1 Adverbs and situations

1.1 Types of adverbs

- Multiplicatives (twice, many times)
- Frequency adverbs (Freq-adverbs; frequently)
- Adverbs of quantification (Q-adverbs; often)

1.2 Claims

- Build on Hungarian, a highly discourse-configurational language
- Freq-adverbs and Q-adverbs differ in interpretation, modify different constituents
  - Freq-adverbs determine the frequency of a certain situation type within a larger time interval
  - Q-adverbs quantify over situations (de Swart 1993, 1996, Heim 1990, a.o.)
• Freq-adverbs and Q-adverbs appear in different positions in Hungarian
  – Freq-adverbs appear inside the predicational component of a clause, where time
    interval arguments are available
  – Q-adverbs are ordered freely among quantifiers, and take scope over predicational
    material in a clause
  – (Predicational component contains focus and negation)
• Multiplicatives are flexible; they can modify any countable situation description

1.3 Adverb types in Hungarian

(1) Multiplicatives
  *egyszer* ‘once’; *kétszer* ‘twice’; *négyesszer* ‘four times’; *sokszor* ‘many times’

(2) Freq-adverbs (Stump 1985)1
  a. Relative freq-adverbs
    *sürün* ‘frequently’; *ismételten* ‘repeatedly’; *ritkán* ‘rarely’; *rendszeresen* ‘regularly’
  b. Fixed freq-adverbs
    *naponta* ‘daily’; *óránként* ‘hourly’; *hetente* ‘weekly’

(3) Q-adverbs
  *gyakran* ‘often’; *néha* ‘seldom’; *általában* ‘generally’; *rendszerint* ‘usually’

2 Distinguishing adverbs

2.1 Multiplicatives
• Count the number of occurrence of certain, countable situations
• All examples show surface scope

(4) a. *Kétszer [mindenki megkóstolta a pudingot]*
    twice everyone-nom tasted the pudding-acc
    ‘Everyone tasted the pudding twice’ (it happened twice that everyone tasted the
    pudding)
  b. *Mindenki kétszer [megkóstolta a pudingot]*
    everyone-nom twice tasted the pudding-acc
    ‘Everyone tasted the pudding twice’ (for every person, they tasted the pudding
    twice)

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1The freq-adverb *ritkán* ‘rarely’ is obligatorily focused in Hungarian, and so it appears in an obligatorily
preverbal position. Focusing affects some of the properties discussed below (focusing effects are ignored
here), so *ritkán* is often omitted from the following examples.
2.2 Freq-adverbs and Q-adverbs

- **Freq-adverbs** determine frequency of a type of situation within a time interval
  - Appear with a time interval argument
  - Cannot modify situation descriptions that exist ‘outside of time’ (Johansdottir 2005, citing Lewis 1975)
  - Cannot modify unique situations
  - Are distributive

- **Q-adverbs** quantify over situations
  - Do not take a time interval argument
  - Can modify situations that exist ‘outside’ of time (Johansdottir 2005, Lewis 1975)
  - Can modify unique situations
  - Are not distributive

2.2.1 Modifying situations that are independent of time

(5) a. Freq-adverbs

?? Az egyenletben ennek a változónak sűrűn / ritkán / rendszeresen
  the equation-in this-dat the variable-dat frequently / rarely / regularly
  negatív az értéke
  negative the value-poss

‘The value of this variable in the equation is frequently / rarely / regularly negative’

b. Q-adverbs

Az egyenletben ennek a változónak gyakran / néha / általában /
  the equation-in this-dat the variable-dat often / seldom / generally /
  rendszerint negatív az értéke
  usually negative the value-poss

‘The value of this variable in the equation is often / seldom / generally / usually negative’

(based on Johansdottir 2005)

2.2.2 Unique situations

(6) a. Freq-adverbs
?? Feri sűrűn evett egy szendvicset
F-nom frequently ate a sandwich-acc
‘Feri frequently ate a sandwich’
b. Q-adverbs
Feri gyakran evett egy szendvicset
F-nom often ate a sandwich-acc
‘Feri often ate a sandwich’

(7) a. Freq-adverb
?? Ebben a kórházban sűrűn / rendszeresen született egy gyerek
this-in the hospital-in frequently / regularly born a child-nom
‘A child was frequently / regularly born in this hospital’
b. Q-adverb
Ebben a kórházban gyakran / néha született egy gyerek
this-in the hospital-in often / seldom born a child-nom
‘A child was often / seldom born in this hospital’

