Interpreting multiple sluicing: Experimental evidence from Hungarian

Eszter Ronai & Laura Stigliano

The University of Chicago

19th Meeting of the Texas Linguistics Society
14-15 February 2020
Main goals and claims

Fake English!

(1) a. Someone invited someone, but I don’t know who whom.  
   b. Who invited whom?  
   c. Who whom invited?

What is the source of (1-a): (1-b) or (1-c)?

No interpretive difference among the structures in (1).
   ▶ Based on novel experimental data.
   ▶ Contra existing claims in the literature.

Answerhood conditions: not sufficient to determine source of Hungarian multiple sluicing.
Roadmap

1. Background
2. Experiment 1: Acceptability rating task
3. Experiment 2: Forced choice task
4. Theoretical implications
5. Conclusions
The properties of **non-elliptical** sentences should **predict** the properties of **elliptical** ones.

- **Availability of multiple sluicing:**
  - Languages that allow multiple wh-movement allow multiple sluicing.
    - e.g. Bulgarian, Hungarian, Polish, and Russian

- **Parallel extends to possible interpretations:**
  - Answers licensed by **multiple wh-fronting questions** = scenarios in which **multiple sluicing** is allowed.
    - e.g. Hungarian (van Craenenbroeck & Lipták, 2013)
Parallel in interpretation

Check what interpretations single vs. multiple wh-fronting questions allow for.

Check which one the interpretations of multiple sluicing aligns with.

→ Whichever type of question it parallels = the source.
Single wh-fronting questions must have a single-pair (SP) answer:

(2) A: János kit mutatott be kinek? (É. Kiss, 2002, ex.68)
    John whom introduced VM who-to
    ‘Whom did John introduce to whom?’
B: Péter mutatta be Marinak.
    Peter.ACC introduced.he VM Mary-to
    He introduced Peter to Mary.
▶ Multiple wh-fronting questions must have a pair-list (PL) answer:

(3) A: János kit kinek mutatott be? (É. Kiss, 2002, ex.69)
   John whom who-to introduced VM
   ‘Whom did John introduce to whom?’

B: Pétert Marinak és Évának, Zoltánt Évának és Júliának, Istvánt
   Peter.ACC Mary-to and Eva-to Zoltan.ACC Eva-to and Julia-to Istvan.ACC
   pedig Júliának és Marinak mutatta be.
   on the other hand Julia-to and Mary-to introduced-he VM
   ‘He introduced Peter to Mary and Eva, Zoltan to Eva and Julia, and Istvan to Julia and Mary.’
Single wh-fronting questions license both a PL and a SP answer:

(4) A: Ki nézett rá kire?  
who looked on who-on  
‘Who looked at who?’

B: János nézett rá Marira, Pali Gabira,...  
John looked on Mary-on Paul Gaby-on  
‘John looked at Mary, Paul looked at G...’

B’: János nézett rá Marira.  
John looked on Mary-on  
‘John looked at Mary.’
Multiple wh-fronting questions must have a PL answer:

(5) A: Ki melyik tárgyat tanítja? (Surányi, 2006, ex.27)
   who which subject.ACC teaches
   ‘Who teaches which subject?’
B: Pál a szintaxist tanítja, Márk a szintaxist és a morfológiát,...
   Paul the syntax.ACC teaches Mark the syntax.ACC and the morphology.ACC
   ‘Paul teaches syntax, Mark teaches syntax and morphology,...’
B’: #Pál a szintaxist tanítja.
   Paul the syntax.ACC teaches
   ‘Paul teaches syntax.’
Multiple wh-fronting questions must have a PL answer (also É. Kiss, 1993).

(6) Ki kinek hagyott egy üzenetet? (van Craenenbroeck & Lipták, 2013, ex.66)

who.NOM who.DAT left a message.ACC

‘Who left a message for whom?’

a. Everyone left a message for someone. I wonder who each person left a message for.
b.*A single person left a message for someone. I wonder who the person was and for whom he left a message.
Multiple sluicing is only compatible with a PL scenario (promoted by everyone, (7-b)):

   ‘Everyone left a message for someone. I don’t know who for whom.’

   ‘Someone left a message for someone. I don’t know who for whom.’

Assumption: Strict parallel between ellipsis and non-ellipsis.

Multiple sluicing derives from multiple wh-fronting.
Interim Summary

Existing literature:

- **Single wh-fronting** questions: disagreement as to whether they only license SP answers, or both SP and PL answers.

- **Multiple wh-fronting** questions: allow for only a PL reading.

- **Multiple sluicing**: is claimed to also only be available in PL contexts.

- Multiple sluicing is derived from multiple wh-fronting.
Interim Summary

- None of the reported judgements have been subjected to rigorous experimental testing.

