Arguments for argument structure for a Hungarian pronoun in clausal complementation

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Abstract

In this paper I present a novel LFG analysis of finite subject, object and oblique clausal arguments in Hungarian with particular attention to object clauses. These clauses can be used in combination with a demonstrative pronoun, or they can be used on their own. I assume that the nominative, accusative or oblique pronoun in the first type is a special referential pronoun, and not an expletive. The entirely new aspect of my analysis is that this pronoun is a one-place predicate whose semantics contains "identity relation". It takes the CP as its propositional argument bearing the COMP GF. In the case of the subject and object subtypes in the stand-alone CP type I assume that the correlative pronoun undergoes subject or object pro-drop. In this way I provide a uniform analysis of the subject and object subtypes in Types A and B. I assume that in the oblique subtype of the stand-alone CP type the matrix verb selects the CP as its COMP argument.

1 Introduction

The following two characteristics of Hungarian provide the general empirical context for the phenomena to be analysed in this paper. *(i)* This language is a subject and object pro-drop language. *(ii)* It also exhibits a special type of differential object marking. It has two conjugation paradigms: indefinite and definite. The latter is triggered if the non-pronominal object of a transitive verb is definite or the pronominal object is third person singular or plural. Elsewhere the indefinite conjugation is used. I use the term transitive to refer to verbs whose internal argument bears the OBJ GF.

In this paper I concentrate on finite subject, object and oblique clausal arguments in Hungarian with particular attention to object clauses. Subject and object clauses can be realized in two different ways.

Type A: the distal demonstrative pronoun *az* 'that' is used in nominative or accusative case, and the finite CP is its associate, see (1) and (2), respectively.[1]

(1) *Az,* *hogy* *Péter* *hazud-ott,*
that.NOM COMP Peter.NOM lie-PAST.3SGSUBJ
meglep-ett *engem.*
surprise- PAST.3SGSUBJ I.ACC
'That Peter had lied surprised me.'

[1] In (1) and similar examples the comma between the pronoun and the *that*-clause does not indicate an intonational break: it is conventionally used before subordinate clauses. In the glosses COMP stands for complementizer. The definite conjugation is indicated by the gloss DEFOBJ on the verb, and the absence of this gloss indicates that the verb form belongs to the indefinite conjugation.

(2) *(Én)* *Tud-om* *az-t,* *hogy* *Péter*
I.NOM know-PRES.1SGSUBJ.DEFOBJ that-ACC COMP Peter.NOM
hazud-ott.[2]
lie-PAST.3SGSUBJ
'I know that Peter lied.'

Type B: the finite CP is used on its own, see the subject clause type in (3) and the object type in (4).

(3) *Hogy* *Péter* *hazud-ott,*
COMP Peter.NOM lie-PAST.3SGSUBJ
meglep-ett *engem.*
surprise-PAST.3SGSUBJ I.ACC
'That Peter had lied surprised me.'

(4) *(Én)* *Tud-om,* *hogy* *Péter*
I.NOM know-PRES.1SGSUBJ.DEFOBJ COMP Peter.NOM
hazud-ott.
lie-PAST.3SGSUBJ
'I know that Peter lied.'

The transitive matrix verb in (4) has definite object conjugation, just like in (2).

When the finite clause is in an oblique functional environment, only Type A is available, as the distal pronoun in an oblique case-marked or post-positional phrasal form must always be present in the construction, see (5).

(5) *Beszélget-t-ünk* **(a-rról),* *hogy* *Péter*
talk-PAST-1PLSUBJ that-about COMP Peter.NOM
hazud-ott.
lie-PAST.3SGSUBJ
cca. 'We talked about the fact that Peter had lied.'

The phenomena presented above raise at least the following three basic questions for any approach. *(i)* Are the overt nominative and accusative pronouns in Type A referential or expletive? *(ii)* In the case of Type A, can the nominative, accusative and oblique variants be treated in a uniform fashion or not? *(iii)* In the case of the nominative and accusative variants, can Types A and B be treated in a uniform fashion? In the brief overview of some salient previous analyses in the generative literature in section 2, I point out that there are proposals that give partially or entirely different answers to these questions. I also show that the answer to question *(i)* greatly determines the answer to question *(ii)*.

[2] (2) and (4) also illustrate subject pro-drop.

In my approach I adapt ingredients from a variety of accounts, and I answer the foregoing three questions as follows. *(i)* The pronoun in Type A is referential. *(ii)* Yes, it is feasible to treat the three variants in Type A in a uniform manner. *(iii)* Yes, we can treat the subject and object variants in Types A and B uniformly by assuming that in Type B there is a dropped subject or object pronoun. It is an entirely novel aspect of my analysis that the referential pronoun in all the three variants in Type A is a one-place predicate taking the CP as its propositional argument bearing the COMP function.

The structure of the paper is as follows. I offer a critical assessment of previous generative analyses in section 2. I develop my new account in section 3. I make some concluding remarks in section 4.

2 Previous analyses

In Laczkó (forthcoming) I offer a detailed overview of the most salient types of analyses in the Chomskyan mainstream and in LFG. Here I confine myself to highlighting the crucial general points that are directly relevant for the presentation of my approach.

2.1 Accounts in the Chomskyan mainstream

The two extreme points in GB/MP approaches are represented by Kenesei's (1994) seminal, fully developed GB proposal and É. Kiss's (2002) sketchy and informal MP solution.

