Towards developing an LFG syntax of Hungarian WH-questions

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1.1. Introduction

aims of the presentation

- first steps towards an **LFG**-theoretic and **XLE**-implementational analysis of the most important aspects of Hungarian WH-questions
- concentrating on
  - preverbal domain
  - multiple WH sentences
  - interactions with focus and negation
  - syntactic positions and distribution

- **LFG**: Lexical-Functional Grammar
- **XLE**: Xerox Linguistic Environment (LFG’s implementational platform)
1.2. Introduction

structure of the presentation

1. Introduction
2. The phenomena
3. On LFG
4. Previous approaches
5. The analysis
6. Conclusions
2. The phenomena

<table>
<thead>
<tr>
<th>(1)</th>
<th>Jani</th>
<th>be</th>
<th>mutatta</th>
<th>Marit</th>
<th>Ferinek.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Jani.nom</td>
<td>VM</td>
<td>showed</td>
<td>Mari.acc</td>
<td>Feri.dat</td>
</tr>
<tr>
<td></td>
<td>‘Jani introduced Mari to Feri.’</td>
<td></td>
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</table>

<table>
<thead>
<tr>
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<tbody>
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<table>
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<tr>
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<th>mutatott</th>
<th>be?</th>
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<tbody>
<tr>
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<th>mutatta</th>
<th>be</th>
<th>Marit?</th>
</tr>
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<tbody>
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<td>why</td>
<td>Feri.dat</td>
<td>showed</td>
<td>VM</td>
<td>Mari.acc</td>
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</table>

<table>
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<th><strong>nem</strong></th>
<th>mutatta</th>
<th>be</th>
<th>Marit?</th>
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<tbody>
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<td></td>
<td>Jani.nom</td>
<td>who.dat</td>
<td>not showed</td>
<td>VM</td>
<td>Mari.acc</td>
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</table>

<table>
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<th>Jani</th>
<th><strong>kit</strong></th>
<th><strong>nEM FERINEK</strong></th>
<th>(nem) mutatott</th>
<th>be?</th>
</tr>
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<tbody>
<tr>
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<td>Jani.nom</td>
<td>who.acc</td>
<td>not Feri.dat</td>
<td>not showed</td>
<td>VM</td>
</tr>
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</table>

<table>
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<tr>
<th>(7)</th>
<th>Jani</th>
<th><strong>MARIT</strong></th>
<th>kinek</th>
<th>mutatta</th>
<th>be?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jani.nom</td>
<td>Mari.acc</td>
<td>who.dat</td>
<td>showed</td>
<td>VM</td>
</tr>
</tbody>
</table>
3.1. On LFG

- a non-transformational generative grammar (no movements, empty categories in constituent structure)
- a representational (↔ derivational) model: parallel syntactic and other levels of representation
- strictly limited number (= nature) of functional categories: DP, IP, CP
- much closer to Surányi’s (2011) (SEM, PHON) interface MP model than to cartographic MP
  - but still radically different from it wrt architecture, principles and assumptions
- exocentricity (S sentence structure) is a parametric option
3.2. On LFG


<table>
<thead>
<tr>
<th>LEVEL OF STRUCTURE</th>
<th>TYPE OF LINGUISTIC INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>s-string</td>
<td>lexical items</td>
</tr>
<tr>
<td>p-string</td>
<td>phonological words</td>
</tr>
<tr>
<td>c(onstituent)-structure</td>
<td>surface syntactic representation</td>
</tr>
<tr>
<td>f(unctional)-structure</td>
<td>abstract grammatical functions (e.g. subject, object) and features</td>
</tr>
<tr>
<td>p(rosodic or phonological)-structure</td>
<td>phonological and prosodic features</td>
</tr>
<tr>
<td>i(nformation)-structure</td>
<td>information packaging (discourse functions)</td>
</tr>
<tr>
<td>s(emantic)-structure</td>
<td>meaning</td>
</tr>
</tbody>
</table>
3.3. On LFG

single question phrase, single clause
János ki-nek mutat-t-a be Mari-t?
John.NOM who-DAT introduce-PAST-DEF.3SG VM Mary-ACC
‘Who did John introduce Mary to?’

