Operator Fronting in Hungarian and the typology of control from an LFG perspective

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1. Introduction

Operator Fronting in Hungarian
1. Introduction

An element that semantically belongs to the embedded clause, appears in the main clause.

(1) (Azt) mondtad, hogy János jön.
    that.ACC said.2SG that(c) John comes
    ‘You said (it) that John comes.’

(2) a. János mondtad, hogy jön.
    John.NOM said.2SG that(c) comes

b. János-t mondtad, hogy jön.
    John-ACC said.2SG that(c) comes
    ‘(Of) John you said that he comes.’

• The fronted element usually bears some discourse function (topic, focus).
1. **INTRODUCTION: 2 TYPES OF OPERATOR FRONTING**

(2) a. *János* mondtad, hogy jön.
   John.NOM said.2SG that(c) comes

   ‘(Of) John you said that he comes.’

b. *János-t* mondtad, hogy jön.
   John-ACC said.2SG that(c) comes

Contrasts between the two types:

- Island sensitivity
- Reconstruction
- Agreement patterns
- Licensing verbs
- Idiom-chunks
1. INTRODUCTION: 2 TYPES OF OPERATOR FRONTING

(3) a. *János mondtad, hogy hallottad a hírt,
   John.NOM said.2SG that(c) heard.2SG the news
   hogy jön.
   that(c) comes.

   b. János-t mondtad, hogy hallottad a hírt,
   John-ACC said.2SG that(c) heard.2SG the news
   hogy jön.
   that(c) comes
   ‘(Of) John you said that you heard the news that he comes.’

(4) a. Egymás szülei mondtad, hogy elszomorította a fiúkat.
   each. other parents.poss said.2SG that(c) saddened.3SG the boys.ACC

   b. *Egymás szülei-t mondtad, hogy
   each. other parents.poss-ACC said.2SG that(c)
   elszomorította a fiúkat.
   saddened.3SG the boys.ACC
   ‘(Of) Each other’s parents you said that they saddened the boys.’
   (backward binding of experiencers)
1. Introduction: 2 Types of Operator Fronting

• Agreement-variation: only with the accusative version.

(5) Az összes lány mondtad, hogy jön / *jönnek.  
the all girl.NOM said.2SG that(c) come.3SG / come.3PL  
‘(Of) all the girls you said that they come.’

(6) Az összes lány-t mondtad, hogy jön / jönnek.  
the all girl-ACC said.2SG that(c) come.3SG / come.3PL  
‘(Of) all the girls you said that they come.’

• Licensing verbs: with the accusative version, several non-bridge verbs are acceptable.

(7) *János kételted/ sérelmezted, hogy jön.  
John.NOM doubted.2SG resented.2SG that(c) comes

(8) János-t kételted/ sérelmezted, hogy jön.  
John-ACC doubted.2SG resented.2SG that(c) comes  
‘(Of) John you doubted/resented that he comes.’
1. **INTRODUCTION: 2 TYPES OF OPERATOR FRONTING**

- Idioms: not acceptable in either version, for different reasons.

(9) *Jánost elkapta a gépszíj.*
    John.ACC caught.3sg the driving.belt
    ‘The driving belt caught John.’ → ‘John has to work a lot.’

(10) *Mondtad a gépszíj, hogy elkapta Jánost.*
    said.2sg the driving.belt.NOM that(c) caught.3sg John.ACC

(11) #Mondtad a gépszíj-at, hogy elkapta Jánost.
    said.2sg the driving.belt-ACC that(c) caught.3sg John.ACC
    ‘(Of) the driving belt you said that it caught John.’

(Hungarian preverbal positions are associated with discourse-functions.)
1. **INTRODUCTION: 2 TYPES OF OPERATOR FRONTING**

(2) a. János _mondtad, hogy jön._
   John\_NOM said.2SG that(c) comes

b. János-t _mondtad, hogy jön._
   John\_ACC said.2SG that(c) comes
   ‘(Of) John you said that he comes.’

• 2a: a proper functional dependency ("movement”-like properties)

• 2b: a “base-generated” construction → our main focus
1. INTRODUCTION: THE RESEARCH FOCUS

(2) b. *János-ti mondtad, hogy ___i jön.*
John-ACC said.2sg that(c) comes
‘(Of) John you said that he comes.’