Kenesei (1994) assumes that in Type A the subject or object pronoun is an expletive that forms a chain with the clause. This pronoun use is comparable to the use of *it* in English *it* & *that*-clause constructions. Kenesei further assumes that oblique case-marked or postpositional pronouns with clausal associates are also used as expletives.[3] In his approach the trigger of this construction type is Case Theory: clauses cannot be case-marked. The expletive member of the chain receives case, while the CP member is assigned a Theta role.[4] In the case of Type B Kenesei assumes subject and object expletive pro-drop, otherwise the crucial aspects of the analysis are exactly the same as that of Type A. By contrast, there can be no oblique pro-drop in the

[3] Kenesei claims that in discourse-functional languages expletives have a different role. "Rather than being required by the extended projection principle to fill in an empty subject, expletives in Hungarian can occur in quantifier field or topic positions where the clauses are blocked or have decreased acceptability" (Kenesei 1994: 324). It is also interesting to note that Belyaev et al. (2017) informally and without any analytical details use the notions of subject, object and *oblique* expletive pronouns in Moksha Mordvin when they argue for keeping COMP among GFs in LFG.

[4] There is a structural representational difference in Kenesei's approach in the case of Type A. He assumes that the overt subject and object expletives and their clausal associates occupy independent constituent positions in sentence structure, while the oblique expletives and their CPs are dominated by a DP node: [DP_{case} CP]$_{DPcase}$.

theory because that would violate the recoverability principle, so stand-alone oblique CPs need to be analysed differently.

In É. Kiss's (2002) sketchy and rather programmatic analysis all the three overt pronoun variants (subject, object and oblique) are assumed to be referential. The pronominal DPs and the clausal associates are dominated by a DP node, and the relation between them is appositive. The CP can be extracted from this complex DP. She also allows (referential) subject and object pro-drop, so she also provides a uniform treatment of Types A and B in the case of nominative and accusative pronouns, and stand-alone oblique CPs require a different analysis here, too.

In the Chomskyan mainstream there have been several other analyses of Types A and B proposed, see Lipták (1998), Cuba & Ürögdi (2009), Molnár (2015), Brandtler & Molnár (2016) and Dikken (2018), among others. The overwhelming majority can be generally characterized in the following way. They are different kinds of in-between analyses partially or fully subscribing to Kenesei's (1994) influential expletive treatment of the pronouns involved. They also differ as to whether or not they offer a uniform analysis of Types A and B.[5]

2.2 LFG accounts

Szűcs (2018, 2020), agreeing with É. Kiss (2002), Tóth (2000) and Rákosi & Laczkó (2005), assumes that all the pronoun variants involved in Type A are referential and not expletive.[6] These nominative, accusative and oblique pronouns are the SUBJ, OBJ and OBL arguments of the matrix verb, respectively, and the CP is their (appositive) ADJUNCT associate. Szűcs (2018), in the context of the COMP debate in LFG, proposes that in the stand-alone CP type, Type B, the CP itself bears the SUBJ, OBJ or OBL functions, i.e. there is no pro-drop in the case of subjects and objects. In this approach then there is no uniformity across Types A and B, as the functions of the CPs are radically different (ADJUNCT vs. SUBJ, OBJ and OBL). At the same time, there is full uniformity in Type B inasmuch as the stand-alone CPs have their respective nominal argument functions (SUBJ, OBJ and OBL) required by their matrix predicates. Szűcs argues that on the basis of the relevant Hungarian facts and

[5] For a comparative discussion, see Laczkó (forthcoming).

[6] In Szűcs (2020) he argues against Kenesei's (1994) expletive pronominal approach. One of his main counter-arguments is that Kenesei's typological generalization, see footnote 3 in section 2.1, does not seem well-founded. For instance, in Finnish, another discourse-functional Finno-Ugric language, the expletive pronoun *sitä* can only occupy the [Spec,TP] position. He adds that the pronoun and the clause are not in full complementary distribution, which also weakens the justifiability of the expletive account. For further details and comments, see Szűcs (2020) and Laczkó (forthcoming).

an analysis along the foregoing lines there is no need for the COMP function in LFG. One of his key arguments is that stand-alone CPs with the usual nominal functions (SUBJ, OBJ and OBL) can be coordinated with DPs bearing the same GFs.

In Laczkó (2021a) I show that Szűcs's (2018) coordination examples are not convincing and I also give some further arguments on the basis of which I claim that Hungarian rather provides evidence for keeping COMP in the inventory of GFs in LFG. In particular, it is feasible to assume that the stand-alone CPs in Type B bear the COMP function. However, I also point out briefly that in the case of subjects and objects there is an alternative analysis available: pro-drop, and, consequently, a uniform analysis in this domain across Types A and B is possible. I leave exploring this analytical avenue for future research. In this paper I develop a novel analysis of the pronouns in Type A: I assume that they are argument taking predicates, and I combine it with subject and object pro-drop in Type B, thereby achieving uniformity in this domain.

2.3 On two LFG analyses of German *es*

Berman (2001) develops a dual LFG analysis of German *es* necessitated by different types of matrix predicates to satisfy the principles of LFG's Lexical Mapping Theory. She argues that in the case of verbs like *sagen* 'say' and *beweisen* 'prove', when they take propositional arguments, *es* is plausibly analysable as a referential pronoun. By contrast, in the case of psych-verbs like *stören* 'disturb' *es* is best analysed as an expletive. For instance, Berman proposes the following lexical forms for *stören*.

