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Modelling possession, agreement, and "anti-agreement" in Hungarian DPs: A paradigmatic approach

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1.1. Introduction

previous LFG analyses of Hungarian possessive DPs

mainly concentrated on basic (morpho)syntactic issues, e. g.

- c-structure representation
- the treatment of possessor pro-drop
- the grammatical/discourse functions of nominative and dative possessors
- the encoding of definiteness

cf. Laczkó (1995, 2017), Chisarik & Payne (2001), and Charters (2014), a. o.

aims of this presentation

- modelling possessivity and (anti-)agreement
- an LFG (& XLE) paradigmatic approach

  ↔ Laczkó's (2001) morph-based proposal

1.2. Introduction

structure of this presentation

1. Introduction
2. The basic facts
3. Developing a paradigmatic LFG (& XLE) analysis
4. Anti-agreement
5. External possessors
6. Conclusion

2.1. The basic facts

1. ***Two different possessor constituents.*** Hungarian possessive DPs have nominative or dative possessors, see (1a) and (1b).
2. ***Agreement.*** The possessed noun agrees with the possessor, see (1a-c), and possessor pro-drop is possible (typical), see (1c).

(1) a. *Kati* *toll-a*
Kate.NOM pen-her
'Kate's pen'

b. *Kati-nak* *a* *toll-a*
Kate-DAT the pen-her
'Kate's pen'

c. *a* *(mi)* *toll-unk*
the we pen-our
'our pen'

2.2. The basic facts

3. ***Morphosyntactic features and agglutination. The general view.*** The possessum exhibits rich inflectional behaviour: it is morphologically marked for (i) POSSESSION (ii) NUMBER (iii) AGREEMENT with the possessor. In the most transparent (i.e. truly agglutinative) cases, three different (strictly ordered) morphs encode these morphosyntactic features, see (2a), cf. Bartos (2000) & Kiefer (2000).
4. ***Lack of (full) agglutination.*** There are several feature value combinations in the case of which we can only find two overt inflectional elements or one attached to the noun stem, see (2b) and (2c,d), respectively. Note that *-i* is the plural marker of the possessum, cf. (2a,b,d), and *-k* is the plural marker of ordinary nouns, e.g. *a hajó-k* 'the ships'.

(2) a. *a* *toll-**a-i-nk***
the pen-POSS-PL-1PL
'our pens'

b. *a* *toll-**a-i***
the pen-POSS-PL.3SG
'her pens'

c. *a* *toll-**a***
the pen-POSS.SG.3SG
'her pen'

d. *a* *hajó-**i***
the ship-POSS.PL.3SG
'her ships'

In the glosses POSS is usually omitted.

2.3. The basic facts

5. ***Agreement (1PERS & 2PERS).*** In the case of first and second person possessors (which are obviously pronouns), there is a regular agreement relationship between the possessor and the (inflected) posse ssum, see (1c).

(1) c. ***a (mi) toll-unk***
the we pen-1PL
'our pen'

6. ***Agreement (3SG).*** In the case of third person possessors, the regular agreement pattern is followed when the possessor (whether a referential DP or a pronoun) is singular, see (3a) and (3b).

(3) a. *a lány toll-a*
the girl.NOM pen-3SG
'the girl's pen'

b. *az ő toll-a*
the she.NOM pen-3SG
'her pen'

2.4. The basic facts

7. ***Anti-agreement (3PL):*** when the (interpretation of the) third person possessor is plural, we find two exceptional (economy-driven) agreement phenomena, which are mirror images of each other.

2.5. The basic facts

7. Anti-agreement (3PL)

A. If the plural possessor is a referential DP, the possessum has 3SG possessor marking: (4).

(4) *a lány-ok *toll-uk / toll-a*
the girl-**PL**.NOM pen-3PL pen-**3SG**
'the girls' pen'

B. If the possessor is a (droppable) pronoun, the possessum has 3PL agreement marking, and when the pronominal possessor is overt, it must be in its 3SG form: (5).

