OPERATOR FRONTING IN HUNGARIAN AND THE TYPOLOGY OF CONTROL FROM AN LFG PERSPECTIVE

1. Operator Fronting in Hungarian

The Hungarian Operator Fronting (OF, also known as Operator Raising or Focus Raising in the literature, see e.g. Coppock (2003)) is a construction whereby an element that is semantically associated with an embedded predicate appears in the main clause, optionally bearing the case assigned by the main clause predicate, as in (3).

If the fronted element (*János* in (3)) bears its original case (which would be nominative in both sentences), the structure is a standard long-distance dependency, similar to *wh*-constructions or Topicalization in English.

More interesting is the scenario where the fronted element bears the case that the main predicate assigns: the most common is the type with the one with accusative in (3a), but oblique cases are also possible, as in (3b). This version is plausibly analyzed as "prolepsis" (the term gained prominence in Davies (2005)), whereby the fronted constituent is a thematic argument of the main verb, involved in an obligatory anaphoric control relationship with an embedded GF (as prolepsis in not restricted to embedded subjects). The lexical entry in (1) is derived from the base predicate via a morphosemantic operation, assuming Kibort's (2007) version of LMT. As part of the morphosemantic operation, an obligatory anaphoric link is established with some grammatical function of the embedded predicate, using the annotation in (2), resulting in an f-structure like Figure 1.

(1) *mond* ('say') <(SUBJ)(OBJ)(COMP)>

(2) OBJ INDEX = {COMP$^+$ GF*} GF INDEX

This analysis has several advantages, including:

(i) it is compatible with the view that the pronoun associate of Hungarian that-clauses is a demonstrative, not an expletive, see (4). This is argued to be more satisfactory both from an empirical and a theoretical perspective, see Rákosi & Laczkó (2005), Szűcs (2015));

(ii) unlike Coppock's (2003) account, no violation of Semantic Coherence is involved (in Coppock (2003), the proleptic OBJ is analyzed as being non-thematic but it is only anaphorically linked to the embedded GF)

(iii) explaining the potential agreement variation on the embedded predicate in the case of quantified antecedents ((5), as functional control would not allow the number mismatch);

(iv) explaining the ungrammaticality of fronted idiom chunks ((6), since the proleptic object is thematic);

(v) the lack of island effects ((7), since anaphoric control is utilized).

2. The theoretical place of prolepsis

If the f-structure of (1a) is compared to the f-structure of a standard object-equi construction ((8), Figure 2), the similarity is evident. This is not limited to the configuration: the proleptic construction shares crucial interpretational properties with equi, for instance, sloppy reading under ellipsis. Accordingly, much like (9a), where the understood subject of the elided clause is *David*, in (9b) the understood subject is *Péter*. Thus, the embedded SUBJ behaves like a bound variable, like the controlled subject of equi-clauses.

Differences between prolepsis and control as standardly understood are the following:

(i) the finite nature of the embedded clause;

(ii) that the proleptic dependency could be long-distance;

(iii) the flexibility of the controlled function.

However, neither of these properties are essential for the LFG perspective of control, so it is worth considering what theoretical and empirical picture emerges if takes prolepsis as subtype of control, namely, anaphoric equi. This is what I had set out to do.

3. An LFG-perspective on the typology of control

The concept of "control" here is understood as a cover term for equi and raising. In both cases, some matrix-clause dependent is interpretationally linked to an embedded predicate. In the case of equi, the main clause entity is a thematic argument of the main verb, while raising involves a non-thematic SUBJ or OBJ. A further distinction could be made on the basis of the nature of the link: functional or anaphoric control. While raising with anaphoric control is barred by the LFG architecture (as seen in Coppock's (2003) analysis of OF), equi is compatible with either kind of identification, see e.g. Falk's (2001: 136-139) discussion of *try* (which takes a functionally controlled XCOMP infinitive) and *agree* (which takes an anaphorically controlled COMP). Finally, while control is traditionally associated with finite complement clauses, nothing in LFG actually requires this. Accordingly, finiteness (defined as having tense/agreement features) could also be seen as a categorizing distinction. What emerges is the taxonomy in Table 1 and the constructions filling it in (3) and (10)-(14).

4. Discussion

Apart from the emerging typology, the following conclusions are to be drawn. First, it seems unavoidable that functional and anaphoric control should not be restricted to non-finite clauses. As for functional control, this is clear in Copy Raising and Hyperraising configurations. These seem to be essentially the same structure, involving the functional identification of a non-thematic main clause dependent with the SUBJ of a finite embedded clause. In English (or Swedish, see Asudeh & Toivonen 2012) this may be mediated through a predicative preposition, but as the Bantu examples show, regular *that*-clauses are also possible. What differentiates them is the overtness of the embedded subject. Languages which require an overt SUBJ may instantiate Copy Raising, while languages allowing pronoun drop may have Hyperraising. This approach is in line with Ademola-Adeoye's (2010) conclusion, reached within a Minimalist framework. The variation may be captured with different ordering of some c-structural constraint requiring an overt subject and Semantic Consistency. For an implementation of the second aspect, see Asudeh & Toivonen (2012), where the pronoun has to be removed from the semantic computation, via a "manager resource".

