Interpretation cannot determine the source of multiple sluicing in Hungarian

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Hungarian multiple sluicing is claimed to only be allowed in contexts that set up a pair-list (PL), but not a single-pair (SP) reading. This has been taken as evidence for the claim that multiple sluicing derives from multiple wh-fronting questions, which only license PL answers. Providing novel experimental evidence, we show that all three relevant constructions—multiple sluicing, single and multiple wh-fronting questions—in fact pattern alike: there is a uniform preference for SP readings in Hungarian. Additionally, multiple sluicing does not clearly align with either type of question in terms of how strong a preference it shows for SP. We thus argue that answerhood conditions are not sufficient to determine the source of multiple sluicing.

1. Multiple questions and multiple sluicing in Hungarian. An important theoretical claim in the ellipsis literature is that properties of non-elliptical sentences in a language should predict the properties of elliptical ones. One domain where elliptical sentences have been claimed to parallel non-elliptical ones is multiple sluicing: languages that allow multiple wh-movement allow multiple sluicing. Crucially, this correlation between elliptical and non-elliptical structures has been claimed to extend to the possible interpretations that they allow (see e.g. Grebenyova, 2007). For Hungarian, van Craenenbroeck and Lipták (2013) have argued that there is a strict parallel between the answers licensed by multiple wh-fronting questions and the scenarios in which multiple sluicing is allowed. According to the authors, multiple wh-fronting questions only allow for a PL reading, while a SP reading is not allowed (1). This in turn accounts for the fact that multiple sluicing is only compatible with a PL, and not a SP (2) scenario (promoted by *everyone* and *someone* in the antecedent, respectively):

(1) Ki kinek hagyott egy üzenetet? (=(66-68) from van Craenenbroeck and Lipták)
who.NOM who.DAT left a message.ACC
'Who left a message for whom?' → claimed available readings: ✓ PL ✗ SP

(2) {Mindenki/*Valaki} hagyott egy üzenetet valakinek. Nem tudom, ki kinek.
{everyone/someone} left a message.ACC someone.DAT not I.know who.NOM who.DAT
'Everyone/*Someone left a message for someone. I don't know who for whom.'

Crucially, Hungarian allows both multiple (3a), and single wh-fronting questions (3b). According to i.a. É. Kiss (2002), multiple wh-fronting questions must have a PL answer, and single wh-fronting questions a SP answer. Surányi (2006), however, claims that single wh-fronting questions license both a PL and a SP answer:

(3) a. Ki kit hívott meg?
who.NOM who.ACC invited PRT
'Who invited whom?'

b. Ki hívott meg kit?
who.NOM invited PRT who.ACC
'Who invited whom?'

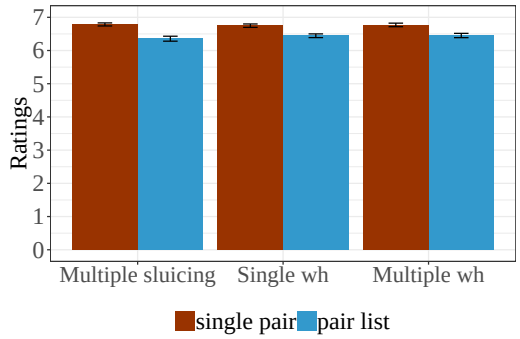
To sum up, existing literature reports that multiple wh-fronting questions allow for only a PL reading. Given that multiple sluicing is claimed to also only be available in PL contexts, it has been assumed to be derived from multiple wh-fronting questions. Regarding single wh-fronting questions, there is some disagreement about whether they only license SP, or both SP and PL answers. Nonetheless, none of the reported judgements have been subjected to more rigorous experimental testing, which is what we turn to in this paper.

2. Experiments 1-2. 45 native speakers of Hungarian took part in Exp.1. Their task was to rate on a 1-7 scale how acceptable an (SP/PL) answer (5) is to the relevant question (4) in a dialogue. This methodology has been used successfully to test the answerhood conditions of questions in English (see i.a. Achimova, et al. 2013). The experiment had a 3×2 design: we tested three Constructions (multiple sluicing—4a, single wh-fronting questions—4b, multiple wh-fronting questions—4c) in two different Readings (SP and PL). Readings were promoted by a preceding sentence (*Someone...* for SP and *Everyone...* for PL), as well as importantly by a matching explicit SP/PL answer given in a dialogue context:

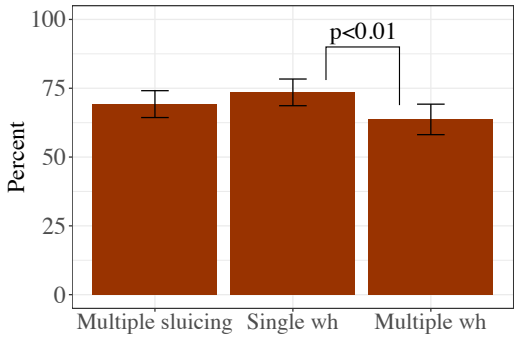
(4) A: {Valaki / Mindenki} meghívott valakit. Tudod, hogy...
A: {Someone / Everyone} invited someone you.know that...
(a) ...ki kit? (b) ...ki hívott meg kit? (c) ...ki kit hívott meg?
who.NOM who.ACC who.NOM invited PRT who.ACC who.NOM who.ACC invited PRT
'A: Someone/Everyone invited someone. Do you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

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

39 Hungarian native speakers took part in Exp.2, which was a forced choice task: participants had to choose between a SP and a PL answer (5) to a question (4) in a dialogue context. Again, we manipulated the type of construction in the question: multiple sluicing, single- or multiple wh-fronting questions. The preceding context sentence was modified to allow for both SP and PL readings (*"Someone.*SG *or Someone.*PL *invited..."*).



(a) Figure 1: Mean acceptability ratings of SP/PL answers.



(b) Figure 2: Percentage of choosing SP answer.

3. Results and discussion. Figure 1 shows mean acceptability for SP/PL answers as potential responses to the three relevant constructions (Exp.1). All conditions received high acceptability ratings across the board, despite previous claims in the literature that multiple sluicing and multiple wh-fronting do not license SP readings. Crucially, however, we also observed differences between the acceptability of SP/PL answers. In particular, SP answers were rated significantly higher than PL answers for all constructions (main effect of Reading: $p < 0.001$, no effect of Construction: $p = 0.75$, or interaction: $p = 0.45$). Figure 2 shows the percentage of SP answers being chosen for each construction type in Exp.2. Again, all three constructions pattern alike in showing a preference for SP answers. At the same time, there was a significant difference between single (74% SP) and multiple (64% SP) wh-fronting questions ($p < 0.01$), but multiple sluicing (70% SP) did not differ significantly from either of them ($p = 0.2$, $p = 0.1$). Both experiments thus provide evidence for the same generalization: **SP answers are preferred over PL ones across the board, though both answer types are generally available**. Additionally, in Exp.2 we see that multiple sluicing does not clearly align with either type of question in how strong the SP preference is. In ongoing follow-up experiments, we are investigating potential factors that were uncontrolled in earlier theoretical work, and which may have led to generalizations incompatible with our experimental findings. These include *which NP* vs. *who* questions, presence/position of verb in the answer, presence of a verbal particle, and individual/dialect variability. We argue, however, that the current findings are already informative regarding the syntax of multiple sluicing.

4. Optionality of sources for the ellipsis site. Acceptability and forced choice tasks showed that Hungarian multiple sluicing, single wh-fronting questions, and multiple wh-fronting questions pattern alike with respect to their answerhood conditions, with sluicing 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, multiple sluicing can in principle be derived from either source — namely, multiple or single wh-fronting questions. This is schematized in (6). (6a) illustrates existing proposals that follow the move-and-delete approach to ellipsis and derive multiple sluicing from multiple wh-fronting questions: both wh-phrases are moved, and thus both escape deletion, triggered by a feature [E] on C (i.a. van Craenenbroeck & Lipták, 2013). On the other hand, (6b) illustrates an in-situ approach, in which one of the wh-phrases escapes deletion without the need to move (see e.g. Abe, 2015, 2016). For reasons of space, we leave the formal details of these two approaches to be fully spelled out in the presentation.

(6) Valaki/Mindenki meghívott valakit. De nem tudom, ki kit.
someone/everyone invited someone 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

5. Conclusions. Claims about the answerhood conditions of Hungarian multiple sluicing and single/multiple wh-fronting questions have been made based on heterogeneous examples. Our **novel experimental data** suggests that in fact **all relevant structures pattern alike**: they license both SP and PL answers, with a preference for SP. However, **multiple sluicing is in between the two types of questions** in terms of how strong a preference it has for SP. Therefore, answerhood conditions cannot distinguish between the two possible sources for the ellipsis site. We provide a syntax that captures this potential **optionality of sources**.