(6) stören PRED = 'stören <OBJ$_\Theta$, OBJ> SUBJ'

(7) stören PRED = 'stören <OBJ$_\Theta$, SUBJ>'

The version in (6) is used when *es* is present in the sentence. The intrinsically [+o] experiencer argument is mapped onto OBJ$_\Theta$, the propositional argument is mapped onto OBJ, and *es*, in its expletive use,[7] receives non-thematic SUBJ. When there is no *es* in the sentence, the experiencer receives the same OBJ$_\Theta$ function, while the propositional argument is assumed to be mapped onto SUBJ (to satisfy LMT's Subject Condition).

Berman et al. (1998) propose a special in-between LFG analysis of German *es* plus CP constructions in which the pronoun is not an expletive but it is not used as an ordinary referential pronoun having a full argument status, either. The authors argue against the standard referential pronoun plus (appositive) adjunct CP approach by pointing out that such analyses typically fail to formally capture the semantic relation between the pronoun and its clausal

[7] Berman's analysis is a good example of a complex case in which the data and the principles of the theory partially call for an expletive analysis of the pronoun.

adjunct.[8] They add that the intonation properties of the construction do not support the appositive analysis of the clause, either. The essence of their alternative analysis is as follows. They assume that stand-alone CPs bear the SUBJ and OBJ nominal GFs,[9] and when they are combined with *es*, the pronoun and the clause jointly realize the SUBJ or OBJ argument of the matrix verb. Consider their examples (with their glosses and with my translations).

(8) *Hans hat es bedauert, daß er gelogen hat.* (1998: 3)
Hans has it regretted that he lied has
'Hans has regretted it that he lied.'

(9) *Hans hat bedauert, daß er gelogen hat.* (1998: 2)
Hans has regretted that he lied has
'Hans has regretted that he lied.'

The joint realization of an argument is formally captured in the following way. The correlative *es* has its ordinary PRED value ('pro'), so it can be used on its own. However, alternatively it can also combine with the "property-type variant" of the CP associate, in which case both constituents receive the (↑ SUBJ) = ↓ or (↑ OBJ) = ↓ annotations. At the level of f-structure a special instance of PRED unification takes place: the clause adds further restricting information about the referential correlative pronoun's variable introduced independently, see the f-structure representation of (8) in (10).

(10)
$$\begin{bmatrix} \text{PRED} & \text{'bedauern <((↑SUBJ) (↑OBJ)>'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Hans'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{RESTR} & \begin{bmatrix} \text{PRED} & \text{'lügen <(↑SUBJ)>'} \\ \text{SUBJ PRED} & \text{'pro'} \end{bmatrix} \\ \text{PRED} & \text{'pro'} \\ \text{PERS} & 3 \\ \text{NUM} & \text{sg} \\ \text{CASE} & \text{acc} \end{bmatrix} \end{bmatrix}$$
(1998: 12)

As (10) shows, the f-structure of the object of the sentence is complex. It contains the f-structure attributes and values of an ordinary 3SG referential pronoun bearing accusative case; however, in addition it also contains the f-structure of the CP associate, which functions as the restrictor of the pronoun's variable (see the RESTR attribute and its value, which is the f-structure of the clause). This is a special kind of predicate unification.

[8] "It is not made explicit what exactly it is that ensures that the descriptive content of the appositive clause ultimately restricts the same semantic variable as the *es* bearing the *Θ*-role of the verb" (Berman et al. 1998: 7).
[9] Although the formal details of the analysis are more complex, see below.

When the CP occurs without *es*, for the sake of a uniform analysis of the two construction types, the authors use the same restriction device except that in this case the PRED value to be restricted is contributed by the complementizer, which optionally has the following PRED specification.[10]

(11) *daß* C ((↑ PRED) = 'inst') (1998: 12)

See the f-structure of (9) in (12).

(12)
$$\begin{bmatrix} \text{PRED} & \text{'bedauern } \langle((\uparrow\text{SUBJ})\ (\uparrow\text{OBJ})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{PRED} & \text{'Hans'}\end{bmatrix} \\ \text{OBJ} & \begin{bmatrix}\text{RESTR} & \begin{bmatrix}\text{PRED} & \text{'lügen } \langle(\uparrow\text{SUBJ})\rangle\text{'} \\ \text{SUBJ} & \text{PRED} \quad \text{'pro'}\end{bmatrix} \\ \text{PRED} & \text{'inst'}\end{bmatrix} \end{bmatrix}$$
(1998: 12)

3 The new approach

In this section first I give my main motivations for developing a novel analysis (3.1). Next I present the crucial aspects and formal details of my account (3.2). After this I discuss additional data that lend further support to my analysis (3.3).

3.1 Motivations for the new account

I fully agree with Szűcs (2018, 2020) arguing against the expletive treatment of the Hungarian correlative pronoun, see 2.2. Below I add some general arguments against the expletive approach.

Analysing expletive constructions in English, Postal & Pullum (1988) provide four diagnostics for the identification of an expletive pronoun. Out of these four, three can be applied, mutatis mutandis, to the Hungarian pronoun. They are as follows.[11]

(A) Expletive NPs do not support emphatic reflexives, cf. (13a) and (13b).