Furthermore, prolepsis may offer some insight into the nature of possible anaphoric dependencies. It seems that while functional control should be seen as a local dependency possibly restricted to SUBJ controllees, there is more room for variation in anaphoric links (see e.g. Falk 2006: 143). As a matter of parametric variation, they may be restricted to strict anaphoric control (as in Serbian, Zec (1987)), and they may be also involved in partial control[1] and arbitrary control. I argue that prolepsis is another instantiation of anaphoric control dependencies. On the one hand, in prolepsis, the referential identity between the controller and the controllee is obligatory, much like in Zec's (1987) analysis of controlled subjunctive clauses in Serbian. On the other hand, in prolepsis long-distance control of possibly non-subject functions in a finite clause is possible, which is not a usual state of affairs for control constructions in general. However, as anaphoric dependencies are essentially constraints of pronominal coreference, such a configuration is not entirely unexpected either. Pronouns in principle are flexible in their referential capabilities and taking long-distance antecedents of any grammatical function should be possible for them in principle.

Moreover, such an analysis is not entirely unprecedented. For instance, Dalrymple & King (2000) proposes an analysis for English *tough*-constructions, where the OBJ of an embedded finite clause is provided via an anaphoric dependency with a matrix-clause thematic SUBJ. See (15), in which the fronted object is analyzed as the thematic argument of *tough*, and it is anaphorically coreferent with the TOPIC of the deeply embedded finite clause. This TOPIC is in turn functionally identified with the "missing" object of the embedded verb.

Future research should focus on acquiring a better understanding on the possible constraints on functional and anaphoric control dependencies cross-linguistically. Preferably, this should be connected to work on long distance dependencies in general.

References

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[1] Partial control is when the matrix controller is only a subset of the controllees, e.g. *John agreed to gather at six*. For an LFG view of partial control, see Haug (2013).

CONTROL-TYPE			Example
Thematicity of the controller	**Nature of identification**	**Finiteness**	
Equi	Anaphoric identification	Finite complement	prolepsis (3)
		Non-finite complement	"*agree*-type" canonical control (10a)
	Functional identification	Finite complement	Turkish object control (11)
		Non-finite complement	"*try*-type" canonical control, (10b)
Raising	Anaphoric identification	Finite complement	not expected
		Non-finite complement	not expected
	Functional identification	Finite complement	Copy raising (12), Hyperraising (13)
		Non-finite complement	canonical raising (14)

Table 1.

The typology of control from an LFG-perspective.

(3) a. *János(-t) mondtad, hogy jön.*
John(-ACC) said.2SG that come.3SG
'(Of) John you said that he comes.'

b. *János(-ban) bízok, hogy jön.*
John(-in) trust.1SG that come.3SG
'In John I trust, that he comes.'

(4) *Azt mondtad, hogy János jön.*
that.ACC said.2SG that John come.3SG
'You said that John comes.'

(5) *Két fiú-t mondtál, hogy jön / jönnek.*
two boys-ACC said.2SG that come.3SG come.3PL
'(Of) two boys you said that they are coming.'

(6) *#A gépszíj-at mondtad, hogy elkapta Jánost.*
the driving.belt-ACC said.2SG that caught.3SG John-ACC.
#Idiomatic: 'You said that John has to work a lot.' Lit.: '(Of) the driving belt you said that it caught John.'

(7) *János-t mondtad, hogy hallottad a hírt, hogy jön.*
John-ACC said.2SG that heard.2SG the news that come.3SG
'(Of) John you said that you heard the news that he comes.'

(8) *John persuaded Mary to go.*

(9) a. *Mary encouraged Paul to attend the ceremony, but not David (encourage to attend the ceremony).*

b. *Én János-t mondtam, hogy jön, te pedig Péter-t (mondtad, hogy jön).*
I John-ACC said.1SG that come.3SG you but Péter-ACC said.2SG that come.3SG
'Of John I said that he comes and you did too (of) Peter.'

(10) a. *John agreed to leave.* b. *John tried to leave.*

(11) *Ben Ali-yi yarın balığı yiyecek sanıyordum.* (Turkish, from Ince (2006))
I Ali-ACC tomorrow fish eat.FUT.3SG assumed.1SG
'I thought that Ali will eat the fish tomorrow.'

(12) *Richard seems like he won.* (see e.g. Asudeh & Toivonen (2012))

(13) *Chisaang'i chilolekhana mbo chi-kona.* (Lubukusu, from Carstens & Diercks (2013))
animal seem.PRES that(C) sleep.PRES
'The animals seem to be sleeping.'

(14) *John seems to have won.*

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

$$\begin{bmatrix} \text{PRED} & \text{'mond <(SUBJ)(OBJ)(COMP)>'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'PRO'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'János}_i\text{'} \end{bmatrix} \\ \text{COMP} & \begin{bmatrix} \text{PRED} & \text{'jön <(SUBJ)>'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'PRO}_i\text{'} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

Figure 1.
F-structure for (3a).

$$\begin{bmatrix} \text{PRED} & \text{'persuade <(SUBJ)(OBJ)(COMP)>'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'John'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'Mary}_i\text{'} \end{bmatrix} \\ \text{COMP} & \begin{bmatrix} \text{PRED} & \text{'go <(SUBJ)>'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'PRO}_i\text{'} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

Figure 2.
F-structure for (8).