4.1. Previous approaches


**immediately preverbal WH = Foc; features:**

- F, WH/Q, ID, EXH, EXH-ID

**on the treatment of high WHs**


- **topics:** Gazdik (2012) [LFG]

[Surányi: (i) not universal quantifiers either syntactically or semantically (ii) topics semantically but not syntactically ⇔ Gazdik: both]
4.2. Previous approaches

Mycock (2008: 10)

“all question words must appear in the immediately preverbal focus position, forming a group which cannot be separated from each other or from the verb, even by a VM”

problems

- [Foc,VP] ↔ [WH*,VP]
- mért₂ + [Foc,VP] (*Mért JÁNOS mutatta be Marit Ferinek?)
  & also a problem for her general prosodic analysis
- WH + [Neg-Foc,VP]
- Foc + [WH*,VP] (*JÁNOS kit mutatott be Ferinek?)
  & also a problem for her general prosodic analysis

although (technically) my analysis could also be accommodated in this [Spec*,VP] context
5.1. The analysis

É. Kiss (1992)

• exocentricity
• flat parts of sentence structure (below S and V’)
• a fundamental problem: the XP in [Spec,VP] is assumed to have the [+F(ocus)] feature obligatorily (cf. VMs in neutral sentences)

É. Kiss (2002) against collapsing focus and VM:

• impossible to associate an unambiguous interpretation with a single syntactic position

implified in a principled manner

\[ \text{VP}^* = \text{iterative (binary) adjunction} \]
5.2. The analysis

an LFG sentence structure:
Laczkó & Rákosi (2008-2013) and Laczkó (2014a)

S*/VP*: (possibly) iterative adjunction

\{ (c-)topic | sent.adv. \}

\{ quantifier | WH \}

\{ focus | WH | VM \}

{…} = LFG-style functional annotations
5.3. The analysis

- the basic idea, in the spirit of LFG’s “what-you-see-is-what-you-get” principle-of-thumb
  - the complementarity of all these preverbal elements is to be captured by assuming that they compete for the same single preverbal position
  - disjunctive functional annotations in c-structure, supported by prosodic features, and specific functional annotations in the relevant lexical forms handle this complementarity
## 5.4. The analysis

**An LFG sentence structure:** Laczkó (2014a)

<table>
<thead>
<tr>
<th>(c-)topic</th>
<th>sent.adv.</th>
<th>quantifier</th>
<th>WH</th>
<th>focus</th>
<th>WH</th>
<th>VM</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\uparrow GF = \downarrow$</td>
<td>$\downarrow \in (\uparrow TOPIC)$</td>
<td>$(\uparrow GF = \downarrow$</td>
<td>${ (\downarrow CHECK _QP)=c +$</td>
<td>${ (\uparrow GF)= \downarrow$</td>
<td>${ { (\uparrow GF)= \downarrow$</td>
<td>${ (\downarrow CHECK _VM)=c +$</td>
</tr>
<tr>
<td>$</td>
<td>\downarrow \in (\uparrow CONTR_TOPIC)$</td>
<td>$</td>
<td>(\downarrow ADV_TYPE)=c$</td>
<td>$</td>
<td>(\uparrow CHECK _VM_INTER)=c +$</td>
<td>$</td>
</tr>
<tr>
<td>$</td>
<td>(\downarrow SPECIFIC)=c +$</td>
<td>$}$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Here:** arguing for this ($\Rightarrow$) and developing it further - to capture additional data

| $(\uparrow GF) = \downarrow$ | $(\uparrow GF)= \downarrow$ | $(\uparrow GF)= \downarrow$ |
| $\uparrow CHECK \_VM\_INTER)=c +$ | $\downarrow \check{\_QP\_INTER}=c +$ | $\downarrow \check{\_QP\_INTER}=c +$ |
| $(\downarrow SPECIFIC)=c +$ | $((\uparrow CHECK \_VM\_INTER)= +)$ | $((\uparrow CHECK \_VM\_INTER)= +)$ |
| $\}$ | $\}$ | $\}$ |