Main Questions

- What is the relationship between the main predicate and the accusative-marked element? (i)
- What is the relationship between the accusative-marked element and the coreferent embedded GF? (ii)
- How does the construction fit into general syntactic theory? (iii)
2. LFG accounts

What is the relationship between the main predicate and the accusative-marked element?

What is the relationship between the accusative-marked element and the coreferent embedded GF?
2. LFG accounts: Coppock (2003)

(2) b.  \textit{János-t mondtad, hogy jön.}
\textit{John-ACC said.2sg that(c) comes}
‘(Of) John you said that he will come.’

Features of the analysis
- Non-thematic main clause OBJ
- Anaphoric identification ($\rightarrow$ agreement mismatch, see later)
- Violation of Semantic Coherence $\rightarrow$ posits that Semantic Coherence is a violable OT-style constraint.
- Does not account for the impossibility of idiom-chunks.
2. LFG ACCOUNTS: THE PROLEPTIC ACCOUNT

**Features of the Analysis**
- Szűcs (2017).
- Thematic main clause OBJ → semantically coherent.
- **Prolepsis:** “a structural complement of the matrix verb is semantically related to the predicate of a finite embedded clause” (Salzmann (2017)).

**Is there independent evidence for a thematic object?**
- No idiom chunks (10-11).
- The accusative pronoun in standard subordinate clauses is contentful.
- Ellipsis (see later).
2. LFG ACCOUNTS : THE PROLEPTIC ACCOUNT

PRONOUNS ASSOCIATED WITH SUBORDINATE CLAUSES ARE CONTENTFUL IN HUNGARIAN

(1) a.   \textit{Azt mondtad, hogy János jön.} \\
\hspace{1cm} \textit{that.ACC said.2SG that(c) John comes}
\hspace{1cm} ‘You said that John comes.’

\hspace{1cm}  b.   \textit{*\langle Jánost \rangle a\textit{zt mondtad \langle Jánost \rangle, hogy jön.}}


• \textit{predicate}  \hspace{.5cm} \langle \text{SUBJ)(COMP)\rangle\text{OBJ} \hspace{.5cm} \text{vs.} \hspace{.5cm} \langle \text{SUBJ)(OBJ)\rangle\text{OBJ} >

• Discourse functions.

• Coordination with standard thematic objects.

• Argument-adjunct asymmetries (also cross-linguistically).
2. Accounts: The Proleptic Account

Pronouns Associated with Subordinate Clauses are Contentful in Hungarian – Discourse functions (12) (vs. canonical expletives, (13))

(12) János CSAK AZT mondja, hogy hazamegy.
John only that.ACC says that(c) home.goes
‘John only says that he goes home.’

(13)a. *Only it seems that John is smart.

b. *Only it rains a lot nowadays.

Pronouns Associated with Subordinate Clauses are Contentful in Hungarian – Canonical objects

(14) Fontolgatom a lemondást és azt, contemplate.1sg the resignation.ACC and that.ACC hogy elutazom.
that(c) away.travel.1sg
‘I’m contemplating about resignation and that I travel somewhere.’
2. ACCOUNTS: THE PROLEPTIC ACCOUNT

PRONOUNS ASSOCIATED WITH SUBORDINATE CLAUSES ARE CONTENTFUL IN HUNGARIAN – Argument-adjunct asymmetries

(15) *Hova mondod (*azt) hogy mész ____?
where say.2sg that.acc that(c) go.2sg
‘Where do you say (*it) that you go?’

• Pronoun is present → clause is an adjunct → no extraction.
  Pronoun is absent → clause is an OBJ argument.

• See also Bennis (1986), Berman (2001).

(16)a. weil er (es) gesagt hat, dass Hans krank ist
because he it said have that(C) Hans ill is
‘because he said that Hans is ill’

b Was hat er (*es) gesagt, dass er gelesen hat?
what has he it said that he read has
‘What did he say that he read?’
2. Accounts: The Proleptic Account

The proleptic object is thematic – evidence from complement ellipsis (17 is based on Bresnan (1982: 71-72))

(17) a. Someone had to wash my car. I persuaded John (to wash my car).

   b. Someone stole my car. I believed John *(to have stolen my car.) → incoherence

(18) A: Szerintem János a legokosabb. 
in.my.opinion John the smartest.
   ‘I think John is the smartest.’

