

**(Non-) exhaustivity in focus partitioning:
A cross-linguistic investigation of exhaustivity
in Hungarian focus and clefts**

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M. Zimmermann (UP), J. DeVaugh-Geiss (UP), S. Tönnis (GÖ), E. Onea (GÖ),
and A.C. Boell (GÖ), E. Shipova (UP) & E. Destruel (Iowa)

1. Introduction: What's a cleft?

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- ... but possibly different underlying syntax!

⇒ No obligatory exhaustivity effects across languages, **including Hungarian!**

⇒ **Defining semantic characteristic of focus partitioning:**
∃-presupposition/anaphoricity

1.1 Focus-background partitioning:

Possibly universal structural device for (optionally) expressing information-structural partitioning,

but languages may differ in their (language-specific) choice of structural building blocks (Zimmermann 2016)

1.1 Focus-background partitioning: Examples

A. Focus-background Clefts (German, English, French):

(1) Es ist MAX\, [der einen Cocktail gemischt hat]. (G.)

(2) It's MAX\ [that/who mixed a cocktail]. (E.)

(3) C'est MARC\ [qui a préparé un cocktail]. (Fr.)

(4) [Pron/Dem] COP XP_{FOC} [REL]

1.1 Focus-background partitioning: Examples

B. Èto-clefts in Slavic (e.g. Junghanns 1997, Kimmelman 2009, Reeves):

- (5) a. Èto [BORIS vypil vodku]. [Russian, Reeves 2012:13]
this Boris drank vodka
'It was Boris who drank the vodka.'
- b. DEM [XP_{FOC} ...]

1.1 Focus-background partitioning: Examples

C. Preverbal Focus; Left-Dislocation (Hungarian, Akan):

(6) a. Mari PÉTERT hívta fel. (É. Kiss 1998:256)

b. Mari [_{FP} PÉTERT_j [_{F'} hívta_i [_{VP} fel t_i t_j]]]
'It was Peter that Mari called up.'

(see e.g. Szabolcsi 1981, 1994, Kenesei 1986, 2006, Horváth 1986, É. Kiss 1987, 1998, Brody 1990, Onea & Beaver 2009 a.o., [pace Horváth 2010](#))

(7) a. ɔbaa_i no na me huu no_i (Akan, Saah 1994:102)
woman DEF FOC I saw her

b. [[XP_{FOC,i}] FOC [... pron_i ...] (see also Renans 2016 on Gaa)

1.2 Cross-linguistic parallels: discourse-semantics

Focus-partitioning has unified discourse-semantics across languages

- i. **Structural separation of focused material** from background material:
 - (8) (TOP) [FOC] [Background]
⇒ Focus constituent prosodically marked as well
- ii. **Anaphoric devices** that are **not licensed out of the blue** (Delin 1992), and which come with an **existence presupposition**, computed over background property *BG* (Rooth 1996)
 - (9) $\exists z [BG(z)(s_0)]$
⇒ EXH-inference follows anaphoricity/ \exists -presupposition

1.2 Cross-linguistic parallels: discourse-semantics

Focus-partitioning has unified discourse-semantics across languages

- (10) Q: Did anyone win the football pool this week?
- a. A: #Probably not, because it's unlikely **that it's MARY who won it**, and she's the only person who ever wins.
 - b. A: #Probably not, because it's unlikely **that the one who won it was MARY**, and she's the only person who ever wins.
 - c. A: Probably not, because it's unlikely **that MARY won it**, and she's the only person who ever wins. (Rooth 1996)
- (11) Q: Who won the football pool this week?
- A:#It's NOBODY who/that won it.

1.3 Cross-linguistic differences:

i. Focus projection from XP_{FOC} : No or Yes

English/German: No

(12) Q1: Who won the Russian elections? (OK)

Q2: What's new? (#)

A: It is YELTSIN who won the Russian elections.

French: Yes

(13) Q: Qu'est-ce qui s'est passé? (What happened?)

A: C' est le petit qui est tombé dans l'escalier
It is the small-one who is fallen in the stairs

(Clech-Darbon et al. 1999)

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- (12) Q1: Who won the Russian elections? (OK)
Q2: What's new? (#)

A: It is YELTSIN who won the Russian elections.