(5) *az *ők / ő toll-uk / *toll-a*
the they.NOM **she**.NOM pen-**3PL** pen-3SG
'**their** pen'

Thus, both patterns exhibit anti-agreement with respect to the ordinary dual (= agreeing) encoding of PL in opposite directions.

2.6. The basic facts

8. External possessors. The (always dative-marked) possessor can occur externally to the possessive DP. When this external possessor is a 3PL referential DP, the inflection on the possessum can follow either the regular agreement pattern or the anti-agreement version, see (6) and (7), respectively.

(6) *A lány-ok-nak elvesz-ett a toll-uk.*
the girl-**PL**-DAT get.lost-PAST.3SG the pen-**3PL**.NOM
'The girls' pen got lost.'

(7) *A lány-ok-nak nem lát-tam a toll-á-t.*
the girl-**PL**-DAT not see-PAST.1SG the pen-**3SG**-ACC
'I didn't see the girls' pen.'

3.1. Developing a paradigmatic LFG analysis

When the possessum follows a strictly agglutinative pattern, as in (2a), the analysis could be rather straightforward from a general morphological point of view. A particular morpheme (realized by its allomorphs) needs to be associated with the relevant feature value(s).

(2) a. *a* *toll-a-i-nk*
the pen-POSS-PL-1PL
'our pens'

b. *a* *toll-a-i*
the pen-POSS-PL.3SG
'her pens'

c. *a* *toll-a*
the pen-POSS.SG.3SG
'her pen'

d. *a* *hajó-i*
the ship-POSS.PL.3SG
'her ships'

3.2. Developing a paradigmatic LFG analysis

- When the morphological composition of a word is not (fully) agglutinative, as in (2b-d), basically there are three strategies that can be followed: Item and Arrangement (IA), Item and Process (IP), and Word and Paradigm (WP), see Spencer (1991).
- **IA** is templatic in nature: it assumes strictly ordered morpheme positions, and, consequently, it needs to admit zero (allo)morphs when there is no full (overt) agglutination.
- **IP**, instead, fuses two or more ("underlying") morphemes into a single morph in such cases.
- **WP**, by contrast, employs paradigmatic slots the feature value combinations of which are realized by particular word forms of varied morphological compositions (whether fully agglutinative or not).
- LFG's architecture and principles are not compatible with IA and IP, because the theory fundamentally rejects empty/zero elements (IA) and deep (morphological) structure → surface (morphological) structure transformations (IP).

3.3. Developing a paradigmatic LFG analysis

There have been analyses of the relevant Hungarian phenomena along both the IA and the IP lines. Compare the crucial aspects of the treatments of ***toll-unk*** 'our pen' in Kiefer's (2000) and Bartos's (2000) frameworks (with the number feature of the possessum ignored for simplicity's sake) in (8) and (9), respectively, and compare them with an analysis in the spirit of WP in (10).

(8) Kiefer (2000) – IA	STEM	POSS	AGRN (1PL)	MORPHEMES
	toll	0	-unk	MORPHS
(9) Bartos (2000) – IP	STEM	POSS	AGRN (1PL)	MORPHEMES
	toll	-unk		MORPHS – AFTER FUSION
(10) – WP	STEM	{POSS; AGR: 1PL}		PARADIGMATIC SLOT
	toll	-unk		MORPHS

3.4. Developing a paradigmatic LFG analysis

In the possessive paradigm, the presence of the stem and the POSS feature is obligatory, and the combination of the number feature values of the possessum (SG vs PL) and the (possessor) agreement feature values yields 12 paradigmatic slots, see (11).

(11)	STEM	{POSS; NUM; AGR}	{POSS; NUM; AGR}
		{POSS; SG; 1SG}	{POSS; PL; 1SG}
		{POSS; SG; 2SG}	{POSS; PL; 2SG}
		{POSS; SG; 3SG}	{POSS; PL; 3SG}
		{POSS; SG; 1PL}	{POSS; PL; 1PL}
		{POSS; SG; 2PL}	{POSS; PL; 2PL}
		{POSS; SG; 3PL}	{POSS; PL; 3PL}

3.5. Developing a paradigmatic LFG analysis

If we wanted to capture, in an LFG way, the agglutinative and the not (fully) agglutinative cases of satisfying the requirements of the paradigmatic slots by treating all overt morphological elements individually, i.e. **in a morph-based approach**, we would very often need lexical forms for these morphological pieces with disjunctive annotations, as sketched in Laczkó (2001).