(8) a. Freq-adverb
?? A frissen alapított vállalatoknál sűrűn / rendszeresen egy
the recently established companies-at frequently / regularly a
szakembert választanak elnöknek
specialist-acc elect-3pl chairperson-dat
‘In the recently established companies, frequently / regularly a specialist (and not a manager) is elected as chairperson’
b. Q-adverb
A frissen alapított vállalatoknál gyakran / rendszerint egy szakembert
the recently established companies-at often / usually a specialist-acc
választanak elnöknek
elect-3pl chairperson-dat
‘In the recently established companies, often / usually a specialist (and not a manager) is elected as chairperson’

2The object is focused, so it appears in the immediately preverbal position, the canonical position of foci in Hungarian. The sentence is not marked if the topicalized definite expression is a contrastive topic. The status of this structure is expected, given that (a) contrastive topics take narrow scope and (b) if the plural definite is interpreted below the freq-adverb, the sentence becomes grammatical (cf. section 7.1).
2.2.3 Non-distinguishing properties

- No functional uniqueness (adverbs can be iterated; cf. section 6) (cf. Ernst 2002)
- Homogeneity
  - Only freq-adverbs yield unbounded, atelic aspect; Q-adverbs do not affect aspectual values (e.g. van Geenhoven 2004, 2005)
  - Both freq-adverbs and Q-adverbs can yield homogeneous situation descriptions
- Time interval affected
  - van Geenhoven 2005: freq-adverbs operate on the asserted event time; Q-adverbs operate on the reference time
  - Freq-adverbs determine the frequency of (the occurrences of) a situation description within a time interval argument; Q-adverbs quantify over situations

(Partially contra van Geenhoven 2004, 2005; Johansdottir 2005; Cinque 1999, a.o.)

2.2.4 Freq-adverbs are distributive

- Distributive morphology on fixed freq-adverbs
- Distributive interpretation (both temporal and spatial) for relative freq-adverbs
- Freq-adverbs: distribution of situations of a given time within a time interval

(9) Fixed freq-adverbs
  a. -ként
     i. órán-ként ‘hourly’ (time)
     ii. mérfölden-ként ‘by mile’ (spatial measure)
     iii. szeleten-ként ‘by slice’
  b. -onta / -ente
     i. het-ente ‘weekly’ (time)
     ii. darab-onta ‘by piece’

(10) Relative freq-adverbs
  a. Feri sűrűn / ritkán süttött pizzát
     F-nom frequently / rarely baked pizza-acc
     ‘Feri frequently / rarely baked pizza’ (time)
  b. Feri sűrűn / ritkán ültette a virágokat
     F-nom frequently / rarely planted the flowers-acc
     ‘Feri planted the flowers densely / thinly’ (space)
c. Az erdőben sűrűn / ritkán nőttek a fák
   the forest-in frequently / rarely grew  the trees-nom
   ‘The trees grew densely / thinly in the forest’ (space)

2.2.5 Freq-adverbs and Q-adverbs

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<th>Q-adverbs</th>
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<td>yes</td>
<td>no</td>
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<tr>
<td>Situations outside of time</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Unique situations</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Distributive morphology</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

2.3 A puzzle

- Modification of punctual when-clauses with a progressive matrix clause

- Q-adverbs can modify the when-clause; freq-adverbs cannot do so (Johansdottir 2005)

- Suggests that the distinction between Q-adverbs and freq-adverbs is not restricted to Hungarian

(11) Puzzle (Johansdottir 2005)
   a. When Fred arrived, Frederike was eating lunch
   b. ?? When Fred often / frequently arrived, Frederike was eating lunch
   c. Often when Fred arrived, Frederike was eating lunch
   d. ?? Frequently when Fred arrived, Frederike was eating lunch

(12) Q-adverbs can quantify over the complex situation
   a. Often [when Fred arrived, Frederike was eating lunch]
   b. ?? [When Fred often / frequently arrived], Frederike was eating lunch

(13) Freq-adverbs determine frequency within the when-clause (time argument)
   a. ?? [Frequently when Fred arrived], Frederike was eating lunch
      (≠ It frequently occurred that when Fred arrived, Frederike was eating lunch)
   b. [While temporal / ?when Fred frequently missed training], Frederike was running conscientiously
3 Adverb distribution