5.5. The analysis

| {quantifier | WH} |
|---|
| $(↑ \text{GF}) = ↓ \begin{cases} (↓ \text{CHECK} \ _\text{QP}) = c + \\ (↑ \text{CHECK} \ _\text{VM-INTER}) = c + \\ (↓ \text{CHECK} \ _\text{QP-INTER}) = c + \\ (↓ \text{SPECIFIC}) = c + \end{cases} \} \ |
| • XLE-style CHECK features constrain the position to quantifiers and ‘wh’-phrases (marked in the lexicon)  
  • in the second disjunct, the two CHECK features together ensure that a ‘wh’-phrase can occur in this position iff another occupies $[\text{Spec}, \text{VP}]$ - see the corresponding CHECK feature on the next slide |
| • L (quantifier) ... $(\text{CHECK} \ _\text{QP} \ (\text{GF}^\ast \ ↑)) = +$ |
| • L (wh-word) ... $(↑ \text{PRON-TYPE}) = \text{interrogative}$  
  $(\text{STMT-TYPE} \ (\text{GF}^\ast \ ↑)) = \text{wh-interrogative}$  
  $\begin{cases} (\text{CHECK} \ _\text{VM-INTER} \ (\text{GF}^\ast \ ↑)) = + \\ (\text{CHECK} \ _\text{QP-INTER} \ (\text{GF}^\ast \ ↑)) = + \end{cases} \} \ |

5.5. The analysis
### 5.6. The analysis

| {focus | WH | VM} |
|---|
| `{ (↑ GF)= ↓  |
| (↑ FOCUS)= ↓  |
| | {((↑ GF)= ↓ | ↑=↓ } |
| (↓ CHECK _VM)=c + |
| | (↑ GF)= ↓  |
| (↓ CHECK _VM-INTER)=c + |
| ((↑ CHECK _VM-INTER)= +) } |

- the three-way disjunction encodes the complementarity in [Spec,VP] of
  - focussed constituents
  - VMs (see Laczkó 2014b)
  - ‘wh’-phrases
- the optional (↑ CHECK _VM-INTER)= + feature licenses the presence of a ‘wh’-phrase in the VP-adjoined QP position (cf. its counterpart there: (↑ CHECK _VM-INTER)=c +)
  - when the feature is present, it requires the presence of its counterpart (→ the presence of at least one ‘wh’-phrase in QP)
  - when it is absent, it blocks ‘wh’-phrases in QP

- in the second disjunct, the ↑=↓ annotation is for particles (see Laczkó & Rákosi (2011))
5.7. The analysis

\[ [\text{XP, S}] \]

\( (\uparrow \text{SUBJ})= \downarrow \)
\( \downarrow \in (\uparrow \text{TOPIC}) \)

DP

János

\[ [\text{XP, VP}] \]

\( (\uparrow \text{OBJ})= \downarrow \)
\( (\uparrow \text{CHECK } \_\text{VM-INTER})=c + \)
\( (\downarrow \text{SPECIFIC})=c + \)

DP

kit

\[ [\text{Spec, VP}] \]

\( (\uparrow \text{OBL})= \downarrow \)
\( (\downarrow \text{CHECK } \_\text{VM-INTER})=c + \)
\( (\uparrow \text{CHECK } \_\text{QP-INTER})=c + \)
\( (\downarrow \text{SPECIFIC})=c + \)

DP

KINEK

V'

mutatta be Marit?

V'

mutatott be?
5.8. The analysis

[XP,S]

(↑SUBJ) = ↓
↓ ∈ (↑TOPIC)

DP
János

[XP,VP]

(↑ADJUNCT) = ↓
(↑FOCUS) = c +

(↓CHECK _QP-INTER)=c +

ADVP
miért

[Spec,VP]

(↑OBL)= ↓
(↑FOCUS)= ↓

DP
FERINEK

V’

mutatta be Marit?

annotations in the lexical forms of WH words (including miért, cf. kiért)

(↑PRON-TYPE)= interrogative
(STMT-TYPE (GF* ↑))= wh-interrogative

{ (CHECK _VM-INTER (GF* ↑))= +
| (CHECK _QP-INTER (GF* ↑))= + }

annotations in the lexical form of miért

(↑PRON-TYPE)= interrogative

{ (↑CHECK _VM-INTER)= +
| (STMT-TYPE (GF* ↑))= wh-interrogative
| (↑CHECK _QP-INTER)= +
| (STMT-TYPE (GF* ↑))= wh-interrogative
| (FOCUS (GF* ↑)) }
5.9. The analysis

[XP,VP] [Spec,VP]