This would be closest in spirit to IP with its fusional operation; except that here no real fusion is assumed to take place. Instead, the result of fusion is encoded. And the fusional effect itself is modelled by the combination of more than one annotation in one of the disjuncts.

3.6. Developing a paradigmatic LFG analysis

(A) a morph-based approach

(2) a. *a* *toll-a-i-nk*
the pen-POSS-PL-1PL
'our pens'

b. *a* *toll-a-i*
the pen-POSS-PL.3SG
'her pens'

c. *a* *toll-a*
the pen-POSS.SG.3SG
'her pen'

d. *a* *hajó-i*
the ship-POSS.PL.3SG
'her ships'

(12)	STEM	{POSS; NUM; AGR}	{POSS; NUM; AGR}
	toll 'pen' [2a-c]	{POSS; SG; 1SG}	{POSS; PL; 1SG}
		{POSS; SG; 2SG}	{POSS; PL; 2SG}
		{POSS; SG; 3SG} *a* [2c]	{POSS; PL; 3SG} *a+i* [2b] *i* [2d]
	hajó 'ship' [2d]	{POSS; SG; 1PL}	{POSS; PL; 1PL} *a+i+nk* [2a]
		{POSS; SG; 2PL}	{POSS; PL; 2PL}
		{POSS; SG; 3PL}	{POSS; PL; 3PL}

(13) -nk (↑ POSS) [2a]
(↑ POSS PERS) = 1
(↑ POSS NUM) = PL
((↑ POSS PRED) = 'PRO')

(14) -a { (↑ POSS) [2a,b]
| (↑ POSS)
(↑ POSS PERS) = 3 [2c]
(↑ POSS NUM) = SG
(↑ NUM) = SG
((↑ POSS PRED) = 'PRO') }

(15) -i { (↑ POSS) [2a]
(↑ NUM) = PL
| (↑ POSS) [2b,d]
(↑ NUM) = PL
(↑ POSS PERS) = 3
(↑ POSS NUM) = SG
((↑ POSS PRED) = 'PRO') }

3.7. Developing a paradigmatic LFG analysis

(A) a morph-based approach

main advantage

- morph-based → morphologically transparent with predictive/explanatory force

main disadvantages

- requires a very complex, sophisticated annotational apparatus with a whole range of conditions and constraints
- problematic implementationally (cf. fst morphological analyzer)
- (maybe) not maximally realistic psychologically

3.8. Developing a paradigmatic LFG analysis

(2)

a.	*a*	*toll-aink*	b.	*a*	*toll-ai*
	the	pen-POSS.PL.1PL		the	pen-POSS.PL.3SG
	‘our pens’			‘her pens’	
c.	*a*	*toll-a*	d.	*a*	*hajó-i*
	the	pen-POSS.SG.3SG		the	ship-POSS.PL.3SG
	‘her pen’			‘her ships’	

(B) a WP alternative

each paradigmatic slot is filled with a single, internally unanalyzed morphological element (realized by several allomorphs)

(16)	{POSS; NUM; AGR}		{POSS; NUM; AGR}	
	{POSS; SG; 1SG}:	m, am, em, om, om	{POSS; PL; 1SG}:	im, aim, eim, jaim, jeim
	{POSS; SG; 2SG}:	d, ad, ed, od, öd	{POSS; PL; 2SG}:	id, aid, eid, jaid, jeid
	{POSS; SG; 3SG}:	a [2c], e, ja, je	{POSS; PL; 3SG}:	i [2d], ai [2b], ei, jai, jei
	{POSS; SG; 1PL}:	nk, unk, ünk	{POSS; PL; 1PL}:	ink, aink [2a], eink, jaink, jeink
	{POSS; SG; 2PL}:	tok, tek, tök, atok, etek, ötök	{POSS; PL; 2PL}:	itok, itek, aitok, eitek, jaitok, jeitek
	{POSS; SG; 3PL}:	uk, ük, juk, jük	{POSS; PL; 3PL}:	ik, aik, eik, jaik, jeik