3.1 Clause structure

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<td>mindenki</td>
<td>VILLÁVAL ette fork-with ate</td>
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<tr>
<td></td>
<td>everyone-nom</td>
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<tr>
<td>a csokoládépudingot / the chocolate-pudding-acc</td>
<td>sokan</td>
<td>nem szerették not liked</td>
</tr>
<tr>
<td></td>
<td>many people-nom</td>
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<tr>
<td>Feri / F-nom</td>
<td>gyakran</td>
<td>VILLÁVAL ette a pudingot fork-with ate the pudding-acc</td>
</tr>
<tr>
<td></td>
<td>often</td>
<td></td>
</tr>
<tr>
<td>A villát / the fork-acc</td>
<td>mindenki</td>
<td>sűrűn használta frequently used</td>
</tr>
<tr>
<td></td>
<td>everyone-nom</td>
<td></td>
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</tbody>
</table>

(cf. É. Kiss 2002, ms)

3.2 Adverb distribution: First pass

(14) Adverbs and quantifiers

a. Q-adverbs
   Feri gyakran / néha / rendszerint mindenkit\textsubscript{Q} meg hívott
   F-nom often / seldom / usually everyone-acc part invited
   'Feri often / seldom / usually invited everyone'

b. Freq-adverbs
   ?? Feri sűrűn / rendszeresen mindenkit\textsubscript{Q} meg hívott
   F-nom frequently / regularly everyone-acc part invited
   'Feri frequently invited everyone'

(15) Adverbs and negation

a. Q-adverbs
   ? Feri nem\textsubscript{NEG} gyakran / néha / rendszerint késett el
   F-nom not often / seldom / usually was late part
   'Feri was not often / seldom / usually late'

b. Freq-adverbs
   Feri nem\textsubscript{NEG} sűrűn / rendszeresen késett el
   F-nom not frequently / regularly was late part
   'Feri was not frequently / regularly late'
4 Time intervals

- Time intervals are restricted to the predicational component of the clause
- Freq-adverbs are restricted to the predicational component

4.1 Iteration and habituality

- Reduplicated particles yield iterative, not habitual interpretation
- Iterative and habitual interpretations and times must be distinguished

(16) a. Particle: perfective situation description
   Feri el késett
   F-nom away was late
   ‘Feri was late’

b. Reduplicated particle: iteration
   Feri el-el késett
   F-nom away-away was late
   ‘Feri was repeatedly late’

c. Iterated, non-habitual interpretation with reduplicated particle
   Feri el-el késett a múlt héten
   F-nom away-away was late the last week-on
   ‘Feri was repeatedly late last week’

4.2 Reference time

- Perfectivity is shown by the relative position of the verb and the particle

- Perfectivity is the ordering between the event time and the reference time (cf. Klein 1994, a.o.)
  - Perfective: event time is part of reference time
  - Imperfective: reference time is proper part of event time

- Reference time is located within the predicational component of the clause
- Reference time is located below the preverbal quantifier field
(17)  a. Perfective situation description
    Feri  fel ment  a  lépcsőn
    F-nom up went the stair-on
    ‘Feri went up the stairs’

    b. Imperfective situation description
    Feri  ment fel  a  lépcsőn  (amikor megszólalt  a  telefon)
    F-nom went up the stair-on when sounded the telephone
    ‘Feri was going up the stairs when the phone sounded’

4.3 Ordering of times

• All time intervals (including the speech time) are located in the predicational component

(18)  [ Topics [ quantifiers / Q-adverbs [ T_{speech} ... T_{habitual} ... T_{iterative} ... T_{event} ... ]] ]

• Time intervals are restricted to the predicational component

• Freq-adverbs are restricted to the predicational component

4.4 Q-adverbs and quantifiers

• Q-adverbs are freely ordered among quantifiers

(19)  a. Mindenki_{Q}  gyakran  mindent_{Q}  megkritizált
    everyone-nom often everything-acc criticized
    ‘Everyone often criticized everything’

    b. Sok  ember_{Q}  gyakran  minden  süteményt_{Q}  megkóstolt
    many people-nom often every cake-acc tasted
    ‘Many people often tasted every cake’

5 Flexible multiplicatives

• Multiplicatives can modify any countable situation description

(20)  Freq-adverbs and multiplicatives
    a. Feri  [kétszer_{M}  [sűrűn_{F}  csengetett]]
    F-nom twice frequently rang
    ‘Feri rang frequently twice’ (two occasions; twice > frequently)

    b. Feri  [sűrűn_{F}  [kétszer_{M}  csengetett]]
    F-nom frequently twice rang
    ‘Feri rang twice frequently’ (frequently > twice)
(21) Quantifiers and multiplicatives
   a. Feri [kétszer_\text{M} [mindenkit_\text{Q} meg hívott]]
      F-nom twice everyone-acc part invited
      ‘Feri invited everyone twice’ (twice > everyone)
   b. Feri [mindenkit_\text{Q} [kétszer_\text{M} meg hívott]]
      F-nom everyone-acc twice part invited
      ‘Feri invited everyone twice’ (everyone > twice)

