

# Is multiple fronting necessary for multiple sluicing? The view from Hungarian

Eszter Ronai & Laura Stigliano

The University of Chicago

38th West Coast Conference on Formal Linguistics  
6-8 March 2020



# Main goals and claims



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

- (1) a. Valaki meghívott valakit, de nem tudom **ki** **kit**. multiple sluicing  
someone invited someone.ACC but not know.I who.NOM who.ACC  
'Someone invited someone, but I don't know who whom.'
- b. **Ki** hívott meg **kit**? single wh-fronting  
who.NOM invited PRT who.ACC  
Literal: 'Who invited whom?'
- c. **Ki** **kit** hívott meg? multiple wh-fronting  
who.NOM who.ACC invited PRT  
Literal: 'Who whom invited?'

# Main goals and claims



- (1) a. Valaki meghívott valakit, de nem tudom, ki kit.  
someone invited someone.ACC but not I.know who.NOM who.ACC  
'Someone invited someone. But I don't know who whom.'

Structure A: ... de nem tudom, ki hívott meg kit. single wh-fronting  
... but not I.know who.NOM invited PRT who.ACC

Structure B: ... de nem tudom, ki kit hívott meg. multiple wh-fronting  
... but not I.know who.NOM who.ACC invited PRT

- ▶ We'll adjudicate between these two sources.
- ▶ Key idea: if Structure A vs. B is the source, there should be interpretational correlations.

# Main goals and claims



- ▶ 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.  
(i.a. Tancredi, 1992)

- ▶ Availability of multiple sluicing:
  - Languages that allow multiple wh-movement allow multiple sluicing (i.a. Merchant, 2001).  
e.g. Bulgarian, Hungarian, Polish, and Russian
  
- ▶ Parallel extends to possible interpretations:
  - Interpretations of **multiple wh-fronting questions** = those of **multiple sluicing**.  
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 interpretation(s) of multiple sluicing aligns with.  
  
→ Whichever type of question it parallels = the source.
- ▶ There are disagreements in the existing literature on Hungarian.



► Single wh-fronting questions must have a single-pair (SP) answer:

(2) A: János **kit** mutatott be **kinek**? (É. Kiss, 2002, ex.68)

John who.ACC introduced PRT who-to

‘Who did John introduce to whom?’

B: Pétert mutatta be Marinak.

Peter.ACC introduced PRT 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 who.ACC who-to introduced PRT  
'Who did John introduce to whom?'

B: Pétert Marinak és Évának, Zoltánt Évának és Júliának, Istvánt pedig Júliának  
Peter.ACC Mary-to and Eva-to Zoltan.ACC Eva-to and Julia-to Istvan.ACC and Julia-to  
és Marinak mutatta be.  
and Mary-to introduced PRT  
'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**? (Surányi, 2006, ex.28)

who looked PRT who-on

‘Who looked at who?’

B: János nézett rá Marira, Pali Gabira,...

John looked PRT Mary-on Paul Gaby-on

‘John looked at Mary, Paul looked at

Gaby, ...’

B’: János nézett rá Marira.

John looked PRT 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** **kinék** hagyott egy üzenetet? (van Craenenbroeck & Lipták, 2013, ex.66)

who who-to 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-a)):

- (7) a. Mindenki hagyott egy üzenetet      valakinek.    Nem tudom, hogy **ki**    **kinek**.  
everyone left      a    message.ACC someone-to not    I.know that who who-to  
'Everyone left a message for someone. I don't know who for whom.'
- b.\*Valaki    hagyott egy üzenetet      valakinek.    Nem tudom, hogy **ki**    **kinek**.  
someone left      a    message.ACC someone-to not    I.know that who who-to  
'Someone left a message for someone. I don't know who for whom.'

(van Craenenbroeck & Lipták, 2013, exs.67-68)

(See also Nishigauchi 1998 for Japanese and Merchant 2001 for English.)