3.9. Developing a paradigmatic LFG analysis

(B) a WP alternative

(2) a. *a* *toll-aink*
the pen-POSS.PL.1PL
'our pens'

b. *a* *toll-ai*
the pen-POSS.PL.3SG
'her pens'

c. *a* *toll-a*
the pen-POSS.SG.3SG
'her pen'

d. *a* *hajó-i*
the ship-POSS.PL.3SG
'her ships'

(13) -nk (↑ POSS) [2a]
(↑ POSS PERS) = 3
(↑ POSS NUM) = SG
((↑ POSS PRED) = 'PRO')

(14) -a { (↑ POSS) [2a,b]
| (↑ POSS)
(↑ POSS PERS) = 3 [2c]
(↑ POSS NUM) = SG
((↑ POSS PRED) = 'PRO') }

(15) -i { (↑ POSS) [2a]
(↑ NUM) = PL
| (↑ POSS) [2b,d]
(↑ NUM) = PL
(↑ POSS PERS) = 3
(↑ POSS NUM) = SG
((↑ POSS PRED) = 'PRO') }

(17) -ink, -aink, -eink, -jaink, -jeink
(↑ POSS) [2a]
(↑ NUM) = PL
(↑ POSS PERS) = 1
(↑ POSS NUM) = PL
((↑ POSS PRED) = 'PRO')

(18) -a, -e, -ja, -je (↑ POSS) [2c]
(↑ NUM) = SG
(↑ POSS PERS) = 3
(↑ POSS NUM) = SG
((↑ POSS PRED) = 'PRO')

(19) -i, -ai, -ei, -jai, -jei (↑ POSS) [2b,d]
(↑ NUM) = PL
(↑ POSS PERS) = 3
(↑ POSS NUM) = SG
((↑ POSS PRED) = 'PRO')

3.10. Developing a paradigmatic LFG analysis

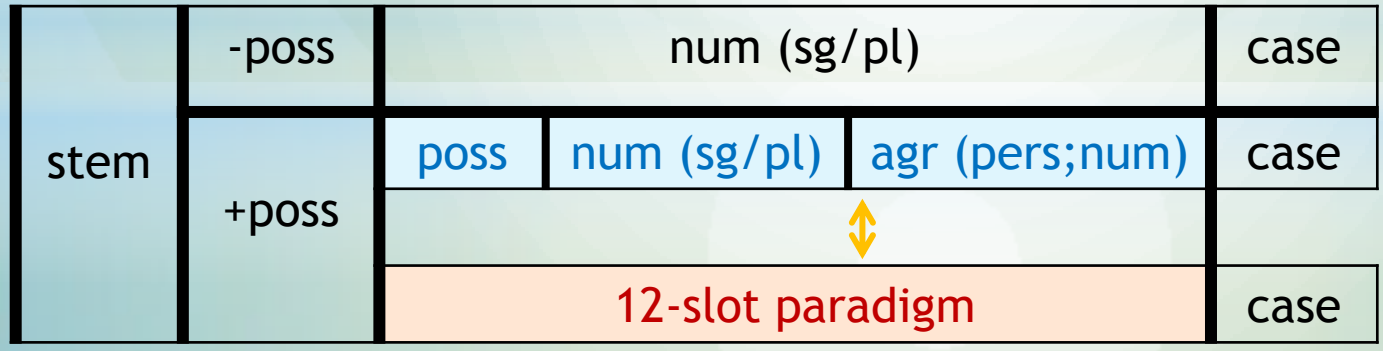
(B) a WP alternative

main disadvantage

- no direct/principled treatment of the unanalyzed morph-complexes with otherwise identifiable morphological pieces (but this follows from the very nature of WP)

main advantages

- admits a remarkably simple formal apparatus
- absolutely feasible implementationally (cf. fst morphological analyzer), see Prószéky (2000)
- (maybe) even more realistic psychologically



Cf. (**I** + **ek**)
*Szeret-**lek**.*
love-1SG(SU).2SG(OB)
'I love you.'