French: Yes

Hungarian: ?? (see e.g. É.Kiss 1998:264)

1.3 Cross-linguistic differences:

ii. Morpho-syntax (at least on the surface):

	YES	NO
peripheral:	G., E., Fr., Ak.	Ru., H.
PRON/DEM:	G., E., Fr., Ru.	H., Ak.
REL-marking:	G., E., Fr.	Ru., H., Ak.
Mono-clausal	Ru., H., Ak.	G., E., Fr.
Focus movement	H., Ru.(?)	G., E., Fr., Ak.
Designated focus marker	Ak.	G., E., Fr., Ru., H.

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⇒ But see É. Kiss (1998) and Reeves (2012) for unified analyses of English and Hungarian focus partitioning and English and Russian focus partitioning, respectively.

1.3 Cross-linguistic differences:

ii. Morpho-syntax (at least on the surface):

Focus partitions are built from different morpho-syntactic building blocks (Pron/DEM/REL/COP/FOC/none) and involve different derivational histories (even within a single language; cf. É.Kiss 1998:259)!

1.3 Cross-linguistic differences:

ii. Morpho-syntax (at least on the surface):

Focus partitions are built from different morpho-syntactic building blocks (Pron/DEM/REL/COP/FOC/none) and involve different derivational histories (even within a single language; cf. É.Kiss 1998:259)!

Q: How to derive robust **EXH-inferences** from such diverse structures?

e.g. É.Kiss (1998): **FocP with feature [+exhaustive]**

BUT: EXH-inferences no robust interpretive feature of focus-partitioning in our experiments !!!

1.4 The Question:

How to define focus-partitioning structures as cross-linguistically unified class of constructions?

- i. On the basis of discourse-semantic characteristics (irrespective of possible morpho-syntactic differences)?
- ii. On the basis of structural (morpho-syntactic) criteria?

H1 Focus-partitioning structures form a discourse-semantic class of (possibly) structurally heterogeneous constructions

⇒ Parallel discourse-semantics and interpretive effects (\exists, \forall)

1.4 The Question:

H1 Focus-partitioning structures form a discourse-semantic class of (possibly) structurally heterogeneous constructions

⇒ **Focus-partitioning structures = Anaphoric constructions** with (more or less) identical use conditions in discourse (Onea & Beaver 2009, Velleman et al. 2012)

i. **\exists -inference:** Tied to backgrounding, anaphoricity markers

ii. **EXH-inference:** Tied to \exists -inference/anaphoricity (Pollard & Yasavul, in press)

NB EXH-inference typically closely associated with focus-partitioning; variously modelled as truth-conditional, presupposition, conventional implicature, or pragmatic implicature.

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ii. **EXH-inference:** Tied to \exists -inference/anaphoricity (Pollard & Yasavul, in press)

⇒ **If EXH-effect tied to \exists -inference/anaphoricity: Pragmatic effect, +/-EXH-interpretation tied to semantic properties of discourse antecedent (indefinite vs definite) or QUD**

1.5 The Plan:

Controlled and cross-linguistically comparable investigation of exhaustivity in focus-partitioning constructions, using the same experimental methodology:

Incremental Information Retrieval Paradigm

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Incremental Information Retrieval Paradigm

Predictions:

- i. H1 correct \Rightarrow Parallel EXH-interpretation across languages
- ii. Differences in EXH-interpretation across languages
 \Rightarrow H1 incorrect

1.6 EXH-inferences and focus-partitioning:

Our exps. show that EXH-inferencing with focus-partitioning is indeed parallel across languages, **but in unexpected ways**

Standard view: EXH-inference defining characteristic of cleft constructions and the Hungarian preverbal (focus) position (e.g. Szabolcsi 1981, É.Kiss 1998, Horváth 2010)

⇒ motivation for unified syntactic analysis (e.g. É. Kiss 1998)

Our exps: EXH-inference not obligatory in clefts (nor in Hungarian pre-verbal focus)

⇒ **EXH is not a defining characteristic of focus-partitioning, but anaphoricity/ \exists -presupposition is!** (viz. Delin 1992)

2. The Experiment

2.1 Experimental Set-Up

2.2 Theoretical Lay of the Land & Predictions

2.3 Procedure

2.4 Analysis

2.1 Experimental Set-Up

Two experiments on EXH-inference:

Exp.1: **Verification**

Exp.2: **Falsification**

in **Incremental Information Retrieval Paradigm**

Purpose of experiments:

Exp.1: EXH-inference at issue/not at-issue?

Exp.2: EXH-inference semantically coded or not?