- No minimal pairs → potential confounding factors in reported judgements:
  - *Which NP* vs. *who* in the question.
  - Transitives vs. ditransitives.
  - Presence vs. absence of verb in the answer.
  - Position of verb in the answer (VO vs. OV).
  - Presence vs. absence of verbal particle: indexes focus movement.
Experiment 1: acceptability rating

- 45 native speakers of Hungarian.
- Rate on a 1-7 scale how acceptable an (SP/PL) answer is to the relevant question in a dialogue.
- Methodology has been used successfully to test the answerhood conditions of questions in English (Achimova, Deprez, & Musolino, 2013).
Experiment 1: acceptability rating

3×2 design:

- 3 Constructions: multiple sluicing—8a, single wh-fronting questions—8b, multiple wh-fronting questions—8c

- 2 Readings: SP and PL, promoted by a preceding sentence (Someone... for SP and Everyone... for PL) + a matching explicit SP/PL answer.
Experiment 1: stimuli

(8) A: {Valaki / Mindenki} meghívott valakit. Tudod, hogy...
   A: {Someone / Everyone} invited someone.ACC you.know that...
   a. ...ki kit?
      who.NOM who.ACC
   b. ...ki hívott meg kit?
      who.NOM invited PRT who.ACC
   c. ...ki kit hívott meg?
      who.NOM who.ACC invited PRT

   ‘A: Someone/Everyone invited someone. Do you know who (invited) who?’

(9) B: {Mari Jánost. / Mari Jánost, Péter Zsuzsit, Ádám pedig Évát.}
   B: Mary John.ACC / Mary John.ACC Peter Susie.ACC Adam and Eva.ACC
Experiment 1: results

High acceptability ratings.

SP rated higher than PL:
- Reading main effect ($p < 0.001$)
- Construction n.s.
- Interaction n.s.
Experiment 2: forced choice

- 39 native speakers of Hungarian.
- Forced choice task: participants had to choose between a SP and a PL answer in response to a question in a dialogue context.
- 3 conditions = 3 Constructions:
  - multiple sluicing—10a, single wh-fronting questions—10b, multiple wh-fronting questions—10c
Experiment 2: stimuli

(10) A: Valaki, vagy valakik meghívtak valakit. Tudod, hogy...
   A: Someone.SG or someone.PL invited someone.ACC you.know that...
   
   a. ...ki kit?
      who.NOM who.ACC
   b. ...ki hívott meg kit?
      who.NOM invited PRT who.ACC
   c. ...ki kit hívott meg?
      who.NOM who.ACC invited PRT

   ‘A: Someone, or some people invited someone. Do you know who (invited) who?’

(11) B: {Mari Jánost. / Mari Jánost, Péter Zsuzsit, Ádám pedig Évát.}
    B: Mary John.ACC / Mary John.ACC Peter Susie.ACC Adam and Eva.ACC
Experiment 2: results

Uniform preference for SP.

Significant difference between: single (74% SP) and multiple (64%) wh-fronting questions ($p < 0.01$).

Multiple sluicing (70% SP) doesn’t differ from either.
Overall results

- Previously reported judgements not confirmed by our findings.
  - × Multiple sluicing and multiple wh-questions: only compatible with PL.

- Hungarian multiple sluicing, single and multiple wh-fronting questions pattern alike with respect to their answerhood conditions:
  - SP answers are preferred over PL ones across the board, though both answer types are generally available.

- Exp. 2: multiple sluicing does not clearly align with either type of question in how strong the SP preference is.
  - Representing a “middle ground” when it comes to interpretation?
These findings complicate our view of the syntax of multiple sluicing.

Assuming that properties of non-elliptical sentences predict properties of elliptical ones: no reason *in principle* to prefer analyzing multiple sluicing as deriving from either question type.
12a: both wh-phrases are moved, and thus both escape deletion, triggered by feature [E] on C (i.a. van Craenenbroeck & Lipták, 2013).

12b: one of the wh-phrases escapes deletion without needing to move (i.a. Abe, 2015, 2016).

(12) Valaki/Mindenki meghívott valakit. De nem tudom, ki kit.
someone/everyone invited someone.ACC but not I.know who.NOM who.ACC
‘Someone/Everyone invited someone. But I don’t know who whom.’

a. ... De nem tudom, ki kit [C[E] hívott meg ]. → move-and-delete approach
  ... but not I.know who.NOM who.ACC invited PRT
b. ... De nem tudom, ki [C[E] hívott meg [F kit]]. → in-situ approach
  ... but not I.know who.NOM invited PRT who.ACC
Follow-up ideas

Investigate potential factors uncontrolled in earlier theoretical work, which may have led to generalizations incompatible with our experimental findings:

- Transitives vs. ditransitives.
- Presence vs. absence of verb in the answer.
- Position of verb in the answer (VO vs. OV).
- Presence vs. absence of verbal particle: indexes focus movement.

Individual/dialect variability?
Conclusions

Claims about the answerhood conditions of Hungarian multiple sluicing and single/multiple wh-fronting questions were made on the basis of heterogeneous examples.

Novel, controlled experimental data:
- **All relevant structures pattern alike**: license both SP and PL answers, with a preference for SP.
- **Multiple sluicing is in between the two types of questions** in terms of how strong a preference it has for SP.

Answerhood conditions cannot distinguish between the two possible sources for the ellipsis site.
→ No longer have an argument for multiple sluicing deriving from multiple wh-fronting.
Thank you!

ronai@uchicago.edu
laurastigliano@uchicago.edu
References I


van Craenenbroeck, J., & Lipták, A. (2013). What sluicing can do, what it can’t and in which language: On the cross-linguistic syntax of ellipsis.