- ▶ Assumption: Strict parallel between ellipsis and non-ellipsis.
- ▶ Multiple sluicing derives from multiple wh-fronting.



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.**



- ▶ 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} PRT.invited someone.ACC you.know that...

a. ... ki kit.

who who.ACC.

b. ... ki hívott meg kit.

who invited PRT who.ACC

c. ... ki kit hívott meg.

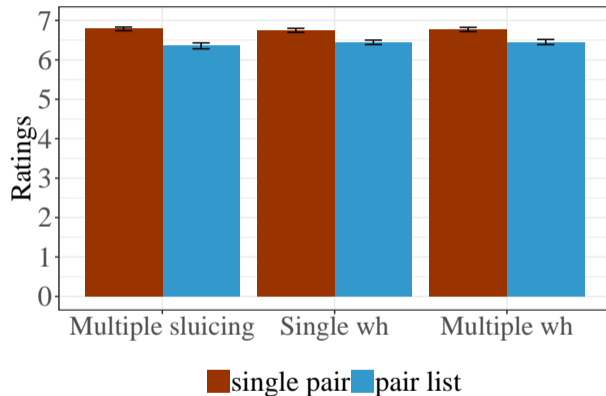
who who.ACC invited PRT

‘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 PRT.invited someone.ACC you.know that...

a. ... ki kit.

who who.ACC.

b. ... ki hívott meg kit.

who invited PRT who.ACC

c. ... ki kit hívott meg.

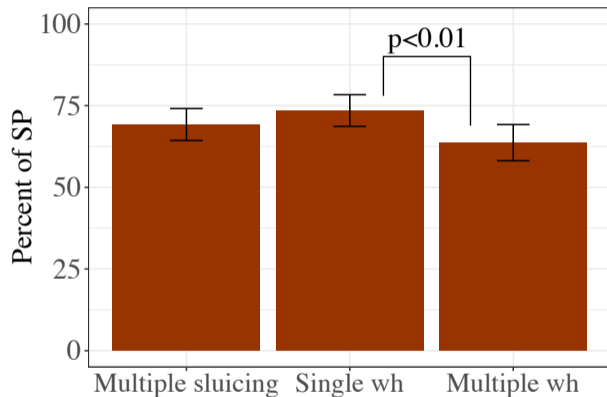
who who.ACC invited PRT

‘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.



- ▶ Previously reported judgements not confirmed by our findings.
  - ✗ Multiple sluicing and multiple wh-fronting 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, which targets the complement of C (i.a. Merchant, 2001; 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 hívott meg]. → move-and-delete approach  
... but not I.know who.NOM who.ACC invited PRT
- b. ... De nem tudom, ki [C hívott meg [kit]<sub>F</sub>]. → in-situ approach  
... but not I.know who.NOM invited PRT who.ACC



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.



