On a realistic LFG treatment of the periphrastic IRREALIS MOOD in Hungarian

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1. Introduction
1.1. Introduction

Goal of the talk

• to develop (and implement) an analysis of the Hungarian periphrastic irrealis mood in the framework of Lexical-Functional Grammar by
  • subscribing to a paradigmatic (= inferential-realizational) view of morphology/morphosyntax\(^1\) and
  • maintaining LFG’s classical synthetic notion of a lexeme

1.2. Introduction

Structure of the presentation

1. Introduction
2. The data
3. The challenge
4. The morphological/morphosyntactic view
5. Two analyses in Lexical-Functional Grammar (LFG)
6. Conclusion
2. The data
2.1. The data

- **conditional** verb forms are **synthetic**
- **irrealis** verb forms are systematically **analytic**: they use a two-word pattern
  
  - the first word is the conjugated past tense form of the lexical verb: **V-TENSE-AGREEMENT**
  
  - the second word is the combination of one of the stems of the copula *van* ‘be’ (*vol-*) and the conditional marker (*-na*): **VOLNA**

→ Hungarian encodes **irrealis** mood periphrastically via the combination of two words and two morphosyntactic features: **PAST** and **CONDITIONAL**

↔ in English, for instance, both types are periphrastic: *would V & would have V-en*
2.2. The data

the two singular & indefinite paradigms

**conditional**, indef.  **irrealis**, indef.
‘would see’  ‘would have seen’
\(\text{lát}-\text{né}-k\)  \(\text{lát}-\text{t}-\text{am}\)  \(\text{vol-na}\)
\(\text{see-COND-1SG}\)  \(\text{see-PAST-1SG}\)  \(\text{be-COND}\)
\(\text{lát}-\text{ná}-l\)  \(\text{lát}-\text{t-ál}\)  \(\text{vol-na}\)
\(\text{see-COND-2SG}\)  \(\text{see-PAST-2SG}\)  \(\text{be-COND}\)
\(\text{lát-na}\)  \(\text{lát-ott}\)  \(\text{vol-na}\)
\(\text{see-COND.3SG}\)  \(\text{see-PAST.3SG}\)  \(\text{be-COND}\)

earlier Hungarian had several analytic tense form complexes, e.g.:

(a) PRES&AGR + PAST
\(\text{megy-ek}\)  \(\text{vala}\)
\(\text{go-PRES.1SG VALA}\)  ca. ‘I was going’

(b) PAST&AGR + PAST
\(\text{men-t-em}\)  \(\text{vala/volt}\)
\(\text{go-PAST-1SG VALA/VOLT}\)  ca. ‘I had gone’
2.3. The data

- **volna** (even in the expression of irrealis mood) is an independent syntactic atom, see Bartos (2000)

(1) %vár-t  
   is volna  
   wait-PAST.3SG.INDEF too VOLNA  
   ‘he would also have waited’

(2) %vár-t-ál  
   csak volna  
   wait-PAST-2SG.INDEF only VOLNA  
   ‘you would only have waited’

(3) %vár-t-ál-e  
   volna?  
   wait-PAST-2SG.INDEF-QM VOLNA  
   ‘would you have waited?’

(4) én megsüt-ött-em ∅, te pedig mege-tt-ed volna  
   I fry-PAST-1SG.DEF you by.contrast eat-PAST-2SG.DEF VOLNA  
   ‘I would have fried and you, in turn, would have eaten (it)’
3. The challenge
3.1. The challenge

English

- this language has a complex auxiliary system (allowing for the simultaneous combination of 4 auxiliaries at most)
  
  (1) *I would have been being examined*

- the corresponding patterns are uniformly periphrastic
  
  (2) *I would see ~ I would have seen*

- whatever treatment a particular approach develops, it can apply this treatment uniformly
3.2. The challenge

Hungarian

• there is no auxiliary system — and there are few auxiliaries, e.g. fog ‘will’, szokott ‘habitual action’