3.11. Developing a paradigmatic LFG analysis

(B) a WP alternative

- the treatment, in this approach, of two marked morphosyntactic phenomena: anti-agreement (section 4) and external possessors (section 5)

4.1. Anti-agreement

(A) plural non-pronominal possessor ⇔ singular agreement morphology

(4) *a lány-ok *toll-uk / toll-a*
the girl-**PL**.NOM pen-3PL pen-**3SG**
'the girls' pen'

(B) singular (droppable) pronominal possessor ⇔ plural agreement morphology

(5) *az *ők / ő toll-uk / *toll-a*
the they.NOM **she**.NOM pen-**3PL** pen-3SG
'**their** pen'

4.2. Anti-agreement

(A) second disjunct:

the paradigmatic morph requires a 3PL non-pronominal possessor

(4) *a lány-ok *toll-uk / toll-a*
the girl-**PL**.NOM pen-3PL pen-**3SG**
'the girls' pen'

(21) -a, -e, -ja, -je (↑ POSS)
(↑ NUM) = SG
{ (↑ POSS PERS) = 3
(↑ POSS NUM) = SG
| (↑ POSS PERS) =c 3
(↑ POSS NUM) =c PL
(↑ POSS PRED FN) ~= 'PRO' }

(5) *az *ők / ő toll-uk / *toll-a*
the they.NOM **she**.NOM pen-**3PL** pen-3SG
'**their** pen'

(B) second disjunct:

when the pronoun ***ő*** has the POSS function, it is underspecified for the number feature

(22) **ő** { (↑ PRED) = 'PRO'
(↑ PERS) = 3
(↑ NUM) = SG
(↑ CASE) = NOM
(SUBJ ↑)

⟷

| (↑ PRED) = 'PRO'
(↑ PERS) = 3
(↑ NUM)
(↑ CASE) = NOM
(POSS ↑) }

5.1. External possessors

The (always dative-marked) possessor can occur externally to the possessive DP. When this external possessor is a 3PL referential DP, the inflection on the possessum can follow either the regular agreement pattern or the anti-agreement version, see (6) and (7), respectively.

(6) *A lány-ok-nak elvesz-ett a toll-uk.* **(A)**
the girl-**PL**-DAT get.lost-PAST.3SG the pen-**3PL**.NOM
'The girls' pen got lost.'

(7) *A lány-ok-nak nem lát-tam a toll-á-t.* **(B)**
the girl-**PL**-DAT not see-PAST.1SG the pen-**3SG**-ACC
'I didn't see the girls' pen.'

5.2. External possessors

(6) *A lány-ok-nak elvesz-ett a toll-uk.* **(A)**
the girl-**PL**-DAT get.lost-PAST.3SG the pen-**3PL**.NOM
'The girls' pen got lost.'

(7) *A lány-ok-nak nem lát-tam a toll-á-t.* **(B)**
the girl-**PL**-DAT not see-PAST.1SG the pen-**3SG**-ACC
'I didn't see the girls' pen.'

É. Kiss (2014)

(A) The ***possessor*** is ***base-generated outside*** the possessive DP when thematically related/relatable to the matrix verb. The possessive DP contains an always dropped *pro*, which is bound by the "external possessor", and, thus, the ***agreement*** is ***regular***, see (6).

(B) The ***possessor*** can be ***extracted*** from the possessive DP for ***discourse functional purposes***. In this case it is generated within the possessive DP; therefore, it is involved in ***anti-agreement***, and then it is raised into the matrix clause to acquire a discourse function (topic or focus), see (7).

5.3. External possessors

Here:

(A) the lexical form of the paradigmatic morph: only a dropped pro can be anaphorically controlled by the external possessor, see the first disjunct

(6) *A lány-ok-nak elvesz-ett a toll-uk.* **(A)**
the girl-**PL**-DAT get.lost-PAST.3SG the pen-**3PL**.NOM
'The girls' pen got lost.'