(VP,VP) = \downarrow \ (\downarrow \text{CHECK \_VM-INTER}) = c +

\begin{align*}
\text{DP} & \quad \text{KINEK} \\
(\uparrow \text{OBL}) & = \downarrow \\
(\downarrow \text{CHECK \_QP-INTER}) & = c + \\
(\uparrow \text{OBJ}) & = \downarrow \\
(\downarrow \text{CHECK \_QP-INTER}) & = c + \\
(\uparrow \text{FOCUS \_POL}) & = \text{neg} \\
(\downarrow \text{SPECIFIC}) & = c + \\
(\uparrow \text{OBL}) & = \downarrow \\
(\uparrow \text{FOCUS}) & = \downarrow
\end{align*}

\text{V'}

\begin{align*}
\text{DP} & \quad \text{Kit} \\
(\uparrow \text{POL}) & = \text{neg} \\

\text{NEG} & \quad \text{NEM} \\
(\uparrow \text{FOCUS}) & = \downarrow \\
\uparrow & = \downarrow \\
\text{DP} & \quad \text{FERINEK} \\
\text{mutatott be János?}
\end{align*}

or:

\begin{align*}
\text{V'} & \\
\text{NEG} & \quad \text{V'}
\end{align*}

\{ (\uparrow \text{FOCUS}) \\
| (\uparrow \text{STMT-TYPE}) = \text{int} \}
5.10. The analysis

[XP,S]

[XP,VP]

[Spec,VP]

V’

(↑ SUBJ)= ↓
↓ ∈ (↑ TOPIC)

DP
János

(↑ OBJ)= ↓
(↑ FOCUS)= ↓
(↑ CHECK _VM-INTER)=c +

DP
MARIT

(↑ OBL)= ↓
(↓ CHECK _VM-INTER)=c +
(↑ CHECK _VM-INTER)= +

DP
kinek

(nem) mutatta be?
### 5.11. The analysis

<table>
<thead>
<tr>
<th>[XP,S]</th>
<th>[XP,VP]</th>
<th>[Spec,VP]</th>
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<tr>
<td>((\uparrow \text{GF}) = \downarrow)</td>
<td>((\uparrow \text{GF}) = \downarrow)</td>
<td>((\uparrow \text{GF}) = \downarrow)</td>
</tr>
<tr>
<td>({ \downarrow \in (\uparrow \text{TOPIC}))</td>
<td>((\uparrow \text{TOPIC}))</td>
<td>((\downarrow \text{CHECK }_\text{VM-INTER}) = c +)</td>
</tr>
<tr>
<td>(\downarrow \in (\uparrow \text{CONTR-TOPIC}))</td>
<td>((\downarrow \text{CHECK }_\text{QP-INTER}) = c +)</td>
<td>((\downarrow \text{CHECK }_\text{VM-INTER}) = c +)</td>
</tr>
<tr>
<td>(\downarrow \in (\downarrow \text{ADV-TYPE}) = \text{c SENT})</td>
<td>((\downarrow \text{SPECIFIC}) = c +)</td>
<td>((\downarrow \text{CHECK }_\text{VM-INTER}) = c +)</td>
</tr>
<tr>
<td>|</td>
<td>((\downarrow \text{CHECK }_\text{QP-INTER}) = c +)</td>
<td>((\uparrow \text{CHECK }_\text{VM-INTER}) = +))</td>
</tr>
</tbody>
</table>

**János**

- \(\text{kit}\)
  - \((\uparrow \text{ADJUNCT}) = \downarrow\)
  - \((\downarrow \text{CHECK }\_\text{QP-INTER}) = c +\)
  - \((\uparrow \text{FOCUS}) = c +\)

**miért\(_2\)**

- \((\uparrow \text{GF}) = \downarrow\)
  - \((\downarrow \text{CHECK }\_\text{QP-INTER}) = c +\)
  - \((\uparrow \text{FOCUS POL}) = c \text{ neg}\)
  - \((\downarrow \text{SPECIFIC}) = c +\)

**kit**

- \((\uparrow \text{GF}) = \downarrow\)
  - \((\uparrow \text{FOCUS}) = \downarrow\)
  - \((\uparrow \text{CHECK }\_\text{VM-INTER}) = c +\)

**nem**

- \((\uparrow \text{GF}) = \downarrow\)
  - \((\downarrow \text{CHECK }\_\text{QP-INTER}) = c +\)
  - \((\uparrow \text{CHECK }\_\text{VM-INTER}) = +)\)
## 5.12. The analysis