- ▶ 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

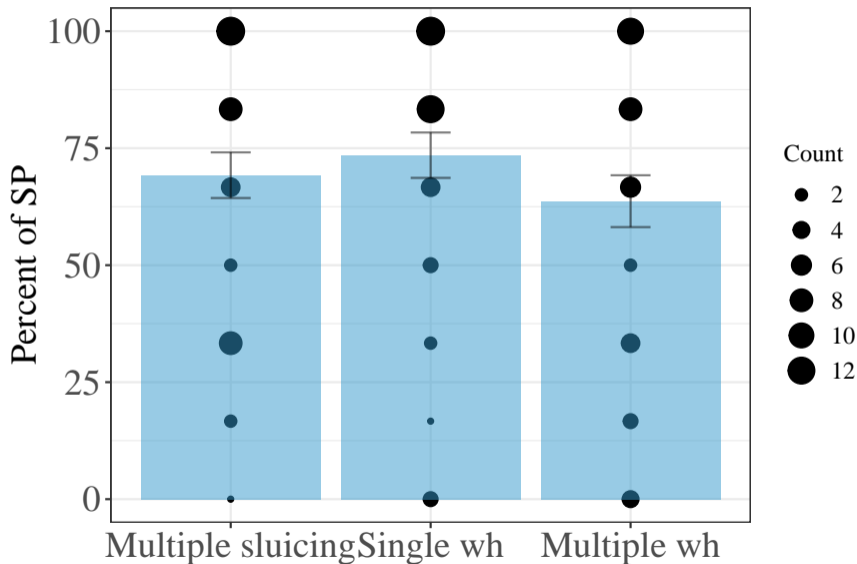
laurastigliano@uchicago.edu

# References I

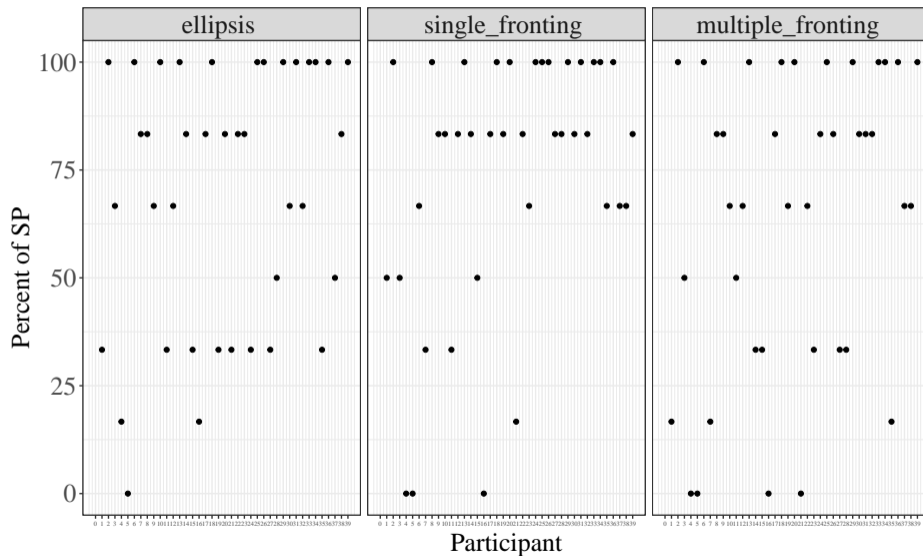


- Abe, J. (2015). *The in-situ approach to sluicing* (Vols. Linguistik Aktuell/Linguistics Today, 222). John Benjamins Publishing Company.
- Abe, J. (2016). Make short answers shorter: Support for the in situ approach. *Syntax*, 19(3), 223–255.
- Achimova, A., Deprez, V., & Musolino, J. (2013). What makes pair list answers available: An experimental approach. In N. LaCara, L. Fainleib, & Y. Park (Eds.), *NELS 41: Proceedings of the 41st Annual Meeting of the North East Linguistic Society*. Amherst, MA: GLSA.
- É. Kiss, K. (1993). Wh-movement and specificity. *Natural Language & Linguistic Theory*, 11(1), 85–120.
- É. Kiss, K. (2002). *The Syntax of Hungarian*. Cambridge University Press. doi: 10.1017/CBO9780511755088
- Merchant, J. (2001). *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford University Press.
- Nishigauchi, T. (1998). ‘multiple sluicing’ in Japanese and the functional nature of wh-phrases. *Journal of East Asian Linguistics*, 7(2), 121–152.
- Surányi, B. (2006). Mechanisms of wh-saturation and interpretation in multiple wh-movement. In N. Corver & L. L. S. Cheng (Eds.), *Wh-movement: Moving on* (p. 289-318). Cambridge, MA: MIT Press.
- Tancredi, C. D. (1992). *Deletion, deaccenting, and presupposition* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.
- 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.

# Data on individuals (Experiment 2)



# Data on individuals (Experiment 2)



# Data on individuals (Experiment 2)