(22) Q-adverbs and multiplicatives
   a. Feri [gyakran_\text{Q} [kétszer_\text{M} telefonált]]
      F-nom often twice called
      ‘Feri often called twice’
   b. (?) Feri [kétszer_\text{M} [gyakran_\text{Q} telefonált]]
      F-nom twice often called
      ‘Twice, Feri called often’ (e.g. on two trips out of four)

6 Iteration and coercion

- No functional uniqueness of multiplicatives, freq- or Q-adverbs

- Iteration of these adverbs is not inherently constrained
  (vs. Cinque 1999, who assumes that these adverbs can occupy two distinct positions)

- Coercion may be necessary
  - Multiplicatives, freq-adverbs and Q-adverbs modify countable situations
  - Freq-adverbs and Q-adverbs yield homogeneous, non-countable situations

(23) a. Multiplicatives
    Feri négyszer háromszor kétszer csengetett
    F-nom four times three times twice rang
    ‘Feri rang twice three times on four occasions’ (four times > three times > twice)

b. Freq-adverbs
    Feri ritkán késett el (rendszeresen) sűrűn
    F-nom rarely was late part (regularly) frequently
    ‘It rarely happened that Feri was (regularly) frequently late’ (rarely > frequently)

c. Q-adverbs
    Feri néha (általában) gyakran csengetett
    F-nom seldom (usually) often rang
    ‘Feri seldom rang often (usually)’ (seldom > often)
7 Some consequences

7.1 Freq-adverbs and iteration

- Freq-adverbs are not pluractional operators; they do not yield iterative interpretation
- Freq-adverbs require an iterable situation description

(24) Semelfactive – iterative verbs
   a. ?? Feri sűrűn kopp-int-ott / köh-int-ett
      F-nom frequently knock-semelfactive-3sg / cough-semelfactive-3sg
      ‘Feri frequently knocked / coughed’
   b. Feri sűrűn kop-og-ott / köh-ög-ött
      F-nom frequently knock-iterative-3sg / cough-iterative-3sg
      ‘Feri frequently knocked / coughed’

(25) Unique situations
   a. Freq-adverbs and unique situations
      ?? A frissen alapított vállalatoknál sűrűn egy szakembert
         the recently established companies-at frequently a specialist-acc
         választanak elnöknek
elect-3pl chairperson-dat
      ‘In the recently established companies, frequently a specialist is elected as chairperson’
   b. Freq-adverbs operating on a time interval which contains several situations
      Sűrűn előfordul, hogy a frissen alapított vállalatoknál egy
      frequently occurs that the recently established companies-at a
      szakembert választanak elnöknek
      specialist-acc elect-3pl chairperson-dat
      ‘It frequently occurs that a specialist is elected as chairperson in recently established companies’
   c. Freq-adverbs and multiple situations
      Sűrűn választanak egy szakembert elnöknek a frissen
      frequently elect-3pl a specialist-acc chairperson-dat the recently
      alapított vállalatoknál
      established companies-at
      ‘In recently established companies, it is often a specialist that is elected as chairperson’
7.2 Fixed freq-adverbs and quantifiers

*Naponta* ‘daily’

- Freq-adverb
- No quantifier-like distribution

\[(26) \quad \begin{align*}
a. & \quad \text{Minden nap}_Q \text{ mindenki}_Q \text{ elkésett} \\
& \quad \text{every day everyone-nom was late} \\
& \quad \text{‘Everyone was late every day’} \\
b. & \quad \text{?? Naponta mindenki}_Q \text{ elkésett} \\
& \quad \text{daily everyone-nom was late} \\
& \quad \text{‘Everyone was late daily’}
\end{align*}\]

8 Adverbs of counting

- Multiplicatives
  Flexible distribution; modify countable situations

- Freq-adverbs
  Specify the frequency of an iterated situation over a specific time interval

- Q-adverbs
  Quantify over situations
  (Including the existential *néha* ‘sometimes, seldom)

- The distribution of adverbs of counting is special

- For arguments and other adjuncts (cf. É. Kiss 2002, a.o.)
  - Indefinite expressions: topics or variables in predicational domain
  - Distributive quantifiers: quantifier domain

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9 References


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