(23) -uk, -ük, -juk, -jük
(↑ POSS)
(↑ NUM) = SG
{ (↑ POSS PRED FN) =C 'PRO'
(↑ POSS PERS) =C 3
(↑ POSS NUM) = PL
(↑ POSS CASE) =C NOM
(↑ INDEX) ~= (GF INDEX ↑)
| (↑ POSS PRED) = 'PRO'
(↑ POSS PERS) = 3
(↑ POSS NUM) = PL }

5.4. External possessors

(7) *A lány-ok-nak nem lát-tam a toll-á-t.* **(B)**
the girl-PL-DAT not see-PAST.1SG the pen-3SG-ACC
'I didn't see the girls' pen.'

Here:

(B) inside-out function application

(24) -a, -e, -ja, -je
(↑ POSS)
(↑ NUM) = SG
{ (↑ POSS PERS) = 3
(↑ POSS NUM) = SG
| (↑ POSS PERS) =C 3
(↑ POSS NUM) =C PL
(↑ POSS PRED FN) ~= 'PRO'
| (↑ POSS) = (DF ↑)
(↑ POSS PERS) =C 3
(↑ POSS NUM) =C PL
(↑ POSS CASE) =C DAT
(↑ POSS PRED FN) ~= 'PRO' }

6. Conclusion

A WP LFG & XLE APPROACH TO MORPHOLOGICAL PHENOMENA IN POSSESSIVE DPS IN HUNGARIAN

- each paradigm slot is filled with a single, internally unanalyzed morphological element (realized by several allomorphs)

MAIN ADVANTAGES

- admits a remarkably simple formal apparatus
- absolutely feasible implementationally (cf. fst morphological analyzer)
- (maybe) even more realistic psychologically

THE DISADVANTAGE SUCH AN APPROACH HAS TO LIVE WITH

- no direct/principled treatment of the unanalyzed morph-complexes with otherwise identifiable morphological pieces

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References (1)

Bartos, Huba. 2000. Az inflexiós jelenségek szintaktikai háttere [The syntactic background of inflectional phenomena]. In: Kiefer Ferenc. ed. *Strukturális magyar nyelvtan 3. Morfológia* [Structural Hungarian Grammar 3. Morphology]. Budapest: Akadémiai Kiadó, 653-762.

Bresnan, Joan. 2001. *Lexical-Functional Syntax*. Oxford: Basil Blackwell.

Charters, Helen. 2014. Anchor: A DF in DP. In: Butt, Miriam & King, Tracy Holloway. eds. *The Proceedings of the LFG14 Conference*. Stanford, CA: CSLI Publications, 200-220.

Chisarik, Erika & Payne, John. 2001. Modelling possessor constructions in LFG: English and Hungarian. In: Butt, Miriam & King, Tracy Holloway. eds. *The Proceedings of the LFG01 Conference*. Stanford, CA: CSLI Publications.

É. Kiss, Katalin. 2014. Ways of licensing Hungarian external possessors. *Acta Linguistica Hungarica* 61: 45-68.

Kiefer, Ferenc. 2000. A ragozás [Inflection]. In: Kiefer Ferenc. ed. *Strukturális magyar nyelvtan 3. Morfológia* [Structural Hungarian Grammar 3. Morphology]. Budapest: Akadémiai Kiadó, 569-618.

Laczkó, Tibor. 1995. *The Syntax of Hungarian Noun Phrases – A Lexical-Functional Approach.* Frankfurt am Main: Peter Lang.

Laczkó, Tibor. 2001. A magyar birtokos DP inflexiós morfológiájáról lexikai-funkcionális megközelítésben [Remarks on the inflectional morphology of Hungarian possessive DPs from a lexical-functional perspective]. In: Bakró-Nagy, Marianne; Bánréti, Zoltán & É. Kiss, Katalin. eds. *Újabb tanulmányok a strukturális magyar nyelvtan és a nyelvtörténet köréből. Kiefer Ferenc tiszteletére barátai és tanítványai* [New Studies on Hungarian Structural Grammar and Historical Linguistics. A Festschrift for Ferenc Kiefer by His Friends and Students]. Budapest: Osiris Kiadó, 59-77.