⇒ Information on semantic or pragmatic nature of effect, and on its robustness/systematicity within and across speakers and trials

2.1 Experimental Set-Up

4x2 Design: [Sentence Type] x [+/- EXH] OR [+/- CAN]

- (14) a. **It was MAX**\ that mixed a cocktail. CLEFT Target1
- b. [**The** one that mixed a cocktail] was MAX. DEF Target2
-
- c. **Only** MAX\ mixed a cocktail. EXCL)
- d. **MAX**\ mixed a cocktail. FOC)
- } Controls

Information-structure control: Auditive stimuli

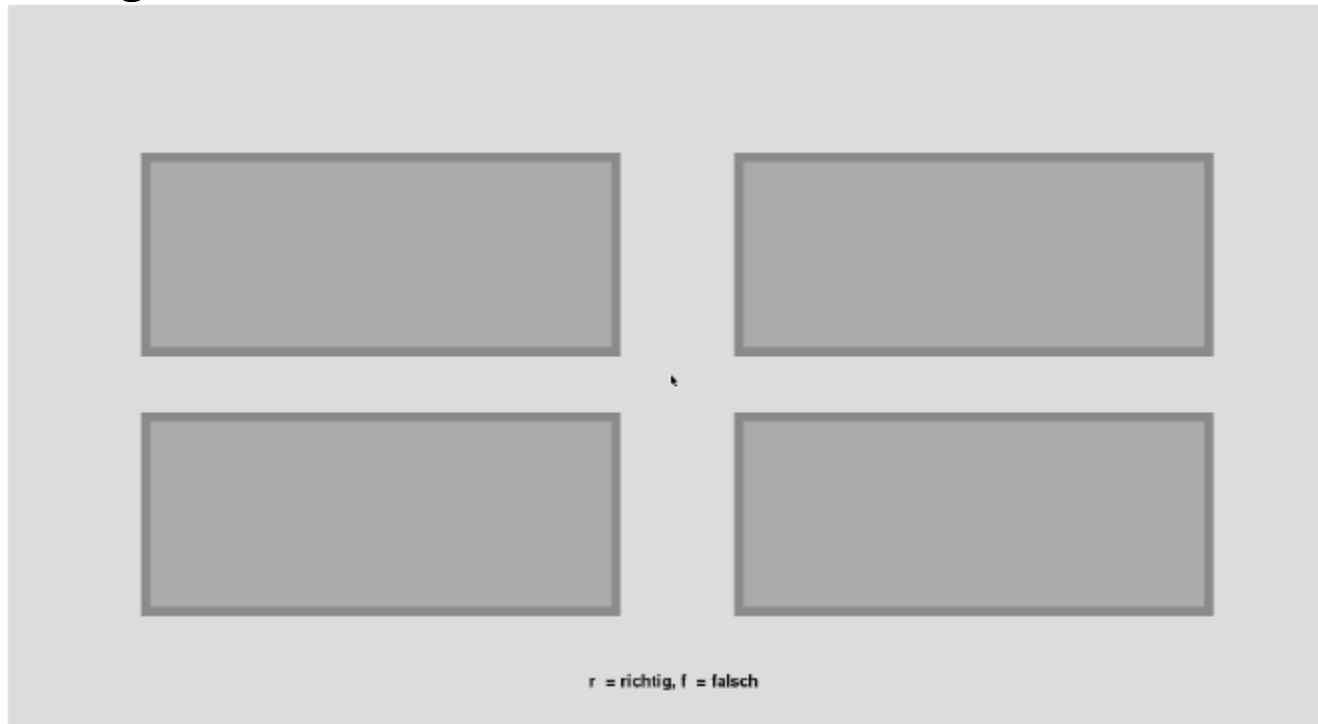
Domain control: Same four individuals across trials!

Explicit comparison of clefts and definite pseudoclefts!

2.1 Experimental Set-Up

Task: Uncover pictures with mouse and give a true/false judgment as soon as sufficient information is available.

Target: It was Max that mixed a cocktail

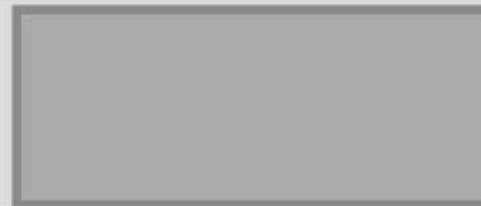
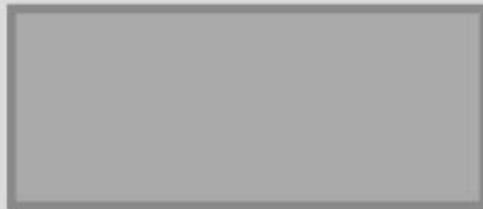


2.1 Experimental Set-Up

Task: Uncover pictures with mouse and give a true/false judgment as soon as sufficient information is available.

