The Hungarian clause as a network of relations

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1. Introduction. The goal of the dissertation

The goal of the dissertation is to propose a new model for the structure of Hungarian clauses which combines the assumptions of functional cognitive linguistics and dependency grammar. From the cognitive school, the author draws especially heavily on Langacker’s (1987, 1991, 2008) work, and analyses clausal structure purely in terms of pairings of meaning and form, i.e. with symbolic categories. From dependency grammar, he takes over the assumption that the clause is a network of binary asymmetrical relations between fairly basic units (typically words), cf. Tesnière 1959/1982, Hudson 2007, etc. This contrasts with generative approaches which rely on the building metaphor and examine how smaller units are „put together” into larger ones, from morphemes to sentences (cf. É. Kiss 2006: 110).

However, in contrast with Hungarian traditional grammar (cf. Keszler ed. 2000), and in line with the view of generativists, the author puts a premium on the analysis of word order. He presents clausal structure as a multi-dimensional network (cf. Debusmann et al. 2004); for example, the dependents of a verbal predicate are classified on two independent dimensions, both with their own sets of relational categories. One is relevant for Hungarian case affixes and postpositions, the other for word order and prosody.

The author strives to demonstrate the viability of this approach by analysing a wider range of structures than his previous publications addressed (cf. Imrényi 2009, 2010). However, there remain several phenomena in need of future research within the proposed framework. These include coordination, contrastive topics, the internal structure of „noun phrases” and complex clauses.

2. Historical background and context

The history of Hungarian word order research can be divided into two main eras. Among the results of the first, spanning 150 years from the mid-19th century to the appearance of the first generative models (É. Kiss 1978, 1987), the following deserve to be mentioned: Fogarasi’s stress rule (Fogarasi 1838), the discovery of topic–comment articulation by Brassai (1860), and the distinction made between collective and exclusive (Kicska 1891) or positive and negative expressions (Arany 1873). These results also made their way into Hungarian descriptive grammars of the ’academic’ tradition (Tompa ed. 1961–1962 [MMNyR.], Rácz szerk. 1968/1971 [MMNy.]); however, the analysis of word order was generally no more than
an appendix to the core description of the clause with the familiar relational categories subject, object, etc.

The second era (from around 1978 to the present) has seen the proliferation of ever more detailed accounts of Hungarian word order from a generative perspective. However, the underlying assumptions of these accounts (deep vs. surface structure, transformations, phrase structure, innatism, etc.) have been in conflict both with the (partly implicit) views of traditional grammarians and, from the 1990’s, with those of cognitive linguists. As a consequence, even though generative grammar has enjoyed a virtual monopoly in word order research, its results are not widely endorsed by the working outside of that school.

The dissertation aims at more than merely fitting into the context pictured above; it also attempts to re-shape it. Uniting assumptions from dependency-based analysis (characteristic of the ’academic’ tradition) and functional cognitive linguistics, it sets out to propose a model of word order which may serve as an alternative to current generative accounts. Besides this, the author also builds on the pioneering work of 19th century linguists, and takes issue with the interpretation of BRASSAI as a precursor to generative grammar (cf. É. Kiss 2005). In particular, he argues that BRASSAI’s parallel between clausal structure and feudalistic society\(^1\) demonstrates his commitment to a dependency-based tradition, and his objections to a predominantly deductive method also set him apart from generativism.\(^2\)

3. Theoretical and methodological background. Central theses

As mentioned in the introduction, the dissertation unites the assumptions of functional cognitive linguistics and dependency grammar. The major assumptions informing the analysis are as follows.

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\(^1\) Vö. BRASSAI (1860: 332): „Sitting at the beginning, middle, or end of the sentence, wherever it pleases him, is the monarch, the verb, related by meaningful bonds to its vassals, the dependents. [...] The rule of the verb is no dictatorship, and its vassals are no slaves but have lawful relations to their lords and to one another; they each possess a degree of autonomy and a certain rank, with a kind of feudalism whose slogan, just as in history, is ‘nulle terre sans seigneur’.”

