Differential object marking in Hungarian and the nature of variation in DOM

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Introduction

Hungarian has two transitive verb paradigms. One of these only shows up with certain types of direct objects.

(1)	Lát-sz	egy kutyá-t.
	see-2SG.SUBJ a	dog-ACC
	'You see a dog.'	

(2)	Lát-od	a kutyá-t.
	see-2SG.OBJ the dog-ACC	
	'You see the dog.'	

(1) shows the *subjective* paradigm (SUBJ), (2) shows the *objective* paradigm (OBJ). Both agree in person and number with the *subject* and the subjective paradigm also appears with intransitive verbs. The objective paradigm only appears when triggered by certain types of direct objects.

Claims

- Hungarian has differential object marking in verb morphology.
- Existing theories of DOM cannot quite capture its properties.

Goals

- To show that we're dealing with DOM.
- Provide some ideas to modify theories of DOM, as well as …
- … ideas about the nature of cross-linguistic variation in DOM.

1 DOM in Hungarian

The following types of direct objects require the objective paradigm in Hungarian. Many of these are expected if we assume that DOM is related to definiteness in Hungarian and the triggers seem to pattern along a hierarchy as assumed in Silverstein (1976).

- Pronouns
- Proper names
- Definites

- Some Possessives structures?
- Quantifiers?
- (Some complement clauses)

1.1 Pronouns and proper names

Direct object pronouns usually trigger the objective paradigm. In (3), this is illustrated with the third person pronouns *ő* 's/he'. It is ungrammatical when the verb is in the subjective paradigm, cf. (4). Note also the presence of case marking on the direct object.

(3) Lát-ja   ő-t.
     see-3SG.OBJ s/he-ACC
     'S/he$_i$ sees her$_j$/him$_j$.'

(4) *Lát-∅   ő-t.
     see-3SG.SUBJ s/he-ACC
     intended: '(3)'

Proper names also require the objective paradigm. The contrasts below are analogous to (3) and (4).

(5) Lát-ja   Mari-t.
     see-3SG.OBJ M.-ACC
     'S/he sees Mari.'

(6) *Lát-∅   Mari-t.
     see-3SG.SUBJ M.-ACC
     intended: '(5)'

1.2 Definites and demonstratives

Direct objects with the definite determiner *a(z)* 'the' and demonstratives like *ez a(z)* 'this', *az a(z)* 'that' trigger the objective paradigm. Again, all these are ungrammatical with the subjective paradigm, as illustrated in the following examples.

(7) Lát-ja   a kutyá-t.
     see-3SG.OBJ the dog-ACC
     'S/he sees the dog.'

(8) *Lát-∅   a kutyá-t.
     see-3SG.SUBJ the dog-ACC
     intended: '(7)'

(9) a. Lát-ja   ez-t   a kutyá-t.
         see-3SG.OBJ this-ACC the dog-ACC
         'S/he sees this dog.'

b. *Lát-∅   ez-t   a   kutyá-t.
    see-3sg.subj this-acc the dog-acc
    intended: '(9a)'

1.3 Further determiners and quantifiers

Other determiners triggering the objective paradigm are those ending in *-ik*, for example *melyik* 'which' and *mindegyik* 'each'. Like in English, at least the former one is D-linked (cf. Pesetsky 1987), suggesting that the trigger of the objective paradigm is sensitive to that property.

(10)   Melyik-et kér-ed /   *kér-sz?
       which-acc want-2sg.obj want-2sg.subj
       'Which one do you want?'

Universal quantifiers show an interesting split. While the universal quantifiers *mindegyik* and *valamennyi* 'each' trigger the objective paradigm, cf. (11a), the universal quantifier *minden* 'every' does not.

(11)   a.   Mindegyik-et kér-em /   *kér-ek.
            each-acc   want-1sg.obj want-1sg.subj
            'I want each (of them).'
       b.   Minden-t *kér-em /   kér-ek.
            every-acc want-1sg.obj want-1sg.subj
            'I want everything.'

