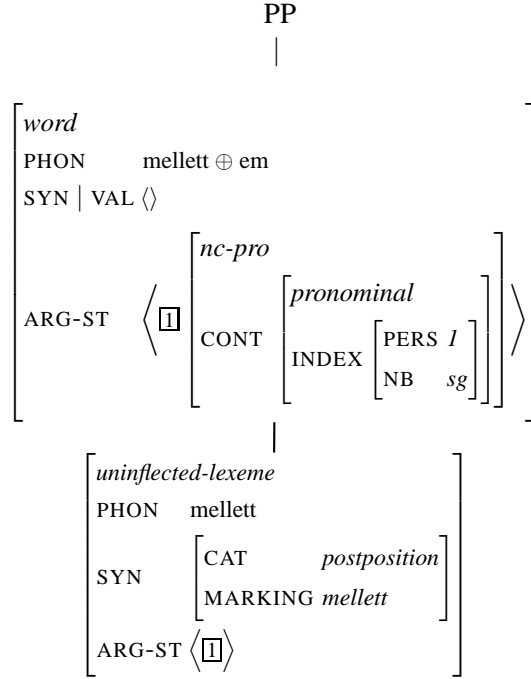
The morphological realization of pronominal complement is introduced by means of *person-marked-post-cxt*. An example for first-person singular postpositions is presented in (36).

(36)   *1sg-mrkd-post-cxt*:

$$
\begin{bmatrix}
\text{MTR} & \begin{bmatrix}
\textit{word} \\
\text{PHON} & \boxed{1} \oplus \textit{em} \\
\text{ARG-ST} & \left\langle \boxed{2} \begin{bmatrix} \text{CONT} & \begin{bmatrix} \textit{pronominal} \\ \text{INDEX} & \begin{bmatrix} \text{PERS} & \textit{1} \\ \text{NB} & \textit{sg} \end{bmatrix} \end{bmatrix} \end{bmatrix} \right\rangle
\end{bmatrix} \\
\text{DTRS} & \left\langle \begin{bmatrix}
\textit{uninflected-lexeme} \\
\text{PHON} & \boxed{1} \\
\text{SYN} & \begin{bmatrix} \text{CAT} & \textit{postposition} \\ \text{MARKING} & \textit{marked} \end{bmatrix} \\
\text{ARG-ST} & \left\langle \boxed{2} \right\rangle
\end{bmatrix} \right\rangle
\end{bmatrix}
$$

The argument on the ARG-ST has a *pronominal* content and its type of sign is underspecified. Thus, depending on whether the argument has the *nc-pro* type or the *overt-expression* type, this construction accounts for both 'pro-drop' (*mellet-em*) and 'agreement' (*én melletem*) situations. If the argument has the *nc-pro* type, it is realized only in morphology and the person-marked postposition forms a PP on its own, as shown in example (37). In contrast, if the argument has an *overt-expr* type, it is realized both in morphology and in syntax (example (38)).

(37) *mellett-em* 'next to me'   PP
      (**pro-drop**) |

$$
\begin{bmatrix}
\textit{word} \\
\text{PHON} \quad \text{mellett} \oplus \text{em} \\
\text{SYN} \mid \text{VAL} \ \langle \rangle \\[4pt]
\text{ARG-ST} \quad \left\langle\, \boxed{1}
\begin{bmatrix}
\textit{nc-pro} \\
\text{CONT}
\begin{bmatrix}
\textit{pronominal} \\
\text{INDEX}
\begin{bmatrix}
\text{PERS} \ \textit{1} \\
\text{NB} \quad \textit{sg}
\end{bmatrix}
\end{bmatrix}
\end{bmatrix}
\,\right\rangle
\end{bmatrix}
$$

|

$$
\begin{bmatrix}
\textit{uninflected-lexeme} \\
\text{PHON} \quad \text{mellett} \\[2pt]
\text{SYN}
\begin{bmatrix}
\text{CAT} \quad \textit{postposition} \\
\text{MARKING} \ \textit{mellett}
\end{bmatrix} \\[6pt]
\text{ARG-ST} \ \langle\, \boxed{1} \,\rangle
\end{bmatrix}
$$

(38) *én mellett-em* 'next to me' (**agreement**)