• the conditional form volna does not behave like the rare Hungarian auxiliaries: it requires a fully inflected past tense verb ⇔ all ordinary auxiliaries require an infinitival verb

  (1) lát-t-am volna
  see-PAST-1SG VOLNA
  ‘I would have seen’

  (2) lát-ni fog-ok
  see-INF WILL-1SG
  ‘I will see’

• ideally, the two conditional paradigms (analytic vs. synthetic) should be treated in a uniform manner

  (3) lát-t-am vol-na
  see-PAST-1SG BE-COND
  ‘I would have seen’

  (4) lát-né-k
  see-COND-1SG
  ‘I would see’
4. The morphological/morphosyntactic view
### 4.1. The morphological/morphosyntactic view

<table>
<thead>
<tr>
<th>Taxonomy of lexicalist approaches (Ackerman et al. 2011)</th>
<th>Lexical modification</th>
<th>Morpholexical inflection</th>
<th>Unary expression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical LFG (A)</td>
<td>Bresnan</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Some recent LFG views (B)</td>
<td>Alsina, Bresnan, Butt</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Realization-based lexicalism (C)</td>
<td>Ackerman, Ackerman &amp; al.</td>
<td>YES [yes]</td>
<td>YES [yes]</td>
</tr>
</tbody>
</table>

(A) Bresnan (1982)


4.2. The morphological/morphosyntactic view

Ackerman (2003) on Hungarian particle-verb constructions (PVCs):

**Morphological Expression** (Ackerman & Webelhuth 1998)

**Synthetic realization principle**

- Where the realization $w$ of $<L,\delta>$ is a synthetic member of category $X$, $w$ may be inserted as the head of $XP$.

**Periphrastic realization principle**

- Where the realization $w_1w_2$ of $<L,\delta>$ is periphrastic and $w_1$ and $w_2$ belong to the respective categories $X$ and $Y$, $w_1$ and $w_2$ may be inserted as the heads of the respective nodes $X(P)$ and $Y(P)$.

- [$\delta$ = either *morphosyntactic* or *derivational* properties]
5. Two LFG analyses
5.1. Two LFG analyses

general considerations

- Lexical Integrity Principle (Bresnan 1982) → both theoretical and implementational aspects
  - theoretical: the classical view
  - implementational: the architecture of XLE\(^1\)

- one word = one syntactic atom = one lexical item

\(^1\)Xerox Linguistic Environment, the computational platform for the ParGram (= Parallel Grammar) project, see Butt et al. (1999)
5.2. Two LFG analyses

(A) a morpheme-based solution: a classical LFG treatment

(1) láttál, V ‘see <(↑SUBJ) (↑OBJ)>’
   (↑SUBJ PERS)= 2
   (↑SUBJ NUM)= SG
   (↑OBJ DEF)= −
   (↑TENSE)= PAST
   { (↑MOOD)= INDICATIVE
     | (↑MOOD) =_C CONDITIONAL
       (↑PRT FORM) =_C VOLNA }.

(2) volna, PRT¹
   (↑PRT FORM) = VOLNA
   (↑TENSE) =_C PAST
   (↑MOOD) = CONDITIONAL.

(3) V₀
   V₀
   ↑=↓
   PRT
   ↑=↓
   láttál
   volna

¹PRT = particle (a non-projecting word, cf. Toivonen (2001))

implemented in XLE in Laczkó & Rákosi (2008-2013): past + conditional = irrealis (face values)

associated with the +Past tag of XLE’s morphological analyzer

a possible alternative in this vein:
{(↑TENSE)= PAST
 (↑ MOOD)= INDICATIVE
 | (↑ MOOD)
 (↑ PRT FORM) =_C VOLNA }

                    ---------------------------------
5.3. Two LFG analyses

(A) a morpheme-based solution: XLE implementation

"Te lát-t-ál volna két lány-t."