1.4 Possessive structures

Most possessive structures trigger the objective paradigm. In Hungarian, possessed nouns carry a possessive suffix indicating the person and number of the possessor. This suffix is glossed as 3sg.poss for a third person singular possessor. Possessors can be nominative (adjacent to the possessed noun) or dative, in which case they do not have to be adjacent.

(12)   Lát-om   Péter bicikli-jé-t.
       see-1sg.obj P.-nom bike- 3sg.poss -acc
       'I see Peter's bike.'

The structure in (12) is definite, yet possessive structures made up of indefinites and indefinite themselves also trigger the objective paradigm, cf. (13).

(13) A   zsűri jutalom-ra méltó-nak   talál-ta   egy diák-nak   két
      the jury prize-SUPL worthy-DAT find-PAST-3SG.OBJ one student-DAT two

      dolgozat-á-t.
      paper- 3SG.POSS -ACC
      'The jury found two papers by one student worthy of a prize.'

                                               (adapted from É. Kiss 2002: (50), 173)

1.5 Items *not* triggering differential marking

Certain indefinite determiners do not trigger the objective paradigm, e.g. the indefinite determiner *egy* 'a, one', as well as weak quantifiers like *néhány* 'some', *sok* 'many', etc. Specific direct objects do not trigger the objective paradigm either. I illustrate this with an epistemic specific indefinite, cf. (14), and a partitive specific indefinite, cf. (15).

(14) Meghív-ott   egy professzor-t, Péter-t.
      invite-PAST-3SG.SUBJ a   professor-ACC P.-ACC
      'S/he invited a professor, Péter.'

(15) Context: *Several children entered the room.*

         Kettő-t   ismer-t /   *ismer-t-e.
         two-ACC know-PAST.3SG.SUBJ know-PAST-3SG.OBJ
         'S/he knew two of them.'

1.6 Summary of triggers

- Differential marking in verb morphology, …

- … *not* on the noun phrase.

- The DO is always morphologically accusative.

- "Expected": pronouns, proper names, definites, certain Qs,

- and "unexpected" triggers: possessive structures.

2 Hungarian and theories of DOM

2.1 Functional-typological approaches

There is a wide range of literature in which it is argued that DOM serves the purpose of distinguishing subjects and objects from each other.

- *Functional* explanation: DOM serves to distinguish arguments (cf. Bossong 1985, Comrie 1986, Lazard 2001, Haspelmath 2008 a.o.).

- DOM provides morphosyntactic means to do this if semantics cannot.

  "The DOM universals are amenable to a straightforward and complete explanation in functional terms, so adopting a UG-based explanation instead only makes sense if one takes an antifunctionalist stance for independent reasons."

  (Haspelmath 2008: 91)

This explanation does not work for Hungarian. Hungarian has case marking on all direct objects which disambiguates subjects from objects independently DOM. Differential marking in verb morphology thus cannot serve the purpose of further disambiguating arguments. Hungarian does not provide evidence for this particular functionalist view; this might have been different in earlier stages of the language's history, however (cf. Marcantonio 1985, É. Kiss 2010).

2.2 Formalising DOM: Aissen (2003)

Based on cross-linguistic evidence, Aissen (2003) constructs an OT formalism with which to explain DOM. She uses the scales like the one (16) to derive markedness constraints for subjects and objects.

- DOM also happens when there is no need to disambiguate (cf. Aissen 2003: 437).

- Highly effective formalisation of principles of DOM.

- An explanation based on hierarchies captures tendencies, ...

- ... but is somewhat inflexible.

  (16)   Definiteness scale:
         Personal pronoun > Proper name > Definite NP > Indefinite specific NP >
         Non-specific NP

  (Aissen 2003: 437)

In Aissen's (2003) analysis, the interaction of two kinds of constraints derives marking: iconicity and economy constraints. The relative ranking of these constraints derives cross-linguistic differences.

2.3 Hierarchies in Hungarian

Given the distribution of the objective paradigm in Hungarian, Aissen's (2003) definiteness scale seems to be the obvious choice for an analysis of DOM in this language. So how do Hungarian data fit on the definiteness scale?