(13) a. *For him to smoke is itself illegal.*
b. **It is itself illegal for him to smoke.*

Consider the following example, an appropriately modified version of (1). It shows that the Hungarian correlative pronoun can be modified by emphatic reflexives.

[10] In (11) and (12) 'inst' stands for "instantiated symbol", a variable restricted by RESTR in (12).

[11] The English examples are from Postal & Pullum (1988).

(14) *Az* *már* *maga* / *önmagá-ban* *meglep-ett* *engem,*
that.NOM already itself / itself-in surprise- PAST.3SGSUBJ I.ACC
hogy *Péter* *hazud-ott.*
COMP Peter.NOM lie-PAST.3SGSUBJ
*'It already itself / in itself surprised me that Peter had lied.'

(B) Expletive NPs do not coordinate, cf. (15a) and (15b).

(15) a. *Neither he nor it were either difficult to find or easy to lose.*
b. **It and there were difficult to claim to be raining and to prove to be floods in the valley, respectively.*

Consider the following Hungarian example in which a nominative correlative and a DP containing a dative correlative are felicitously coordinated.

(16) *Az* *és* *a-nnak* *az* *ellenkező-je* *is* *lehetséges,*
that.NOM and that-DAT the opposite-POSS.3SG also possible
hogy *Péter* *hazud-ott.*
COMP Peter.NOM lie-PAST.3SGSUBJ
*'It and its opposite is also possible that Peter lied.'

(C) Expletive NPs do not appear in nominalization *of*-phrases, see (17).

(17) *your demonstration of it to him (*that she was sick)*

In (18) I give the closest Hungarian counterpart of (17). It demonstrates that in Hungarian the dative correlative is compatible with the CP associate.

(18) *a-nnak* *az* *által-ad* *való*[12] *bemutatás-a* *neki,*
that-DAT the by-2SG BEING demonstration-POSS.3SG to.him
hogy *ő* *beteg* *volt*
that she sick was

I think the negative results of the three foregoing diagnostics provide further strong arguments against the expletive analysis of the Hungarian pronoun involved in the relevant constructions.

However, I do not find the previous referential pronoun plus (appositive) adjunct CP treatments of these constructions appropriate, either. The main reason for this is that intuitively it seems rather strange to assume that the true

[12] In Hungarian prenominal modifiers of the deverbal noun head must be "adjectivized", and the main formal device for this is the use of one of the participial forms of the copula *van* 'be': BEING.

(and only) semantic argument of the matrix predicate is the referential pronoun, and the clause has an absolutely optional status because of its ADJUNCT function. One does not feel any semantic difference between Type A and Type B as regards the obligatory argumenthood of the clause.[13] Moreover, the intonation pattern of these constructions does not justify the frequent claim that the correlative pronoun and the clause are in an appositive relation.[14] In particular, when the pronoun and the clause are adjacent there is no pause between them and the clause does not start a new intonation phrase.[15]

I also agree with Berman et al. (1998) when they criticize the referential pronoun plus (appositive) adjunct CP analyses for not capturing formally how the matrix predicate and the clause in its ADJUNCT status can "find each other" semantically in an obligatory fashion through the mediation of the correlative pronoun, see footnote 8 in section 2.3. I believe this would require a rather complex formal apparatus. It would be a better in-between solution to assume that the CP is a thematic adjunct of the correlative pronoun, in the spirit of Rákosi (2006), for instance. It would be more favourable because the semantic link between the matrix predicate and the clause could be captured formally. However, even thematic adjuncts are (a special type of) adjuncts, i.e. optional elements semantically selected by their predicate, and my crucial claim, and my main motivation for a different treatment, is that in this construction the CP is as obligatory as the correlative pronoun. In my new analysis the pronoun selects the clause as its obligatory argument.[16] It is important to point out that the (appositive) adjunct, the thematic adjunct and the argument treatments of the clause share a fundamental semantic aspect: in all the three of them there is a (referential) identity relation between the pronoun and the clause. This identity relation must be captured at some level. My claim is that, given the obligatory co-occurrence of the pronoun and the CP, and the untenability of the expletive treatment of the pronoun, the most feasible solution is the

[13] It is to be pointed out here that an expletive approach, otherwise implausible for Hungarian, captures this semantic identity in a principled manner.

[14] See Berman et al.'s (1998) claim to the same effect about the corresponding German construction.

[15] Here we can draw a parallel with English relative clauses. For instance in the noun phrase string *my grandmother who was born in London* the relative clause can have either a restrictive (defining) use to identify one of the two grandmothers, and it can also have a non-restrictive (non-defining) use when it is obvious to the hearer which grandmother is referred to by the speaker. In the latter case the nature of the clause is appositive, there is a short pause between the noun head and the clause (indicated by a comma in writing) and the clause starts a new intonation phrase. In the former case there is no pause and no new intonation phrase.

[16] As I demonstrate in section 3.3, when the CP is not expressed, we are dealing with ellipsis or the anaphoric use of the homophonous distal demonstrative pronoun *az* 'that'.

assumption of an argumental relation between the two elements of the construction.