References (2)

Laczkó, Tibor. 2017. Modelling (in)definiteness, external possessors and (typological) variation in Hungarian possessive DPs. In: Butt, Miriam & King, Tracy Holloway. eds. *The Proceedings of the LFG17 Conference*. CSLI Publications, 243-263.

Prószéky, Gábor. 2000. A magyar morfológia számítógépes kezelése [The computational treatment of Hungarian morphology]. In: Kiefer Ferenc. ed. *Strukturális magyar nyelvtan 3. Morfológia* [Structural Hungarian Grammar 3. Morphology]. Budapest: Akadémiai Kiadó, 1021-1063.

Rebrus, Péter. 2000. Morfofonológiai jelenségek [Morphophonological phenomena]. In: Kiefer Ferenc. ed. *Strukturális magyar nyelvtan 3. Morfológia* [Structural Hungarian Grammar 3. Morphology]. Budapest: Akadémiai Kiadó, 763-947.

Spencer, Andrew. 1991. *Morphological Theory. An Introduction to Word Structure in Generative Grammar.* Cambridge, MA: Basil Blackwell.

Appendix (1)

(B) a WP alternative

the morpho-phonemic aspects require the same kind of (allomorphic) treatment in both approaches at the STEM || (FIRST) MORPH boundary

(20)

a. *a* *toll-**u**nk*
the pen-POSS.SG.1PL
'our pen'

b. *a* *toll-**a***
the pen-POSS.SG.3SG
'her pen'

c. *a* *toll-**a-i-nk***
the pen-POSS-PL-1PL
'our pens'

d. *a* *toll-**ai**nk*
the pen-POSS.PL.1PL
'our pens'

e. *a* *világ-**a***
the world-POSS.SG.3SG
'her world'

f. *a* *hajó-**n**k*
the ship-POSS.SG.1PL
'our ship'

g. *a* *hajó-**ja***
the ship-POSS.SG.3SG
'her ship'

h. *a* *hajó-**i-nk***
the ship-POSS-PL-1PL
'our ships'

i. *a* *hajó-**ink***
the ship-POSS.PL.1PL
'our ships'

j. *a* *virág-**ja***
the flower-POSS.SG.3SG
'her flower'

Appendix (2)

A) I assume that there is an extremely productive lexical redundancy rule that turns an ordinary noun (without an argument structure) into a noun subcategorizing for a possessor argument: (8), cf. Bresnan (2001).

(8) N, (↑ PRED) = '…' → N, (↑ PRED) = '… < (↑ POSS) >'

B) Pro-drop can be handled in the customary LFG manner, see Bresnan (2001): the agreement marker can optionally also contribute the 'PRO' value for the PRED feature of the possessor.

1) When there is no overt possessor, the annotation must be activated, otherwise the construction will be incomplete, given that the argument requirement of the possessive noun head, see (8), cannot be satisfied.
2) When there is an overt (pronominal or ordinary) possessor, the annotation must not be activated, because the possessor constituent contributes the PRED value, and PRED values cannot be unified (or multiply instantiated).

Appendix (3)

(A) second disjunct:

the paradigmatic morph requires a 3PL non-pronominal possessor

(4) *a lány-ok *toll-uk / toll-a*
the girl-**PL**.NOM pen-3PL pen-**3SG**
'the girls' pen'

```
(21)  -a, -e, -ja,   (↑ POSS)
      -je            (↑ NUM) = SG
                     { (↑ POSS PERS) = 3
                        (↑ POSS NUM) = SG
                      | (↑ POSS PERS) =c 3
                        (↑ POSS NUM) =c PL
                        (↑ POSS PRED FN) ~=c 'PRO' }
```

analyzing {tolla}

{toll "+Noun" "+Poss" "+SgP" **"+Sg"** "+3P" "+Nom" }

```
+SG  N_SFX XLE { ~(↑ POSS)
                   (↑ NUM) = SG
                 | { (↑ POSS)
                     (↑ POSS NUM) = SG
                   | (↑ POSS NUM) = PL
                     (↑ POSS PRED FN) ~= PRO } }
```