PP

$$
\boxed{1}
\begin{bmatrix}
\textit{word} \\
\text{PHON} \quad \text{én} \\[2pt]
\text{SYN}
\begin{bmatrix}
\text{CAT} \quad \textit{noun} \\
\text{MARKING} \ \textit{unmrkd}
\end{bmatrix} \\[4pt]
\text{ARG-ST} \ \textit{elist} \\[4pt]
\text{CONT}
\begin{bmatrix}
\textit{pronominal} \\
\text{INDEX}
\begin{bmatrix}
\text{PERS} \ \textit{1} \\
\text{NB} \quad \textit{sg}
\end{bmatrix}
\end{bmatrix}
\end{bmatrix}
\qquad
\begin{bmatrix}
\textit{word} \\
\text{PHON} \quad \text{mellett} \oplus \text{em} \\
\text{SYN} \mid \text{VAL} \ \langle\, \boxed{1} \,\rangle
\end{bmatrix}
$$

|

$$
\begin{bmatrix}
\textit{uninflected-lexeme} \\
\text{PHON} \quad \text{mellett} \\[2pt]
\text{SYN}
\begin{bmatrix}
\text{CAT} \quad \textit{postposition} \\
\text{MARKING} \ \textit{mellett}
\end{bmatrix} \\[6pt]
\text{ARG-ST} \ \langle\, \boxed{1} \,\rangle
\end{bmatrix}
$$
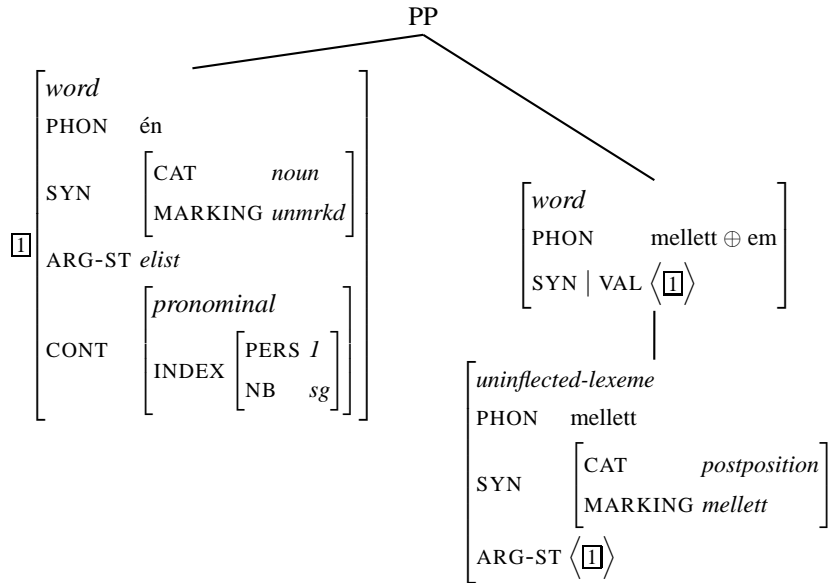
6.3 Demonstrative agreement

Using the MARKING feature, we can now handle the agreement of postpositions
and case suffixes with the demonstrative. I postulate that Hungarian displays a sub-
type of *head-functor-cxt*, called *demonstrative-head-functor-cxt* (presented in (39))
and specifying that the MOTHER and the DAUGHTERS must share their MARKING

value when one of the DAUGHTERS has a positive value for the DEMONSTRATIVE feature.

(39)   *dem-hd-func-cxt*:

$$\begin{bmatrix} \text{MTR} & [\text{SYN} \mid \text{MARKING } \boxed{1}] \\ \text{DTRS} & \left\langle \begin{bmatrix} \text{SYN} & \begin{bmatrix} \text{MARKING } \boxed{1} \\ \text{CAT} \mid \text{DEM } + \end{bmatrix} \end{bmatrix}, \begin{bmatrix} \text{SYN} & \begin{bmatrix} \text{MARKING } \boxed{1} \\ \text{CAT} \mid \text{DEF } + \end{bmatrix} \end{bmatrix} \right\rangle \end{bmatrix}$$

6.4 Defective postpositions

Defective postpositions are a subtype of *postpositions* which cannot satisfy the *naked-post-cxt*, because they lexically require an argument with *pronominal* content. The MARKING value of each defective postposition corresponds to that of the case suffix with which this postposition is in complementary distribution.
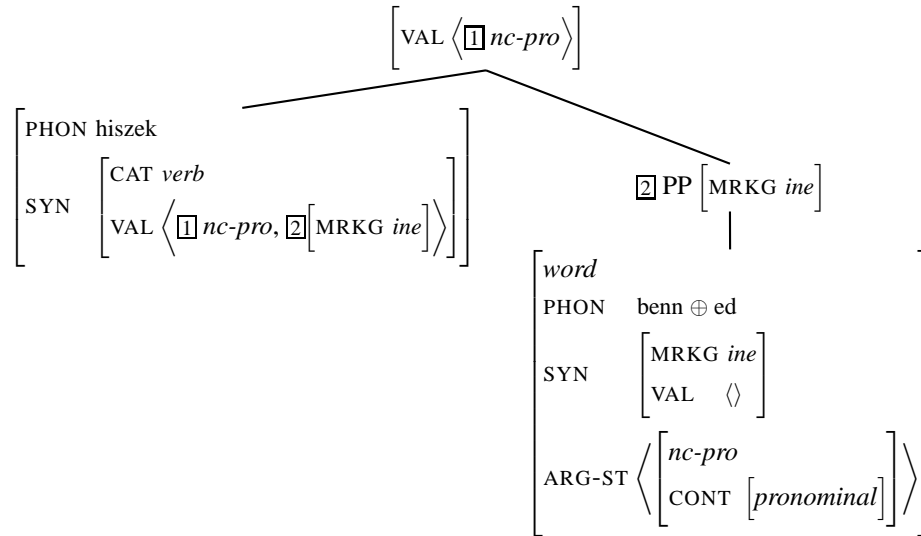
(40)   *defect-post-lxm*:   (41)   *inessive-defect-post-lxm*:

$$\begin{bmatrix} \textit{uninflected-lexeme} \\ \text{ARG-ST} \ \left\langle [\text{CONT } \textit{pronominal}] \right\rangle \end{bmatrix}$$

$$\begin{bmatrix} \textit{uninflected-lexeme} \\ \text{ARG-ST} \ \left\langle [\text{CONT } \textit{pronominal}] \right\rangle \\ \text{SYN} \quad [\text{MARKING } \textit{inessive}] \end{bmatrix}$$

As postpositions, defective postpositions head a PP in syntax. Thus, the heads subcategorizing a case suffix select the MARKING feature of their argument, which can be of part of speech noun, as in example (43), or postposition, as in example (42).

(42)   Verb selecting an inessive PP: *hiszek **benned*** 'I believe in you'

$$\begin{bmatrix} \text{VAL} \ \left\langle \boxed{1} \textit{nc-pro} \right\rangle \end{bmatrix}$$

$$\begin{bmatrix} \text{PHON hiszek} \\ \text{SYN} & \begin{bmatrix} \text{CAT } \textit{verb} \\ \text{VAL} \ \left\langle \boxed{1} \textit{nc-pro}, \boxed{2}[\text{MRKG } \textit{ine}] \right\rangle \end{bmatrix} \end{bmatrix}$$

$$\boxed{2} \text{PP} \begin{bmatrix} \text{MRKG } \textit{ine} \end{bmatrix}$$

$$\begin{bmatrix} \textit{word} \\ \text{PHON} & \text{benn} \oplus \text{ed} \\ \text{SYN} & \begin{bmatrix} \text{MRKG } \textit{ine} \\ \text{VAL} & \langle \rangle \end{bmatrix} \\ \text{ARG-ST} & \left\langle \begin{bmatrix} \textit{nc-pro} \\ \text{CONT} & [\textit{pronominal}] \end{bmatrix} \right\rangle \end{bmatrix}$$

(43)   Verb selecting an inessive NP: *hiszek János**ban*** 'I believe in János'

$$
\left[\text{VAL}\ \left\langle \boxed{1}\ \textit{nc-pro}\right\rangle\right]
$$

$$
\begin{bmatrix}
\text{PHON hiszek} \\
\text{SYN}\begin{bmatrix}\text{CAT } \textit{verb} \\ \text{VAL } \left\langle \boxed{1}\ \textit{nc-pro},\ \boxed{2}\begin{bmatrix}\text{MRKG } \textit{ine}\end{bmatrix}\right\rangle\end{bmatrix}
\end{bmatrix}
\qquad
\boxed{2}\ \text{NP}\begin{bmatrix}\text{MRKG } \textit{ine}\end{bmatrix}
$$

$$
\begin{bmatrix}
\textit{word} \\
\text{PHON János} \oplus \text{ban} \\
\text{SYN}\begin{bmatrix}\text{CAT} & \textit{noun} \\ \text{MRKG} & \textit{ine}\end{bmatrix}
\end{bmatrix}
$$
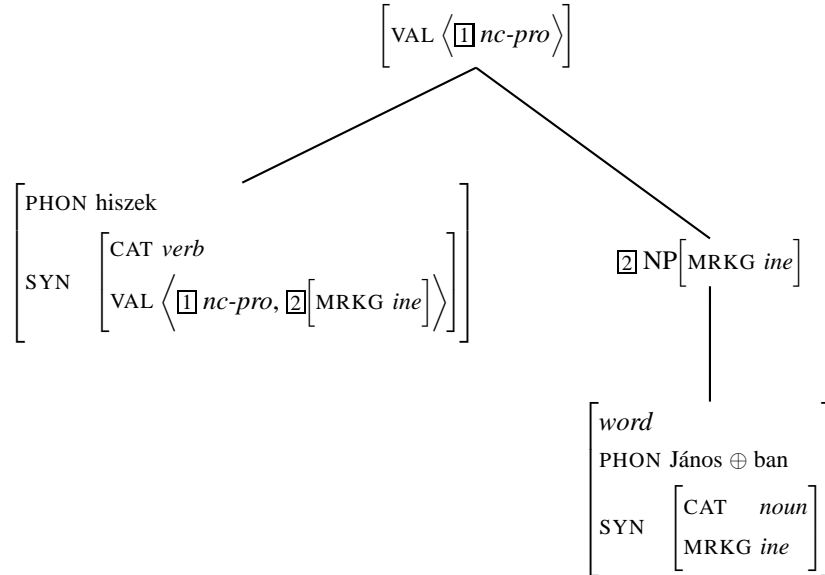
6.5 Derivational suffix *-i*