As shown in section 2.3, Berman et al. (1998) propose an LFG analysis with a special PRED unification and restriction device.[17] Obviously, it avoids all the problems with the (thematic) adjunct accounts that I pointed out above: the CP is an obligatory element of the construction and it has a straightforward semantic link to the matrix predicate. I think, however, that this analysis is more complex than necessary. It employs a special device, PRED unification, to begin with, it needs a particular functional annotational pattern in c-structure, and it has to provide the lexical form of the complementizer with a special optional PRED value seemingly just for the sake of making it possible to treat the pronoun plus CP and the stand-alone CP types in a uniform manner, see section 2.3. By contrast, my alternative, argument-taking pronoun approach specifically targets the two construction types and uses a simpler solution: it just assumes that the pronoun involved in these constructions is a one-place predicate taking the CP as its propositional argument.

3.2 The novel account

This account adapts the following basic ingredients from a variety of previous generative analyses.

- The overt (nominative, accusative or oblique) correlative pronoun in Type A is referential.
- It is only *az* 'that', the distal version of the demonstrative pronoun, that is used in Type A.
- In Type B there is subject or object pro-drop.

As I have already pointed out above, the new component of my approach is that the pronoun is a one-place predicate and the CP is its propositional argument bearing the COMP function. In Type B the subject or object pronoun is dropped.

3.2.1 Type A

In my analysis the treatment of the pronoun *az* 'that' is the crucial factor. It is a distal demonstrative pronoun, see (19).

(19) *Péter* *fest-ett-e* *az-t.*
Peter.NOM paint-PAST-1SGSUBJ.DEFOBJ that-ACC
'Peter painted that.'

The simplified lexical form of the pronoun in this use can be given as in (20). Naturally *ez* 'this', the proximal counterpart, shares this form except that it is (–DISTAL).

[17] Szűcs (this volume) adapts their analysis of the German constructions to their Hungarian counterparts.

(20) *azt*, PRON, (↑ PRED) = 'THAT'
(↑ PRON-TYPE) = DEMONST
(↑ DISTAL) = +
(↑ ANIMATE) = –
(↑ DEF) = +
(↑ CASE) = ACC
(↑ PERS) = 3
(↑ NUM) = SG

As a reminder, below I repeat (2), exemplifying the accusative correlative pronoun plus CP construction in Type A.

(2) *(Én)* *Tud-om* *az-t,* *hogy* *Péter*
I.NOM know-PRES.1SGSUBJ.DEFOBJ that-ACC COMP Peter.NOM
hazud-ott.
lie-PAST.3SGSUBJ
'I know that Peter lied.'

On the basis of my idiolect and a short informal survey, my claim is that in this construction type only the distal variant is used. This is comparable to Kenesei's (1994) analysis, in which only this form has the expletive status. The intonation pattern is as I described in section 3.1: when the CP immediately follows the pronoun there is no pause after the pronoun and the complementizer in the adjacent CP does not start a new intonation phrase.[18] In this case the proximal pronoun cannot be used. The fact that complicates this situation is that both the distal and the proximal pronouns can occur with such CPs in a different intonation pattern: there is a pause between the pronoun and the CP and the complementizer does start a new intonation phrase. In this case then there is an appositive relation between the pronoun and the CP, and, therefore, this configuration does not manifest Type A.[19] Contrary to my view, Szűcs (2020, this volume) assumes that both the distal and the proximal pronouns are possible in Type A. If this claim is supported by empirical facts then I suspect that there may be dialectal variation here. In that case the analysis of the distal pronominal form in Type A I develop below can be extended to the proximal counterpart. However, in what follows I assume that only the distal pronominal form can be involved in Type A.

The crucial aspect of my analysis then is that the distal pronominal form is used in Type A; however, it does not function as a distal pronoun, because in

[18] It is natural to assume that in this case the pronoun and the CP make up a complex DP constituent: [DP CP]$_{DP}$, as in É. Kiss's (2002), for instance.

[19] Also see my comparison of the Hungarian construction with restrictive vs. non-restrictive relative clauses in English in footnote 15. The main point here is that I assume that in this appositive relation the distal pronominal form is actually used as a distal pronoun, and not as an argument-taking personal pronoun.

this use it is not a demonstrative pronoun: it is a 3SG personal pronoun comparable to *it* in English.[20] Consider the lexical form I propose for it in (21).

(21) *azt*$_2$, PRON, (↑ PRED) = 'PRO-RI < (↑ COMP) >'
prop
(↑ PRON-TYPE) = PERSONAL
(↑ ANIMATE) = –
(↑ DEF) = +
(↑ CASE) = ACC
(↑ PERS) = 3
(↑ NUM) = SG
({ ((GF ↑) FOCUS)
| ~((GF ↑) FOCUS)
((GF ↑) CHECK _VM) = + })

This pronoun is a definite, inanimate personal pronoun, always 3SG. It has a propositional argument that bears the COMP grammatical function.

In the PRED value PRO-RI stands for a special type of "referential identity" which is a shorthand for the following informal semantics: I am a referential pronoun in an identity relation to (the reference of) my propositional argument. As regards the formalization of this informal semantics, if we have the following premises: (i) the pronoun is not an expletive (ii) the relation between the pronoun and the CP is not appositive,[21] then exactly the same semantics needs to be formulated at any level of capturing the relationship between the pronoun and the clause: some kind of a predicate–dependent relation, whether the dependent is a simple adjunct, a thematic adjunct or an argument. My claim here is that the most appropriate locus of this modelling is the predicate–argument dimension.