\(^2\) Vö. BRASSAI (1860: 285): „However, I also have to see that a great many people (not all of them at the bottom of Parnass), rather than moving from the specific to the general, strive to bring all facts by force under an a priori general rule, just as though someone attempted to draw the map of Switzerland from Mt. Rigi, which can be a beautiful panorama but a poor map with all the distortions of perspective. [...] I have to see that the ‘so it is’ of analogy is replaced, with a tricky syllogism, by ‘that is how it must have been’, in an attempt to win our approval by force.”
The clause is a symbolic structure which has to be described in terms of pairings of meaning and form. Source: construction grammars, Langacker’s (1987, 1991, 2008) cognitive grammar included.

The analysis of this structure is guided by the methods of dependency grammar (cf. TESNİÈRE 1959, MEL’ČUK 1988, HUDSON 2007 etc.) rather than phrase structure grammar. Instead of the question 'How are words are put together into phrases, and phrases into sentences?' (cf. É. KISS 2006: 110), the author’s main concern is how basic units (typically words) form networks of binary relations.

The relations between units are regarded as symbolic (cf. (1)), i.e., as semantic relations associated with formal devices (morphology, word order, prosody) which make them distinguishable from other types of relations. Drawing on LANGACKER (e.g., 2001), the author assumes that categories like subject and object can also be grounded in semantics. However, he follows CROFT (2001) in rejecting global (construction-independent) and universal (language-independent) categories and instead takes construction and language specific categories to be a better point of departure. For example, instead of the global and universal category 'subject’ a more useful starting point may be the semantic analysis of the 'subject of Hungarian transitive verbs in the active’, with generalizations across constructions and languages only secondary.

The relations are said to form a multi-dimensional network, i.e. there may be more than one dependency structure per clause (cf. DEBUSMANN et al. 2004: 2). This is analogous to a family enterprise where interpersonal relations can be described on two independent dimensions (D1: work relations, D2: family relations). According to the proposal, the dependents of the verb can be classified not only into subjects, objects, and adverbials, but also with another set of relational categories relevant for word order and prosody. On this dimension of the clause, a distinction is made between elaborators, extenders, and restrictors, where 'elaboration’ comes from Langacker (1987), and the opposition between 'extension’ and 'restriction’ has its precursor in KICSKA’s (1891) contrast between collective and exclusive expressions.
The symbolic structure of the clause is organized on a core vs. periphery basis, and a key role is played by the distinction between baseline and derivative patterns. A crucial assumption is that prototypical Hungarian clauses with a verbal predicate have a core component which schematically represents the clause by default, and shows the correlation of various formal and functional properties. On the formal side, these include verb modifier + verb word order and unmarked declarative mood; on the semantic pole, positive polarity and declarative illocutionary force. In its baseline manifestation, the core is a schematic positive declarative clause (proto-statement) asserting the occurrence in time of an event; departures from the baseline have to be formally indicated. Possible devices (some of which are mutually exclusive) include morphology (e.g., imperative mood suffix), certain particles and clitics (e.g. nem 'not', -ɛ 'interrogative clitic'), word order (the inversion of verb modifier and verb), and prosody (e.g., gradual rise followed by sharp fall).

These theoretical assumptions have strong methodological implications. To begin with, adherence to the symbolic thesis and to a dependency-based model has the effect of significantly constraining the set of possible analyses. The author eliminates theoretical constructs invoked for a purely formal reason, insisting on the study of form–meaning correspondences. The dependency-based approach, for its part, shifts attention from the categorization of units as such to the categorization of relationships. Finally, the assumptions in (5) have the methodological implication that the analysis proceeds from the core to the periphery and from simpler (baseline) patterns to more complex ones. An important aspect of emerging picture is that language is a system of similarities and differences, with a fundamental role played by iconicity and analogy.