   B: De eddig te Pétert mondtad (hogy ó a legokosabb).
   but so.far you Peter.ACC said.2sg that(c) he the smartest
   ‘But so far you said (of) Peter (that he is the smartest).’
2. ACCOUNTS: THE PROLEPTIC ACCOUNT

AGREEMENT

(6) Az összes lányt mondtad, hogy jön / jönnek.
the all girl.ACC said.2SG that(c) come.3SG / come.3PL
‘(Of) all the girls you said that they come.’

• The variation may be observed with quantified nominals.
• (6) is an instance of index-semantics mismatch.
• In Hungarian, quantified nominals have singular index, but are semantically plural.

(19)a. [Az összes lány/ Két lány] [jön / *jönnek].
the all girl two girl come.3SG come.3PL
‘All the girls come.’

b. Én hívtam meg *őt/ Őket.
I invited PRT her them
‘I invited them.’
2. ACCOUNTS: THE PROLEPTIC ACCOUNT

AGREEMENT

- Prolepsis involves anaphoric binding.
- “The only value shared between a pronoun and its antecedent is the index value. (…) Concord agreement for personal pronouns is impossible. (…) A pronoun and its antecedent is closely related semantically. (…) This invites the possibility of pragmatic/semantic agreement.” (Wechsler & Zlatic 2003:84)
- Semantic/Pragmatic agreement in OF favors a collective interpretation.

(20)a Két fiút mondta, hogy vitt egy bőröndöt.
two boy.ACC said.2SG that(c) carried.3SG a suitcase.ACC
‘(Of) two boys you said that they carried a suitcase.’
→ distributive or collective reading

b Két fiút mondta, hogy vittek egy bőröndöt.
two boy.ACC said.2SG that(c) carried.3PL a suitcase.ACC
‘(Of) two boys you said that they carried a suitcase.’
→ collective reading is strongly favored
2. **Accounts: The Proleptic Account**

**Argument-Structure**

- Valency-increasing with an OBJ.
  
  \(<(\text{SUBJ})(\text{OBJ})> \rightarrow <(\text{SUBJ})(\text{OBJ})(\text{COMP})>\)

- Obligatory co-reference of the added OBJ with an embedded argument.

  \(\text{OBJ INDEX} = \{\text{COMP}^+ \ \text{GF}^*\} \ \text{GF INDEX} \quad \text{(long-distance)}\)

- The newly added OBJ has a “subject matter” theta-role (Pesetsky 1995).

- A matter to lexical variation, much depends on whether the base verb is compatible with a delative-marked dependent.

(21) a. *mond* (x-ről) – ‘say (of x)’

  b. *parancsol* (*x-ről) – ‘command (*of x)’
3. Prolepsis: an overview
3. **Prolepsis: An Overview**

**Prolepsis**

- “a structural complement of the matrix verb is semantically related to the predicate of a finite embedded clause” (Salzmann (2017)).
- Origin of the term: rhetorics (“anticipation”)

- Davies (2005) brought the term into theoretical limelight.
- Often contrasted to raising/ECM structures.
  - Idioms
  - Productivity
  - Island-effects
  - Semantics (e.g. passive)
3. PROLEPSIS: AN OVERVIEW

English (Massam 1985)
(22) I read of Carrol that she was awfully shy.
(23) And God saw the light, that it was good.
(24) Whom do you suggest should be the president?
    (Chomsky 1981)

Madurese (Davies 2005)
(25) Siti ngera Hasan bari’ melle motor.
    Siti think Hasan yesterday buy car
    ‘Yesterday Siti thought about Hasan that he bought a car.’

Greek (Kotzoglou & Papangeli 2007)
(26) Theorot ton jani pos ine eksipnos.
    consider the John.ACC that(c) he smart
    ‘I consider John to be smart. / I believe of John that he is smart.’

Prolepsis has been also suggested in German, Japanese, Korean.
3. **Prolepsis: An Overview**

**Summarizing Prolepsis**

- 3 dependents for the matrix verb: SUBJ, (proleptic) OBJ, COMP.
- Referential identity of the proleptic OBJ with an embedded argument.

**Points of divergence**

- Argument (direct object) vs. adjunct (oblique/PP) proleptic element.
- Productivity.
- Restrictions on GF and distance (Greek: only immediately embedded SUBJ may be the coreferent GF).
3. **PROLEPSIS: AN OVERVIEW**

PROLEPSIS AS A CONTROL-STRUCTURE?