You would have seen two girls.
5.4. Two LFG analyses

B) a realization-based solution (1)


(1) \( ki \) PRT XLE
    (\( \uparrow \text{PRT-FORM} \)) = \( ki \)
    (\( \uparrow \text{DIR} \)) = out
    (\( \uparrow \text{CHECK } _{\text{PRT-VERB}} \)) = c +.

(2) \( mászik \) V XLE
    (\( \uparrow \text{PRED} \)) = ‘crawl-out < (\( \uparrow \text{SUBJ} \)) (\( \uparrow \text{OBL} \)) >’
    (\( \uparrow \text{CHECK } _{\text{PRT-VERB}} \)) = +
    (\( \uparrow \text{DIR} \)) = c out
    (\( \uparrow \text{PRT-FORM} \)) = c ki.

(3) \( fejez \) V *
    (\( \uparrow \text{PRED} \)) = ‘express <(\( \uparrow \text{SUBJ} \)) (\( \uparrow \text{OBJ} \))’
    \( *fej-ez \)
    (\( \uparrow \text{CHECK } _{\text{PRT-VERB}} \)) = +
    head-Vsuf
    (\( \uparrow \text{PRT-FORM} \)) = c ki.
5.5. Two LFG analyses

B) a realization-based solution (2)

(1) láttál, V ‘see <(↑SUBJ) (↑OBJ)>’
   (↑SUBJ PERS)= 2
   (↑SUBJ NUM)= SG
   (↑OBJ DEF)= −
   { (↑TENSE)= PAST
     (↑MOOD)= INDICATIVE
     | (↑MOOD)= IRREALIS
     (↑CHECK _PRT-VERB)= +
     (↑PRT FORM)= C VOLNA }.

(2) volna, PRT
   (↑PRT FORM)= VOLNA
   (↑CHECK _PRT-VERB)= C +.

(3) \[ V^0 \]

all the specifications of the given paradigmatic slot are encoded in the lexical verb’s entry

associated with the +Past tag of the morphological analyzer

it is more intuitive to have the irrealis feature directly encoded
5.6. Two LFG analyses

B) a realization-based solution (3): XLE implementation

Te látt-t-ál volna két lány-t.
‘You would have seen two girls.’
6. Conclusion
6.1. Conclusion

1. This analysis spells out the (inferential-realizational) approach to periphrasis advocated by Ackerman & Webelhuth (1998) and Ackerman et al. (2011), among others, in an LFG framework in this particular inflectional domain.

2. It leaves the widely accepted, classical view of lexical encoding in LFG intact: by using an appropriate checking and cross-referencing mechanism in the relevant lexical forms, it can avoid recourse to multiple word lexical entries, which would pose rather severe problems for LFG’s general morphological assumptions as well as for implementation. For a discussion, see Laczkó & Rákosi (2011, 2013). “ONE-IN-TWO”

3. The devices can be argued to be motivated and justified independently, again, see Laczkó & Rákosi (2011, 2013) for the treatment of derivational processes in the case of non-compositional PVCs, and Laczkó (2013) for both compositional and non-compositional PVCs.
6.2. Conclusion

4. This analysis is part of my larger project of developing an LFG proposal for treating several categories as *non-projecting words*, in the (modified) sense of Toivonen (2001), or *minor categories*, in the sense of Dalrymple (2001).
   - so far: PVCs, now: *volna*, later: *nem* ‘not’, *is* ‘also’, -e ‘QM’, *csak* ‘only’, etc.

5. The construction type shown in (1) requires an entirely different treatment.

   (1) *fog-ok me-nni*
       will-1SG go-INF
       ‘I will go’

   - the analysis can be similar to that of the English counterpart (the two elements are functional co-heads)
   - except that Hungarian ‘will’ is
     - inflected for (subject–verb) agreement
     - of category V (and not Infl), see Laczkó (2014)
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References (1)


References (2)


References (3)


a distributed morphological (= syntactic) analysis

(1) lát-žál vol-na
see-PAST-2SG.INDEF be-COND
‘you would have seen’