Functional cognitive linguists aim at usage-based descriptions of grammar, one aspect of which is that ideally, the data should come from authentic sources (corpora). However, how strictly this is implemented is subject to variation, and it is not clear that the principle has to be rigorously applied at all stages of the research. The dissertation is chiefly concerned with providing new analyses of well-documented phenomena, hence placing less of an

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3 Within a system or paradigm, LANGACKER (2010) identifies the baseline as the member with the least conceptual complexity which serves as an (indispensable) point of departure for accessing other members of increased complexity. For example, in the nominal system, singular nouns represent the baseline against which plurals are derivative, since they need a special conceptual operation symbolized by the plural suffix (cf. LANGACKER 2010: 7). When it comes to the analysis of clauses, LANGACKER (2010: 10, 26) takes declarative illocutionary force and positive polarity to be the baseline values.
emphasis on data collecting methods. However, the author does implement another aspect of usage-based grammars, namely the need to interpret linguistic data as part of a natural context. In the future, it will be helpful to test the results on a large database and modify the model where necessary.

4. The structure of the dissertation

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Patterns with the verb of existence *van* ’(there is’

The core component in an extending or restricting capacity

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A comparison of grammatical functions and operator–operand relations

Operator chains

Shared operands. The structure of multiple questions

The topic–comment relationship and mental spaces

Cross-linguistic application

Summary and conclusion

5. Sample analyses

The dissertation follows Hudson’s (2007) conventions in the representation of dependency structures, which are more appropriate for reflecting word order than TéSNIÈRE’s stemmas. For example, the clause *Zsuzsi tegnap felhívta Marit* ’Sue telephoned Mary yesterday’ is represented as follows, where arrows point from heads to dependents, and the relations are labelled as *S* (subject), *O* (object), or *A* (adverbial).⁴

![Dependency diagram](attachment:image.png)

⁴ Glosses: *Zsuzsi* ’Sue-nom.’, *tegnap* ’yesterday’ *felhívta* ’he/she telephoned him/her, *Marit* ’Mary-acc.’
The verbal predicate is treated as a clausal core (proto-statement in its baseline realization), cf. (5), since it can serve as a fully functional, albeit schematic, clause in the appropriate context (e.g. in reply to a yes/no question: A: Zsuzsi tegnap felhívta Marit? ’Did Sue telephone Mary yesterday?’ B: Felhívta ’She did’). The speaker of (6) reports on the occurrence of a telephoning event between two participants prior to the speech event, all of which is schematically expressed by the verb form felhívta ’he/she telephone him/her’. The role of Zsuzsi ’Sue-nom’, tegnap ’yesterday’ and Marit ’Mary-acc’ is to elaborate, i.e. specify in finer-grained detail, certain aspects of the event in question (cf. LANGACKER 1987). Sue elaborates the 3rd person singular subject, tegnap the time reference indicated by the past tense morpheme -t, and Marit the object. The inverse of elaboration is reduction. On the one hand, Zsuzsi tegnap felhívta Marit ’Sue telephoned Mary yesterday’ can be regarded as a more elaborate construal of what Felhívta ’He/she telephoned him/her’ expresses; on the other hand, the latter can be viewed as a reduced equivalent of the former. The lower the degree of elaboration, the more is left for the hearer to recover from context. The ’dropping’ of dependents is predominantly determined by the contextual recoverability and relevance of their referents (cf. GOLDBERG 2006: 190).

(7) a. Zsuzsi tegnap felhívta Marit. maximal elaboration, minimal reliance on context
b. Zsuzsi felhívta Marit. reliance on context
c. Felhívta Marit. reduction elaboration
d. Felhívta. e. Fel.
f. Igen. minimal elaboration, maximal reliance on context

Clauses containing only elaborators besides the proto-statement are characterized by highly flexible word order and flat prosody (Zsuzsi tegnap felhívta Marit, Tegnap felhívta Zsuzsi Marit, Marit felhívta tegnap Zsuzsi stb.). In this type of network, connection weights presumably show an even distribution. Each expression participates in the structure with its baseline functional and formal properties (e.g. word-initial stress), and the various word orders (activation patterns) have no bearing on the basic propositional meaning (’who-did-what-to-whom’, cf. TOMASELLO 1998: xvi) of the clause (see also KÁLMÁN ed. 2001: 10–11). For the subtle differences that still exist, see TOLCSVÁI NAGY 2006, 2008.
Elaboration as a syntagmatic relation is not specifically signalled (by a separate arc) on the dependency graph, only the relation types distinguished from it on the second dimension of description. One of these is **extension**, which extends the proto-statement’s contextual application to a higher level with respect to a set or a scale. For example, if the interlocutors treat the information of (6) as part of the common ground, (8) serves to extend the application of *felhívta* ’he/she telephone him/her’ by adding a new referent to its substructure for subjects.\(^5\)

Extenders are highlighted on the representation by bold face. The intended pronunciation is to put a heavier accent on *Péter is* ’Peter also’ than on the verb – this is part of the way their semantic relation is formally distinguished from pure elaboration.