**Differences**
- Finiteness
- Distance
- The controlled GF
3. Prolepsis: An Overview

Similarities between Canonical Control and Prolepsis

• Obligatory co-reference

(2) b. Jánost, mondtad, hogy pro\textsubscript{i/*j} jön.
   John.ACC said.2SG that(c) comes
   ‘(Of) John you said that he comes.’

• Bound variable interpretation (based on Landau 2013)

(27) Only Bill forced himself to jump. (Bill = Only x [x forced x to jump].)
(28) Csak János mondtá magát, hogy (ő) nyert.
    only John said.2SG himself.ACC that(c) he won.3SG
    ‘Only John said (of) himself that he had won.’

• Sloppy interpretation under ellipsis (based on Landau 2013)

(29) Mary encouraged Paul\textsubscript{i} PRO\textsubscript{i} to attend the ceremony, but not David\textsubscript{j} (encourage PRO\textsubscript{*i/j} to attend the ceremony).
(30) Én Jánost, mondtam, hogy jön, te pedig Pétert,
    I John.ACC said.1SG that(C) comes you but Péter.ACC
    (mondtad, hogy PRO\textsubscript{*i/j} jön).
    said.2SG that(C) comes
    ‘(Of) John I said that he comes and you did so of Peter.’
3. PROLEPSIS: AN OVERVIEW

Differences

• Finiteness → semi-finite control has already been attested e.g. in Zec (1987).

• Distance

(31) Jánost mondtad, hogy hallottad, hogy jön.
    John.ACC said.2SG that(c) heard.2SG that(c) comes
    ‘(Of) John you said that you heard that he comes.’

(32) *John persuaded Mary for John to want for her to go out.

• The controlled GF

(33) *I persuaded Mary for John to like.

(34) Párizst mondtad, hogy [OBL oda] utazol.
    Paris.ACC said.2SG that(C) there travel.2SG.
    ‘(Of) Paris you said that you will go there.’
5. Control typology

How does the construction fit into general syntactic theory?
5. **Control typology**

- Control in LFG terminology: raising & equi.
- Axes of the classification:
  - Thematicity of the controller (raising vs. equi)
  - Finiteness of the controlled clause (finite vs. nonfinite)
  - Nature of identification (functional vs. anaphoric)

- Thematicity of the controller (raising vs. equi):
  (35) *John seems to be happy.*
  (36) *John tries to be happy.*

- Finiteness: having tense/agreement features.
5. Control typology

- Nature of identification (functional vs. anaphoric)
  - Functional control: full identity $\rightarrow$ always exhaustive
  - Anaphoric control: referential dependency $\rightarrow$ scale of obligation
    - obligatory – “quasi”-obligatory (Haug 2013) – no control

(37) *John tried/agreed finish earlier.* $\rightarrow$ which one?
  - Dalrymple (2001): anaphoric
  - Falk (2001): depends on the verb, *try* involves functional control, *agree* involves anaphoric control

(38) a. *It was tried to finish earlier.* $\rightarrow$ missing controller
    b. *It was agreed to finish earlier.* $\rightarrow$ discourse control of pro$_{arb}$ is possible
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<th>CONTROL TYPE</th>
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5. Control Typology

Copy Raising, Hyperraising (Raising, Finite, Functional)

(39) a. DP_i [IP_{finite resumptive_i}]  
    b. DP_i [IP_{finite _____i}]

- Copy Raising

(40) a. Ò di m [kà Êzè hũrũ Adá]. (Igbo, Ura 1998)  
    EXPL seems to.me that Eze saw Ada  
    ‘It seems to me that Eze saw Ada.’

    b. Êzè_i di m [kà ᵦ_i hũrũ Adá].  
    Eze seems to.me that he saw Ada  
    approx.: ‘Eze seems to me that he saw Ada.’

For English, see Asudeh & Toivonen 2012 vs. Landau 2011.

(41) John seems like he smokes.
5. CONTROL TYPOLOGY

COPY RAISING, HYPERRAISING (RAISING, FINITE, FUNCTIONAL)

• Hyperraising
  o Carstens & Diercks (2013)
  o Raising from a fully finite (+tense, +agr) complement clause

(42) a. **Ka-lolekhana mbo chisaang’i chi-kona.** (Lubukusu)
   SM-seem that animal SM-sleep.PRES
   ‘It seems that the animals are sleeping.’

   b. **Chisaang’i chi-lolekhana mbo chi-kona**
   animal SM-seem that(C) SM-sleep.PRES
   ‘The animals seem to be sleeping.’