<table>
<thead>
<tr>
<th>[XP,VP]</th>
<th>[Spec,VP]</th>
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<tr>
<td>$(↑ GF)=↓$</td>
<td>$(↑ GF)=↓$</td>
</tr>
<tr>
<td>$(↑ CHECK_VM_INTER)=c+$</td>
<td>$(↓ CHECK_VM_INTER)=c+$</td>
</tr>
<tr>
<td>$(↓ CHECK_QP_INTER)=c+$</td>
<td>$(↑ CHECK_VM_INTER)= +)$</td>
</tr>
<tr>
<td>$(↓ SPECIFIC)=c+$</td>
<td>$(↑ FOCUS)=↓$</td>
</tr>
<tr>
<td>$(↓ CHECK_QP_INTER)=c+$</td>
<td>$(↑ FOCUS)=↓$</td>
</tr>
<tr>
<td>$(↑ FOCUS)=c$ neg</td>
<td>$(↑ FOCUS)=↓$</td>
</tr>
<tr>
<td>$(↑ FOCUS_POL)=c$</td>
<td>$(↓ CHECK_VM_INTER)=c+$</td>
</tr>
<tr>
<td>$(↓ SPECIFIC)=c+$</td>
<td>$(↑ CHECK_VM_INTER)= +)$</td>
</tr>
</tbody>
</table>

\[ \text{CHECK\_VM}\_INTER = c + \]

\[ \text{CHECK\_QP}\_INTER = c + \]

\[ \text{FOCUS} = c \]

\[ \text{FOCUS}\_POL = c \text{ neg} \]

\[ \text{SPECIFIC} = c + \]
## 5.13. The analysis

<table>
<thead>
<tr>
<th>[XP,VP]</th>
<th>[Spec,VP]</th>
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<td>$(\uparrow \text{GF}) = \downarrow$</td>
<td>$(\uparrow \text{GF}) = \downarrow$</td>
</tr>
<tr>
<td>${ \ (\uparrow \text{CHECK } _\text{VM-INTER}) = c \ +$</td>
<td>${ \ (\downarrow \text{CHECK } _\text{VM-INTER}) = c \ +$</td>
</tr>
<tr>
<td>$\ (\downarrow \text{CHECK } _\text{QP-INTER}) = c \ +$</td>
<td>$((\uparrow \text{CHECK } _\text{VM-INTER}) = +)$</td>
</tr>
<tr>
<td>$\ (\downarrow \text{SPECIFIC}) = c \ +$</td>
<td>$}$</td>
</tr>
<tr>
<td>$\ (\uparrow \text{FOCUS})$</td>
<td>$\ (\uparrow \text{FOCUS}) = \downarrow$</td>
</tr>
<tr>
<td>$\ (\downarrow \text{CHECK } _\text{QP-INTER}) = c \ +$</td>
<td></td>
</tr>
<tr>
<td>$\ (\uparrow \text{FOCUS POL}) = c \ neg$</td>
<td></td>
</tr>
<tr>
<td>$\ (\downarrow \text{SPECIFIC}) = c \ +$</td>
<td></td>
</tr>
<tr>
<td>$\ (\uparrow \text{FOCUS}) = \downarrow$</td>
<td></td>
</tr>
<tr>
<td>$\ (\uparrow \text{CHECK } _\text{VM-INTER}) = c \ +$</td>
<td>$}$</td>
</tr>
</tbody>
</table>
6.1. Conclusions

- essentials of an LFG-XLE treatment of WH questions in Hungarian (cf. theory and implementation)
  - preverbal domain
  - also multiple WH
  - interactions with focus and negation
- É. Kiss (1992) style sentence structure accommodated in a (what-you-see-is-what-you-get) LFG-XLE framework
- disjunctive functional annotations, constraints and CHECK features associated with syntactic nodes and lexical items
  - no (discourse) functional projections, no NegP, no movements
- the syntactic distribution of WH, Foc and Neg
6.2. Conclusions

- the basic generalizations
  - single [Spec,VP] is a special, designated (ID/EXH) position, in the unmarked case aligned with prosody
  - [XP,VP]* is truly the “operator zone”, where WH, \( miért_2 \), Foc, and Neg-pol can (scopally-distributionally) interact