(16)   Pronouns:
                                         $\boxed{\text{Personal pronoun}}$ > Proper name > Definite NP > Indefinite specific NP > Non-specific NP

- 1st/2nd person pronouns require SUBJ:

    (17)   *Lát-ja   engem / téged.
              see-3SG.OBJ me.ACC / you.SG.ACC
              intended: 'S/he sees me / you (SG.).'

(16)   Possessive structures:
      Personal pronoun > Proper name > $\boxed{\text{Definite NP > Indefinite specific NP}}$ > Non-specific NP

- Possessive structures require OBJ, but they are (i) not on a single level on the hierarchy and (ii) other indefinites (not possessives) do not require OBJ.

(16)   Universal quantifiers:
      Personal pronoun > Proper name > $\boxed{\text{Definite NP > Indefinite specific NP}}$ > Non-specific NP

- Recall that the universal quantifiers *valamennyi, mindegyik* 'each' trigger the objective paradigm, while *minden* 'every' does not.

The scale has to be adapted for Hungarian. Can it be modified to include presuppositionality or the property of being D-linked? Can the trigger of the Hungarian objective paradigm be represented on scale like this?

In addition, Hungarian is not the only language in which DOM does not quite fit the definiteness scale. There are, for example,
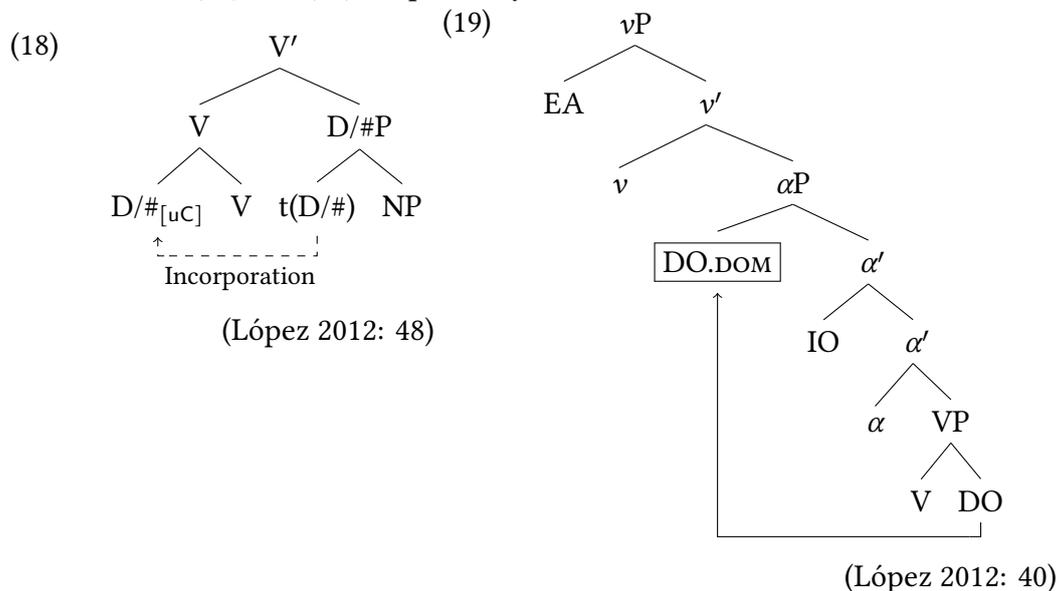
- marked non-specifics in Spanish (López 2012),

- unmarked demonstratives in Hebrew (Danon 2006),

- and marked non-specifics in Turkish (Özge 2011).

2.4 Other formal approaches to DOM

In formal approaches to DOM, properties of the direct object play a role in determining whether that DO gets special marking or whether it moves. These properties are represented as formal features in the syntax and the processes affecting them are syntactic processes. Such analyses of DOM include Jelinek and Carnie (2003), Carnie (2005),

arguing that presuppositionality triggers DOM, Danon (2006), López (2012), where Case and noun phrase structure play a role.

In López's (2012) analysis the relevant property of noun phrases is Case. All NPs have to get Case and there are two ways for noun phrases to get Case. Incorporation and movement, (18) and (19), respectively.