Interestingly, Type A has a special word-order property. When the matrix predicate is non-factive, e.g. *hisz* 'believe' as opposed to *tud* 'know', and the matrix clause is neutral, i.e. when it does not contain a focussed constituent, the correlative pronoun, *az*$_2$, must be used in the immediately preverbal position, as a verbal modifier (just like preverbs and designated arguments of certain predicates).[22] This fact is captured by the disjunction at the bottom of (21). The formalism reads as follows. If the sentence contains a preverbal focussed constituent, the pronoun's position is not constrained (first disjunct), while if there is no focussed constituent in the sentence, the pronoun must

[20] As opposed to *ő*, which is the gender-neutral counterpart of *he* and *she*. Therefore, its more appropriate gloss in (2) would be *it*.

[21] See my argumentation for both premises in section 3.1.

[22] The unmarked, neutral word order for non-factive predicates is exemplified in (i).

(i) *Én* *az-t* *hisz-em,* *hogy …*
I.NOM it-ACC believe-PRES.1SGSUBJ.DEFOBJ that…
'I believe it that …'

occupy the also preverbal VM (verbal modifier) position (second disjunct).[23] This special behaviour of *az*$_2$ lends further support to distinguishing it from *az*.

3.2.2 Type B

As a reminder, below I repeat (4), exemplifying Type B, the stand-alone CP counterpart of the accusative pronoun plus CP construction in Type A shown in (2).

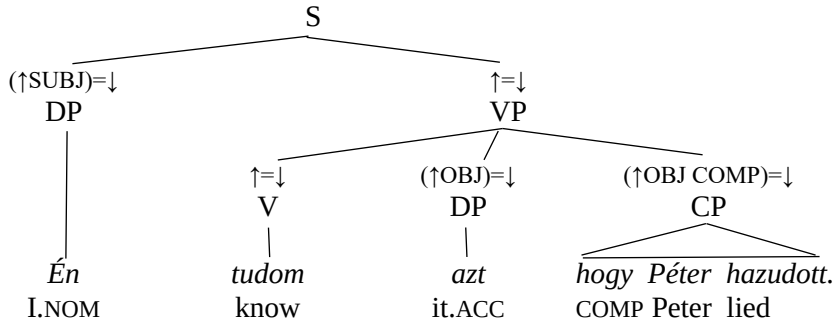
(4) *Én* *tud-om,* *hogy* *Péter*
I.NOM know-PRES.1SGSUBJ.DEFOBJ COMP Peter.NOM
hazud-ott.
lie-PAST.3SGSUBJ
'I know that Peter lied.'

As I pointed out in section 2.2, Szűcs (2018), in his against-COMP approach, assumes that the CP in (4) bears the OBJ GF, while in Laczkó (2021a), in my for-COMP approach, assume that the CP bears COMP. In addition, I point out that in the case of the subject and object configurations a subject and object pro-drop analysis is also available, but I leave exploring this analytical avenue to future research. In this paper, I develop this alternative approach and provide empirical evidence and theoretical justification for it.

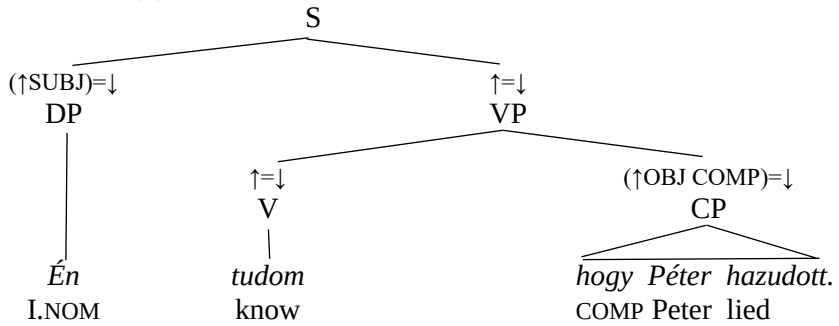
My analysis of (2) and (4) is as follows.

[23] I employ this (↑ CHECK _VM) representational device extensively for the distributional characterization of all types of verbal modifiers in chapter 3 of Laczkó (2021b). CHECK features like this come in defining and constraining pairs. They are very useful when it has to be formally captured that an element must occupy a particular syntactic position under certain circumstances. The element involved is associated with the defining member of the feature pair and the "governor" is associated with the constraining member, see the lexical form of the non-factive predicate *hisz* 'believe' in (26) below. For ease of exposition, here I illustrate the neutral sentence vs. non-neutral sentence contrast by the sentence without focus vs. sentence with focus opposition, the crucial point being that focused constituents and verbal modifiers fight for the same immediately preverbal position in Hungarian in my approach. However, the full picture is more complex in that verbal modifiers are in complementary distribution not only with focused constituents but also with negated phrases and *wh*-constituents. For my analysis, see chapters 3 and 4 in Laczkó (2021b).

(22) c-structure of (2)



(23) c-structure of (4)



(24) lexical form of the matrix verb in (2) and (4)

tudom V, (↑ PRED) = 'KNOW < (↑ SUBJ) (↑ OBJ) >'
(↑ SUBJ PERS) = 1
(↑ SUBJ NUM) = SG
((↑ SUBJ PRED) = 'PRO')
{ (↑ OBJ PERS) =*c* 3
(↑ OBJ NUM)
(↑ OBJ DEF) =*c* +
| (↑ OBJ PERS) = 3
(↑ OBJ NUM) = SG
(↑ OBJ DEF) = +
{ (↑ OBJ PRED) = 'PRO'
| (↑ OBJ PRED) = 'PRO-RI < (↑ COMP) >' }}

In this representation both subject and object pro-drops are encoded. The modelling of subject pro-drop follows the standard LFG pattern: this inflected form of the verb always encodes the person and number feature values, and in the case of pro-drop it additionally contributes the pronominal PRED feature value of the subject. I model the feature properties of the object in a more complex fashion than usual, because in my analysis there are two types of object pro-drop: the standard type and the pro-drop of my newly introduced argument-taking correlative pronoun. I use a complex disjunction: there is a binary main disjunction and in the second disjunct there is a further disjunction.