(8) **Péter** is felhívta.

’Peter also telephoned him/her.’

The sentence in (8) can be reduced not to the proto-statement but rather to the extender, cf. (9).

(9) **A:** *Péter* is felhívta?

**B:** a. Igen, *Péter* is felhívta.

\[
\text{reduction} \quad \text{elaboration}
\]

b. Igen, *Péter is*.

From this I conclude that in the second dimension of the clause, extenders create a new root node, i.e. they relate to the verb as heads (cf. the notion of mutual dependency in HUDSON 2003). And, as (9) already implies, the verb serves as an elaborator of the extender here, elaborating its ’operand’ substructure. The proposed representation is in (10); from now on, D1 relations are signalled above, while D2 relations below the words concerned. Extension is labelled as \(E\).

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\(^5\) Cf. the category and interpretation of collective expressions in KICSKA (1891: 297): ”I add to a smaller degree, quality, number or amount, just as much as required for the extent to be complete”.
Finally, also distinguished from elaboration and extension is the relationship of a third, highly heterogeneous class of elements to the verb (signalled by capital letters in the literature).

(11)  
   a. KI hívta fel Marit?
      'Who telephoned Mary?'
   b. ZSUZSI hívta fel Marit.
      'It was Sue who telephoned Mary'
   c. RITKÁN hívja fel Zsuzsi Marit.
      'Sue rarely telephones Mary'

I propose that interrogative dependents, 'identificational foci' (cf. É. Kiss 1998) and expressions with a negative or restrictive meaning share the functional property of being neither elaborators nor extenders of the proto-statement. Similarly to extenders, they are operators (having an operand substructure elaborated by the verb); hence, none of the patterns above can be reduced to the proto-statement felhívta/felhívja, even though their schema does include a positive declarative core. However, it is also clear that these operators do not perform any extension on the proto-statement’s contextual application; on the contrary, they restrict its application (cf. (11b), (11c)), and override default specifications of the core which characterize its baseline manifestation. The interrogative pronoun ki ‘who’ overrides the core’s declarative illocutionary force, ritkán ‘rarely’ its positive polarity, and although (11b) expresses a positive statement, it is not the telephoning event’s occurrence in time which is profiled in it but rather the identity of a participant. As a result, the core component cannot schematically represent the clause as a whole (cf. the notion of profile determinance in Langacker 1999: 17-18).

For the sake of simplicity, the relationship of this heterogeneous class of elements to the core component is called restriction, and the structure of (11b) is represented as in (12), with restriction labelled as R. The semantic relationship between restrictors and the core is
formally indicated by word order and prosody: in addition to the extender being prosodically more prominent, it is followed by the inverted order of verb modifier and verb.

(12)

In this pattern, the verb modifier *fel 'up'* is analysed as a separate node; however, it is set in italics along with the verb to mark that they are both part of the core component. This is similar to the analysis of verb complexes in OSBORNE 2005. The relationship is labelled as *a*, signalling that verb modifiers have an adverbial source of grammaticalization. Although the restrictor is directly related only to the verb form *hívta 'he/she called him/her’*, the latter also includes the schematic substructures which are elaborated by *fel* and *Marit* in this particular clause. Hence, restriction applies not to the schematic meaning of *hívta* but rather to its contextual elaboration (instantiation).

Finally, it should be mentioned that extension is not limited to taking the proto-statement as its operand; it can also apply to the identification performed on the latter by a restrictor.

(13) **Jánost is** ZSUZSI hívta fel.