(18)

```
                    V′
                  /    \
                 V      D/#P
               / | \      \
         D/#[uC] V t(D/#)   NP
            ↑_____!
          Incorporation
```

(López 2012: 48)

(19)

```
                vP
              /    \
             EA      v′
                   /    \
                  v      αP
                       /    \
                 [DO.DOM]     α′
                    ↑        /   \
                    |       IO     α′
                    |            /   \
                    |           α     VP
                    |                /   \
                    |               V    DO
                    |_____|
```

(López 2012: 40)

Marking is triggered by movement to SpecαP; López (2012) derives a correlation between scrambling and DOM, because the marked DO c-commands the IO, as illustrated in (20).

(20) Los enemigos no   entregaron a   su$_i$ hijo $\boxed{\text{a}}$ nadie$_i$.
      the enemies   NEG delivered.PL DAT his son   no.one
      'The enemies delivered no one to his son.'   (López 2012: 41)

The marked object *a nadie* allows for a bound variable reading to arise, roughly *there is no x such that the enemies delivered x to x's son.*

2.5 A formal approach in Hungarian

Issues

- Case cannot be the relevant property in Hungarian.

- Hungarian DOs are case marked.

- López's (2012) approach does not quite fit either.

- Can we substitute another feature for Case?

There must be a property of direct objects that triggers OBJ. There are several types

of approaches, which focus on different properties of the DO. Note that these are not cross-linguistic approaches.

- Structure: Bartos (1999), É. Kiss (2002)

- Semantics (through formal features): Coppock and Wechsler (2012), Coppock (2013)

- Hybrid: Bárány (2013)

In Hungarian, features of D trigger the objective paradigm. This can happen by having certain determiners like the definite determiner appear in the noun phrase or by the syntactic composition of noun phrases, like in possessive structures.

- D° and its features trigger OBJ.

- If D° is filled or if some its features are spelled out (cf. *each* vs. *every*), OBJ has to appear.

- The trigger is not related to Case, …

- … but noun phrase structure is relevant (cf. possessives).

2.6 Summary

In Hungarian as in other languages, the formal properties of the noun phrase are responsible for triggering DOM, but none of the above approaches derives the distribution of differential marking in Hungarian. Case is not the right property to trigger DOM for Hungarian. Can this be a source of variation in DOM?

3 Variation in DOM

López's (2012) approach does not work all languages straightforwardly: Hungarian has Case marking and c-command tests are not available to argue for a distinct DOM position in the clause because of word order in Hungarian (cf. É. Kiss 2008).

Still, adopting the basic mechanisms of López's (2012) approach might help to reach useful conclusions about cross-linguistic variation.

3.1 The nature of variation in DOM

By retaining the idea that formal features trigger differential marking and making the nature of the features a locus of variation, we can make predictions for and find patterns in variation.

- Assuming López (2012), the mechanism underlying DOM is Agree.

- Agree could probe for any property of NPs.

- In Hungarian, this is *not* Case: Case marking is present.

- What about the features of D? According to Coppock (2013) (her [DEF]), this is related to familiarity (cf. Jelinek and Carnie 2003).

- Noun phrase structure and its feature specification trigger OBJ (cf. Coppock 2013, Bárány 2013).

This allows to make certain predictions. If DOM varies in the nature of the probe, DOM can correlate with different other properties from language to language. In Hungarian, the nature which is involved has an interpretative effect, in Spanish it does not.

- If the nature of the probe varies, we should see correlates in DOM.

- Trivial: if the probe does not probe for Case, Case will not play a role in DOM.

- Less trivial: in López's (2012) approach, interpretation is dissociated from case marking to a certain degree.

- If the probe in Hungarian probes for features of D, marking should correlate with interpretation.

- → This is what we see.

3.2 Restrictions on Agree

If person-sensitive Agree is involved, we should in particular see restrictions on this mechanism. Recall that there are person-restrictions in the distribution of the objective paradigm. First and second person pronoun DOs do not trigger OBJ with a third person subject:

(21) Lát-∅   engem.
      see-3SG.SUBJ me.ACC
      'S/he sees me.'