- the relevant features (Foc: ID/EXH/CONTR/etc. WH: sorting key, etc.) can also be naturally associated with syntactic positions and/or prosodic properties and linked to information structure (cf. LFG’s parallel levels of representation)

- on an experimental study of the prosody of WH sentences (among others) in Hungarian in an LFG framework, see Mycock (2010)

- on a possible typology of WH constituents, see Mycock (2013)
Acknowledgement

The author gratefully acknowledges that this talk has been supported in part by

- the NKFIH (National Research, Development and Innovation Office) = OTKA (Hungarian Scientific Research Fund) project entitled COMPREHENSIVE GRAMMAR RESOURCES: HUNGARIAN (grant number: NK 100804).
References (1)


References (2)


References (3)


A.1. On the classification of DFs

Choi (2001)

<table>
<thead>
<tr>
<th></th>
<th>+PROM</th>
<th>−PROM</th>
</tr>
</thead>
<tbody>
<tr>
<td>−NEW</td>
<td>(shifted) topic, link</td>
<td>continuing topic, tail</td>
</tr>
<tr>
<td>+NEW</td>
<td>contrastive / emphatic focus</td>
<td>completive / presentational focus</td>
</tr>
</tbody>
</table>

cf. identificational vs. informational focus, É. Kiss (1998)

Gazdik (2012)

<table>
<thead>
<tr>
<th></th>
<th>+PROM</th>
<th>−PROM</th>
</tr>
</thead>
<tbody>
<tr>
<td>−PROM</td>
<td>¬ D-LINKED</td>
<td>completive INFORMATION</td>
</tr>
<tr>
<td></td>
<td>¬ D-LINKED</td>
<td>BACKGROUND INFORMATION</td>
</tr>
<tr>
<td>+PROM</td>
<td>¬ D-LINKED</td>
<td>THEMATIC SHIFTER, CONTRASTIVE TOPIC, Q</td>
</tr>
<tr>
<td></td>
<td>D-LINKED</td>
<td>Q</td>
</tr>
<tr>
<td></td>
<td>FOCUS, HOCUS, Q</td>
<td>Q</td>
</tr>
</tbody>
</table>
### A.2. On the classification of DFs

Mycock (2013) on discourse functions of question words

<table>
<thead>
<tr>
<th>Focus [+NEW, +PROM]</th>
<th>Compleotive Information [+NEW, −PROM]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Information Focus</strong></td>
<td></td>
</tr>
<tr>
<td>A: What did Lily buy at the market?</td>
<td></td>
</tr>
<tr>
<td>B: She bought <strong>flowers</strong> at the market.</td>
<td></td>
</tr>
<tr>
<td>[+Q] <strong>Questioning Focus</strong></td>
<td></td>
</tr>
<tr>
<td>A: <strong>What</strong> did Lily buy at the market?</td>
<td></td>
</tr>
<tr>
<td>B: She bought flowers at the market.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compleotive Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Where has Lily been shopping?</td>
</tr>
<tr>
<td>B: She’s just bought <strong>flowers</strong> at the market.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topic [−NEW, +PROM]</th>
<th>Background Information [−NEW, −PROM]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic</strong></td>
<td></td>
</tr>
<tr>
<td>A: What did Lily do?</td>
<td></td>
</tr>
<tr>
<td>B: She <strong>bought flowers at the market.</strong></td>
<td></td>
</tr>
<tr>
<td>[+Q] <strong>Sorting Key</strong></td>
<td></td>
</tr>
<tr>
<td>A: <strong>Who</strong> bought what?</td>
<td></td>
</tr>
<tr>
<td>B: Lily bought flowers, Eve bought cakes ...</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Background Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Who did Lily buy flowers for?</td>
</tr>
<tr>
<td>B: She bought <strong>them</strong> for her mother.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Background Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Lily bought flowers yesterday.</td>
</tr>
<tr>
<td>B: Lily bought <strong>WHAT</strong> yesterday?</td>
</tr>
<tr>
<td>A: Flowers.</td>
</tr>
</tbody>
</table>
A.3. On previous approaches

Payne and Chisarik (2000)