(43) a. **Bi-bonekhana koti eng’ombe chi-ng’were amachi.**
   SM-appear that cow SM-drink water
   ‘It appears that the cows drank the water.’

   b. **Eng’ombe chi-bonekhana chi-ng’were amachi.**
   cow SM-appear SM-drink water
   ‘The cows appear to have drunk the water.’ (Lusaamia)
5. **Control Typology**

**Copy Raising, Hyperraising (raising, finite, functional)**

“An important empirical generalisation, first noted by Ura (1994), which is empirically supported by the data discussed in this thesis, is that if a language has Hyperraising or Hyper-ECM, it is also a pro-drop language. On the basis of this generalisation, it is argued that Hyperraising and Hyper-ECM constructions involve the use of resumptive *pro* in the embedded subject position, while languages with Copy raising and Copy ECM use overt pronouns. Apart from this difference, it is argued that these A-movement constructions are identical in all crucial respects.” (Ademola-Adeoye 2010)

- Copy raising and Hyperraising are amenable to the same structural analysis.
- Copy raising occurs in languages with a strong overt subject requirement, hyperraising occurs in “pro-drop” languages.
- No general requirement on filled object-positions $\Rightarrow$ no Copy Raising to object, only Hyperraising to object.
5. CONTROL TYPOLOGY

Turkish (equi, finite, functional) (Ince 2006)

(44) Ben Ali-yi yarın balığı yiyerek sanıyordu.
I Ali-ACC tomorrow fish eat.FUT.3SG assumed.1SG
‘I thought that Ali will eat the fish tomorrow.’

(45)a. Alinin anası bellendi.
Ali.GEN his.mother was.screwed.3SG
Idiomatic: ‘They really messed up Ali.’
Literal: ‘They raped Ali’s mother.’

b. Alinin anası-ını bellendi sanıyordu.
Ali.GEN his.mother-ACC was.screwed.3SG assumed.1SG
Only literal: ‘I thought that Ali’s mother was raped.’

• Only controlled SUBJs.
• Functional control (‘structure-sharing’) is more tightly regulated by UG than anaphoric dependencies (syntax vs. semantics).
6. Summary
6. SUMMARY

(2) b. János-t mondtad, hogy jön.
John-ACC said.2SG that(c) comes
‘(Of) John you said that he will come.’

• What is the relationship between the main predicate and the accusative-marked element? Thematic argumenthood.
• What is the relationship between the accusative-marked element and the coreferent embedded GF? Obligatory anaphoric control.
• How does the construction fit into general syntactic theory? It’s a finite, anaphorically-controlled equi structure.

• Further avenues:
  o The connection to applicatives. (valency-increasing with an OBJ)
  o A better understanding of various anaphorically controlled constructions (e.g. partial, split control) and agreement patterns.
  o Improve the typology of long-distance dependencies in LFG.
THANK YOU FOR YOUR ATTENTION!

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REFERENCES

CONTROL TYPOLOGY

SEMI-FINITE STRUCTURES

• Subjunctive complements (dependent tense).
• Overt embedded subjects are possible.

Serbo-Croatian (Zec 1987) (equi, semi-finite, anaphoric)

(46) Petar_{i} je pokusao da PRO_{i/*j} dodje na vreme.
Peter AUX tried.3SG that(C) comes on time
‘Peter tried to come on time.’

(47) Ana_{i} je naterala Mariju_{j} da one_{i/*j} dodje.
Anna AUX forced.3SG Maria.ACC that(C) she comes
‘Anna forced Marija that she should come.

Greek (Spyropoulos 2007) (equi, semi-finite, anaphoric)

(48) o janis_{i} prosaðise na PRO_{i/*j} ftasi noris
the John tried.3SG SBJV arrives early
‘John tried to arrive early.’
**Prolepsis: An Overview**

**Differences**

**GF & finiteness:** connection with English *tough*-constructions? (Dalrymple & King 2000)

(49) *Moths are hard to kill.*

(50) *Mary is tough for me to believe that John would ever marry.*

```
PRED    tough <(SUBJ)(COMP)>
SUBJ    PRED    moths_i
COMP    TOPIC   PRED    pro_i
    PRED    kill <(SUBJ)(OBJ)>
SUBJ    pro_{arb}
OBJ
```

- Thematic main clause SUBJ
- Anaphoric control of COMP TOPIC
- Long-distance functionally controlled OBJ