(22) *Lát-ja   engem.
      see-3SG.OBJ me.ACC
      intended: '(21)'

There is no differential marking (= SUBJ) with first person DOs and there are further person-sensitive patterns, cf. (23) and Table 1.

(23) Lát-lak   téged.
      see-1SG>2.OBJ you.SG.ACC
      'I see you.'

EA → IA	1	2	3
1		OBJ′	SUBJ/OBJ
2	SUBJ		SUBJ/OBJ
3	SUBJ	SUBJ	SUBJ/OBJ

Table 1   Distribution of verb paradigms with respect to person. Shaded cells show *inverse contexts*. OBJ′ marks the marker *-lak/-lek* which only appears in 1SG>2 contexts.

This pattern is not unexpected if Agree is involved in DOM in Hungarian. There are very similar patterns from other languages with person-sensitive Agree relations for both external and internal arguments.

- Inverse agreement constraint (É. Kiss 2005):

  (24)   An object agreeing with a verb must be lower in the animacy hierarchy than the subject agreeing with the same verb, unless the subject represents the lowest level of the animacy hierarchy.

- Widespread phenomenon (cf. PCC): Béjar and Rezac (2009), Bobaljik and Branigan (2006), Richards (2008).

- Richards (2008): close ties between definiteness and person features.

4 Conclusions

- Hungarian has **DOM in verb morphology**.

- Its system of DOM provides no evidence for a functional explanation.

- Hungarian provides evidence for a formal analysis of **DOM based on person-sensitive Agree** relations.

- Possible to make predictions of cross-linguistic patterns based on the nature of the probe involved.

- Outlook

  – Cross-linguistic suggestions make specific predictions.

  – Further restrictions on person-sensitive Agree in other languages with DOM?

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Morphological structure of the paradigms

- *lát* 'see', present tense

1SG	2SG	3SG
lát-ok : *lát-om*	*lát-sz* : *lát-od*	*lát-∅* : *lát-* $\boxed{ja}$
1PL	2PL	3PL
lát-unk : *lát-* $\boxed{j}$ *-uk*	*lát-tok* : *lát-* $\boxed{ja}$ *-atok*	*lát-nak* : *lát-* $\boxed{ja}$ *-ak*

Table 2   Subjective and objective verb suffixes, present tense. OBJ-marker highlighted.

- *lát* 'see', past tense

1SG	2SG	3SG
lát-t-am : *lát-t-am*	*lát-t-ál* : *lát-t-ad*	*lát-ott* : *lát-t-* $\boxed{a}$
1PL	2PL	3PL
lát-t-unk : *lát-t-uk*	*lát-t-atok* : *lát-t-* $\boxed{a}$ *-atok*	*lát-t-ak* : *lát-t-* $\boxed{a}$ *-ak*

Table 3   Subjective and objective verb suffixes, past tense. OBJ-marker highlighted.

- *lát* 'see', conditional mood, present tense

1SG	2SG	3SG
lát-n-ék : *lát-n-ám*	*lát-n-ál* : *lát-n-ád*	*lát-na* : *lát-na-* $\boxed{a}$
1PL	2PL	3PL
lát-n-ánk : *lát-n-ánk*	*lát-n-átok* : *lát-n-átok*	*lát-ná-nak* : *lát-n-* $\boxed{a}$ *-ak*

Table 4   Subjective and objective verb suffixes, conditional mood, present tense. OBJ-marker highlighted.

- *lát* 'see', subjunctive mood, present tense

1sg	2sg	3sg
lás-s-ak : *las-s-am*	*lás-s-ál* : *lás-s-ád*	*lás-son* : *lás-s-*$\boxed{a}$

1pl	2pl	3pl
lás-s-unk : *lás-s-uk*	*lás-s-atok* : *lás-s-*$\boxed{a}$*-atok*	*lás-s-anak* : *lás-s-*$\boxed{a}$*-ak*

Table 5 Subjective and objective verb suffixes, subjunctive mood, present tense. OBJ-marker highlighted.