The first disjunct in the main disjunction handles the situation when there is an overt (definite) object in the sentence, and, therefore, the inflection only encodes agreement. The object must always be third person (first line in the disjunct), it can be either singular or plural (this is expressed by an existential annotation: (↑ OBJ NUM) in the second line), and it must be definite (see the third line). The shared part of the second main disjunct encodes the object pro-drop properties. It contributes the person, number and definiteness feature values, see the first three lines in the second main disjunct. In the first disjunct of the second main disjunct the ordinary pro-drop PRED feature value is contributed. The second disjunct of the second main disjunct encodes the object pro-drop of my newly introduced argument-taking pronoun. In the treatment of the pro-dropped subject variant of Type B, my new disjunct has to take the following more complex form.

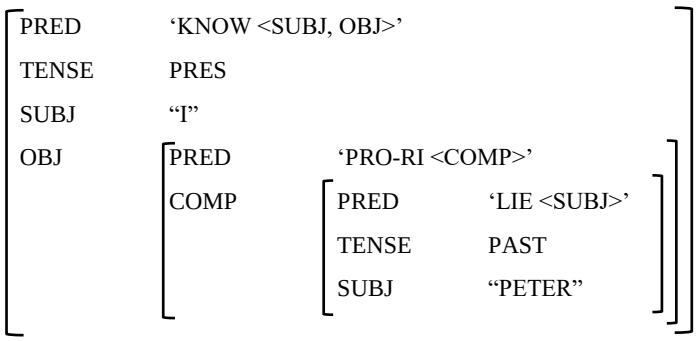
(25)
(↑ SUBJ PERS) = 3
(↑SUBJ NUM) = SG
(↑SUBJ DEF) = +
(↑SUBJ PRED) = 'PRO-RI < (↑ COMP) >'

My object and subject disjuncts are only present in the lexical forms of verbs that can be used in Type A constructions. Above I presented the lexical representation of an inflected form of *tud* 'know', involved in the object variant of Type B. In (3) *meglep* 'surprise' is an example of verbs involved in the subject variant of Type B, so its lexical form must contain (25) in my analysis.

As I pointed out in section 3.2.1, non-factive matrix predicates occurring in Type A have the additional property that in neutral sentences they require az_2 to occupy the immediately preverbal VM-position. In (21) I showed how this is captured in the lexical form of this pronoun. On the other side of this CHECK featural representation coin, this constraint must also be encoded in the lexical forms of these non-factive predicates. For instance, the lexical form of the verb *hiszem* 'I believe' shares all the annotations of *tudom* 'I know' in (24), and it also has an additional CHECK feature encoding in the first main disjunct.

(26) *hiszem* V,
(↑ PRED) = 'BELIEVE < (↑ SUBJ) (↑ OBJ) >'
(↑ SUBJ PERS) = 1
(↑ SUBJ NUM) = SG
((↑ SUBJ PRED) = 'PRO')
{ (↑ OBJ PERS) =$_c$ 3
(↑ OBJ NUM)
(↑ OBJ DEF) =$_c$ +
{ (↑ FOCUS)
| ~(↑ FOCUS)
(↑ OBJ CHECK _VM) =$_c$ + }
| … }

(27) f-structure of (2) and (4)



It is a special aspect of this analysis that in Type B, exemplified by (4), it is an argument-taking predicate, my *az*$_2$, that is covert (i.e. pro-dropped). However, this is not the only construction type in Hungarian in whose analysis a covert predicate is assumed. In chapter 6 of Laczkó (2021b) I analyse Hungarian copula constructions, and I treat the identity type by assuming that the copula is a two-place predicate (equating two entities), and in the case of third person singular or plural subjects it is not overtly expressed. Consider one of my examples.

(28) *Az igazgató a szóvivő.*
the director.NOM the spokesperson.NOM
‘The director is the spokesperson.’

Even when the copula is covert in the sentence in this type, I assume that this unexpressed copula is the main predicate. I follow Dalrymple et al.’s (2004) treatment of a Russian construction in this spirit, and I postulate that the properties of the missing copula are introduced by LFG style phrase-structural means:

(29) S → DP (↑SUBJ)=↓ VCop ↑=↓ ⋁ ε (↑PRED)= ‘be<(↑SUBJ) (↑PREDLINK)>’ (↑TENSE)=present (↑SUBJ PERS)=$_c$3 (↑SUBJ NUM) (↑SUBJ PERS)=(↑PREDLINK PERS) (↑SUBJ NUM)=(↑PREDLINK NUM) (↑SUBJ SPECIFIC)=$_c$+ (↑PREDLINK SPECIFIC)=$_c$+ DP (↑PREDLINK)=↓

In this rule the overt copula (VCop) is in complementary distribution with the special ε (epsilon) symbol, which does not appear in the c-structure representation as an empty category; instead, it contributes its annotations solely to the relevant f-structure.[24] In all the other paradigmatic slots, the

[24] For further details and justification, see Laczkó (2021b).

appropriate form of the copula encodes all the relevant functional information in its lexical entry.