I also want to provide an account for the fact that *postpositions* can receive the *-i* adjectivizer suffix, unlike case-marked nouns or defective postpositions. The construction introducing this derivational suffix (*i-deriv-cxt* in (44)) is well formed if its argument has a non-pronominal content, ensuring that defective postpositions cannot satisfy this construction. The MTR of this construction is an *uninflected-lexeme*, thus allowing inflectional constructions to apply (cf. examples (8) and (9)). Following the hierarchy of category values in figure 3, I use a *noun-post* type in order to capture the fact that both nouns and postpositions can be *-i* suffixed. The impossibility for case-inflected nouns to host the *-i* suffix is straightfowardly accounted: *i-deriv-cxt* is a lexeme-to-lexeme construction, while case-marked nouns have the *word* type.

(44)   *i-deriv-cxt*:

$$
\begin{bmatrix}
\text{MTR} & \begin{bmatrix}\textit{uninflected-lexeme} \\ \text{PHON } \boxed{1} \oplus \text{I} \\ \text{SYN}\begin{bmatrix}\text{CAT} & \textit{adjective} \\ \text{MARKING} & \boxed{2}\end{bmatrix}\end{bmatrix} \\
\text{DTRS} & \left\langle \begin{bmatrix}\textit{uninflected-lexeme} \\ \text{PHON } \boxed{1} \\ \text{SYN}\begin{bmatrix}\text{CAT} & \textit{noun-post} \\ \text{MARKING} & \boxed{2}\end{bmatrix} \\ \text{ARG-ST } \left\langle\begin{bmatrix}\text{CONT } \textit{non-pro}\end{bmatrix}\right\rangle\end{bmatrix}\right\rangle
\end{bmatrix}
$$
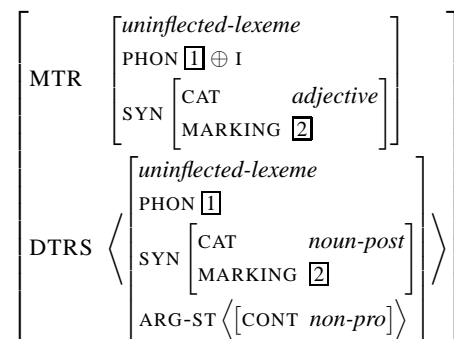
6.6 Nominative and accusative pronouns

Finally, in the case of the accusative suffix, we have an *accusative-cxt*, i.e. a subtype of *case-cxt* introducing an *accusative* value for the noun's feature MARKING. The accusative personal pronouns as well as the nominative ones are lexically specified as having the *word* type, since they cannot satisfy any derivational or inflectional construction.

(45) *én*:

$$
\begin{bmatrix}
word \\
\text{ARG-ST } elist \\
\text{SYN } \begin{bmatrix} \text{CAT} & noun \\ \text{MARKING} & unmrkd \end{bmatrix}
\end{bmatrix}
$$

(46) *engemet*:

$$
\begin{bmatrix}
word \\
\text{ARG-ST } elist \\
\text{SYN } \begin{bmatrix} \text{CAT} & noun \\ \text{MARKING} & accusative \end{bmatrix}
\end{bmatrix}
$$

7 Conclusion

In this paper, I have described the properties of case suffixes, postpositions and defective postpositions, showing that the *essive* suffix should be reanalysed as a postposition and that defective postpositions are true postpositions from both a morphological and a syntactic point of view.

In order to deal with these facts, I have proposed to analyse case suffixes and postpositions as two different objects: case suffixes are inflectional material on nominal heads, and postpositions as well as defective postpositions are independent words subcategorizing an NP. This distinction straightforwardly accounts for morphological and syntactic differences. Finally, the shared distributional properties between case suffixes, postpositions and defective postpositions are captured by means of the use of the MARKING feature.

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