> John-acc also Sue-nom called-3sg-def.obj. up

'John also, it was Sue who telephoned him’

This raises the question whether we need to use brackets in the corresponding representation (*Jánost is* → (*ZSUZSI hívta fel*)). This would be an unwelcome complication as so far only relations between fairly basic units (words) have been explicitly signalled, with no need for explicitly marking phrases.

I suggest that brackets can in fact be avoided here, the reason being that *ZSUZSI hívta fel ’It is Sue who invited him/her’* is schematically represented by, and reducible to, *ZSUZSI.*
The two kinds of construal are in a similar paradigmatic relationship as the examples in (7) and (9a,b). Whereas so-called neutral sentences like (6) can be reduced to their core components, clauses with operators on the left periphery are reduced to their (outermost) operators. Hence, I assume that a relationship with ZSUZSI hívta fel can be established by a syntagmatic link to ZSUZSI, whose operand substructure is elaborated by hívta (fel). This leads to the following representation:

The approach presented here can be interpreted, on the one hand, as an expansion on 'academic' descriptions of Hungarian, supplementing the relation types encoded by case suffixes and postpositions (subject, object, adverbial) by a new set of categories distinguished by word order and prosody (elaborator, extender, restrictor). On the other hand, the dissertation crucially grounds the proposal in a functional cognitive framework (section 3) and in section 5, it draws a parallel between Hungarian and English inverting constructions in a way compatible with, but also raising minor objections to, accounts by GOLDBERG (2006: 166–182) and LANGACKER (2010). Therefore, just as generative models of Hungarian have informed the theory in which they are couched, the doctoral thesis may also provide critical feedback to cognitive theories to grammar.

6. The application of results

Although dependency-based descriptions are widely adopted in computational linguistics, the results of the dissertation may be especially useful for language pedagogy. In this area,
traditional descriptions are fairly successful (e.g. it would be difficult to argue against the recognition of subject, object, and adverbial relations), except for the serious shortcoming that they all but ignore word order. Generative treatments, by contrast, prioritize word order; however, their underlying assumptions, abstract theoretical constructs, and high level of formalization make them awkward candidates for direct pedagogical application.

To mention a concrete example, it may be a more straightforward analysis to treat ZSUZSI in ZSUZSI hívta fel Marit 'It was Sue who invited Mary’ as bearing a special kind of relation to the verbal predicate (signalled by word order and prosody) than to claim that it is base-generated in a lower phrase structural position, and subsequently moved (in line with principles of Universal Grammar) to the specifier of a Focus Phrase to satisfy some abstract syntactic requirement (like feature checking) whose violation would cause the sentence to be ungrammatical. Of course, the analysis could be presented in a simplified form but that would deprive the account of its essence; by contrast, the dependency-based solution can be put to pedagogical use with no serious modification. It relies on less theoretical abstraction, it is easy to harmonize with traditional, 'mono-dimensional’ descriptions, and only makes background assumptions (e.g. the analysis of language in terms of form-meaning pairs) that should be intuitively plausible to the students. Finally, dependency graphs provide opportunities for illustration, which may be helpful in the learning process.

7. Summary and conclusions

The dissertation offers the outlines of a new model of Hungarian clausal structure by combining the assumptions of functional cognitive linguistics and dependency grammar. According to the proposal, Hungarian clauses can be analysed as multi-dimensional networks, in which the distinction between core and periphery as well as between baseline patterns and departures from the baseline are especially significant. The traditional classification of dependents of a verbal predicate (subject, object, adverbial) is assigned to the D1 dimension of the clause, and a new set of relational categories is introduced for D2, where elaborators, extenders, and restrictors are distinguished. Extenders and restrictors are viewed as operators creating new roots on D2, i.e. relating as heads to their operands.

The author strives to demonstrate the viability of the new approach by analysing a wider range of structures than his previous publications addressed (cf. IMRÉNYI 2009, 2010). He analyses various types of core component (section 4.3.), discusses the left periphery in more detail (4.4., 4.5.), and also makes a cross-linguistic comparison between Hungarian and
English inverting constructions (5.). The main area of application may be language pedagogy, where the new account could supplement traditional 'mono-dimensional' descriptions.

References


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