It is noteworthy that of these two covert predicate cases the pro-drop of *az*$_2$ is less marked than the treatment of the covert copula for the following reason. In the latter case a special symbol is used in a phrase structure rule. It is special because it is part of the rule, but it has no actual phrase structure exponence, and it contributes the PRED feature of the clause to the f-structure. In effect this is an LFG way of capturing the fact that a PRED feature is constructionally introduced. By contrast, in my analysis of *az*$_2$ I use LFG's standard object pro-drop mechanism, and its only distinguishing property is that it contributes a PRED value different from the standard 'PRO' value.

3.3 Additional support for the analysis

It is a fundamental empirical generalization that a transitive verb agrees with its object if that object is definite.[25] This has to be encoded in the morphological paradigm of Hungarian verbs (formally speaking: the relevant bound morpheme of transitive verbs needs to convey this constraint, e.g. taking the following form: (↑ OBJ DEF) =$_c$ +, as in (24) and (26). This formal agreement requirement is trivially satisfied in Type A in the case of a transitive matrix verb because the construction contains a definite pronoun in accusative case. As I showed in section 2.2, Szűcs (2018) assumes that in Type B the stand-alone CP has nominal functions, with OBJ among them, and he makes a generalization to the effect that Hungarian non-finite clauses are indefinite and finite clauses are definite, so the latter trigger definite conjugation. This approach is rather circular because Szűcs gives no independent evidence for the definiteness of finite clauses. By contrast, in my object pro-drop approach, just like in Kenesei's (1994) and É. Kiss's (2002), there is a straightforward explanation for the definite conjugation: a dropped definite pronoun triggers it.

I conducted a small-scale (40-informant) survey for testing the agreement behaviour of dropped object pronouns. The basic empirical generalization is that in the speech of the majority of native speakers these covert pronouns can only have singular reference, see the lexical form of *tudom* 'I know' in (24) in section 3.2.2. Consider two of my test examples and my informants' judgements in (30) and (31) in this light.

(30) A: *Megjelen-t-ek* *János* *új* *könyv-e-i.*
appear-PAST-3PL John.NOM new book-POSS.3SG-PL
'John's new books have come out.'

[25] Pronominal objects follow a special pattern: third person pronouns trigger definite conjugation, while first and second person pronouns require indefinite verbal agreement.

B: *Olvas-t-am.*
read-PAST-1SGSUBJ.DEFOBJ
'I (have) read (i) this / (ii) them.'

(i): 66.67% -- (ii): 2.56% -- (i) OR (ii): 30.77%

(31) A: *Megjelen-t* *János* *új* *könyv-e,*
appear-PAST.3SG John.NOM new book-POSS.3SG

és *kiad-t-ák* *Kati*
and publish-PAST-3PLSUBJ.DEFOBJ Kate.NOM

kötet-é-t *is.*
volume- POSS.3SG-ACC also

'John's new book has come out, and they have published Kate's volume, too.'

B: *Olvas-t-am.*
read-PAST-1SGSUBJ.DEFOBJ
'I (have) read (i) this (= about these two events) / (ii) them (= the two books).'

(i): 50% -- (ii): 0% -- (i) OR (ii): 50%

The following observations can be made here.

- The only plural DP antecedent reading is practically non-existent.
- The percentage figures of the ambiguity interpretation, (i) OR (ii), in both (30) and (31) show ratios higher than I originally expected on the basis of the aforementioned empirical generalization (30.77% and 50%). This may have to do with the following two (maybe simultaneous) factors: *(a)* in the relevant area, the language use of this group of speakers does not reflect the basic tendency in the language use of the entire speech community *(b)* the rather strict, general only singular DP antecedent constraint on covert pronouns is being gradually weakened.
- I believe that the ability of two conjoined CPs to function as the joint antecedents of a covert object pronoun for all my informants lends considerable support to my analysis proposed here for the following reason. We can assume that in this reading the phonetically null counterpart of azt_2 in (21) is used and it, just like its overt counterpart, can naturally take two coordinated CPs as its COMP propositional argument. I do not think that any one of the alternative approaches discussed in this paper could handle this phenomenon in a principled and system-internally unmarked fashion to the same extent.

4 Concluding remarks

In this paper I analysed finite subject, object and oblique clausal arguments in Hungarian with particular attention to object clauses. These clauses can be used in combination with a demonstrative pronoun: Type A, or they can be used on their own: Type B.

I adapted several ingredients from a variety of generative approaches. I assume that the nominative, accusative or oblique pronoun in Type A is a special referential pronoun. The entirely new aspect of my analysis is that this pronoun is a one-place predicate whose semantics contains "identity relation". It takes the CP as its propositional argument bearing the COMP GF. The three subtypes are uniformly analysed. In the case of the subject and object subtypes in Type B I assume that there is subject and object pro-drop. In this way I provide a uniform analysis of the subject and object subtypes in Types A and B. In the oblique subtype there can be no uniform analysis across the two main types because oblique pro-drop is not available in Hungarian. Following Laczkó (2021a), I assume that in the oblique subtype in Type B the matrix verb selects the CP as its COMP argument.

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