(1)  
\[
\begin{array}{c}
\text{QP} \\
\text{V}^3 \\
\text{V}^3 \\
\text{QP} \\
\text{FOC} \\
\text{INT} \\
\text{NEG} \\
\text{V}^2 \\
\text{FOC} \\
\text{INT} \\
\text{NEG} \\
\text{V}^2 \\
\text{V}^1 \\
\text{NMR} \\
\text{PART} \\
\text{V}^0 \\
\text{X(P)*} \\
\text{V} \\
\end{array}
\]

- LFG-friendly OT (cf. Börjars et al. 1999)
- FOC and VM (= PRT) in distinct positions -- unnecessarily
- empirical problems
- limited coverage

ALIGN INT > ALIGN FOC > ALIGN NEG > \{ALIGN NCI, IN SITU\} wrt preverbal position

ALIGN V^0 > ALIGN NMR > ALIGN INCORP > \{ALIGN V | \text{*INCORP}\} below V^1

QP=quantifier phrase  FOC=focus  INT=interrogative  NEG=negative phrase
(either constituent negation or negative concord item)  NMR=negative marker
PART=particle/VM
A.4. On previous approaches

Gazdik (2012)

(1)

\[
\uparrow_\sigma \in (\uparrow_\alpha + \text{PROM} \ v D\text{-LINKED}) \\
\uparrow_\sigma \in (\uparrow_\alpha + \text{PROM} \ v \neg D\text{-LINKED})
\]

<table>
<thead>
<tr>
<th>Neut. sent.</th>
<th>thematic shifter(s)</th>
<th>U-Q-s</th>
<th>hocus</th>
<th>verbal modifiers</th>
<th>other const.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-n. sent.</td>
<td>thematic shifters</td>
<td>focus (NP, negative words)</td>
<td>focus (VM)</td>
<td>focus (NP, negative words)</td>
<td>focus (VM)</td>
</tr>
</tbody>
</table>

TOPIC  QP  "FOC"  VM
A.5. On previous approaches

(34) A previous approach

\[
\text{Ki nem a Hamletet olvasta?}
\]
A.6. On previous approaches


Surányi (2006: 297): “high wh-elements are not syntactically topicalized; nevertheless, they have the discourse semantic status of a topic” (cf. sorting key)

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{tree.png}
\caption{(17)}
\end{figure}

Surányi (2007: 237)


\[ \left[ \text{TP Spec}^* \left[ \left[ \text{T} V \right] \left[ \text{AspP} \ldots \right] \right] \right] \]
A.7. On previous approaches

on the quantifier field and [Spec, VP] -- 1


Surányi:

• (A) higher question words need not be interpreted exhaustively in all cases

• (B) a distributive quantifier cannot intervene between two question phrases in a multiple CQ

  (1) *Ki mindenki-t mikor hív-ott fel?

Mycock:

• (C) quantifier—focus and question-word—question-word sequences have different intonation patterns

  (2) [Mindeni-t]_DISTRIB [János]_FOC hív-ott fel.

  ‘For every x, x = person, John called x.’

  (3) Ki ki-nek mutat-t-a be Mari-t?

  ‘Who introduced Mary to whom?’
A.8. On previous approaches

- (A) they are in complementary distribution in a particular position – but this doesn’t necessarily require in an LFG (⇔ GB/MP) approach a (fully) identical semantics (cf. the treatment of [Spec,VP]) – but their targeting the same position can be taken to be motivated by the fact that they are operators
- (B) BUT: a distributive quantifier cannot even precede two or more question phrases in a multiple CQ
  
  \[
  \text{(1) *Mindenki-t ki mikor hív-ott fel?}
  \]
- (Ci) the same position doesn’t necessarily have to be associated with the same, single prosodic pattern (see, again, [Spec,VP])
- (Cii) in my idiolect, \textit{mindenki-t} doesn’t necessarily get heavier stress – also note that it can (but doesn’t have to) get heavy stress when there is a VM in [Spec,VP]: \textit{Mindenki-t/Mindenki-t} fel hívott János. – in the presence of FOC \textit{mindenki-t} strongly needs heavy stress, otherwise it can easily be (mis)interpreted as being in the scope of FOC (as a CT)
A.9. On previous approaches

- on the quantifier field and [Spec,VP] -- 3

Two further problems

- (D) the treatment of $miért_2$ (why) when combined with FOC

  (1) Miért JÁNOS hívott fel mindenkik?

- (E) the treatment of FOC preceding a WH-phrase

  (2) …, de JÁNOS mit csinált?