Target: It was Max that mixed a cocktail

Verification: Second picture matches canonical inference



2.1 Experimental Set-Up

Logic: Verification (Exp.1)

Canonical inference (p), EXH-inference (q): **p in pic.2**

If only p relevant for assessing truth of cleft (eg. FOC)

⇒ True judgment at picture 2

If both p and q truth-relevant (eg. EXCL)

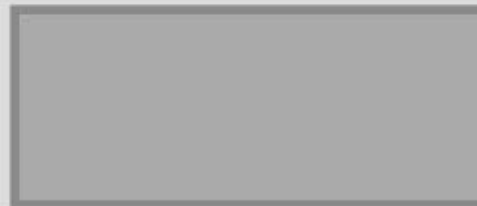
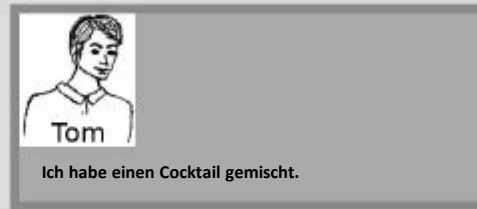
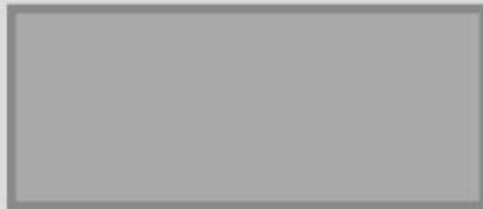
⇒ Continue at picture 2

2.1 Experimental Set-Up

Task: Uncover pictures with mouse and give a true/false judgment as soon as sufficient information is available.

Target: It was Max that mixed a cocktail

Falsification: Second picture falsifies EXH-inference



r = richtig, f = falsch

2.1 Experimental Set-Up

Logic: Falsification (Exp.2)

Canonical inference (p), EXH-inference (q): $\neg q$ in **pic.2**

If only p relevant for assessing truth of cleft (eg. FOC):

\Rightarrow Continue at picture 2

If both p and q truth-relevant (eg. EXCL):

\Rightarrow False at picture 2

(Moreover: Explicit statement of $\neg q$ should make content of EXH-inference salient enough to be considered: at-issueness)

2.1 Experimental Set-Up

Summary Conditions:

	Exp. I (Verifier)	Exp. II (Falsifier)
Box 1	<i>(irrelevant information)</i> Jens: “I opened a bottle.”	
Box 2 (EARLY RESPONSE)	<i>(canonical verified)</i> Max: “I mixed a cocktail.”	<i>(exhaustivity falsified)</i> Ben: “I mixed a cocktail.”
Box 3 / Box 4 (LATE RESPONSE)	[+EXH] <i>(exh. verified)</i> Tom/Ben: “I fetched a straw.” or [-EXH] <i>(exh. falsified)</i> Tom/Ben: “I mixed a cocktail.”	[+CAN] <i>(can. verified)</i> Max: “I mixed a cocktail.” or [-CAN] <i>(can. falsified)</i> Max: “I fetched a straw.”

2.2 Theoretical Lay of the Land & Predictions

3 major accounts of exhaustivity in clefts/focus partitioning:

- i. **Pragmatic** (Horn 1981, 2014, and Wedgwood et al. 2006, Beaver & Onea 2009 for Hungarian)
- ii. **Semantic I: Uniqueness/Maximality Presupposition of DEF**
(Percus 1997, Büring & Križ 2013, and Kenesei 1986, 2006, Szabolcsi 1994 on Hungarian)
- iii. **Semantic II: Not-at issue maximality** (Velleman et al. 2012)

2.2 Theoretical Lay of the Land & Predictions

Pragmatic Account (Horn 1981, 2014):

- i. Clefts trigger an existence presupposition: $\exists z[BG(z)]$
- ii. Use of the structurally marked cleft *It is a that BGs* with existence presupposition $\exists z[[[BG]](z)]$ and canonical meaning $[[BG]] ([[a]])$ triggers EXH-inference as generalized conversational implicature:

$$\forall x [x \neq [[a]]] \rightarrow \neg [[BG]](x)$$

BUT: Pragmatic reasoning unclear, idiosyncratic structure-specific interpretive principle!

2.2 Theoretical Lay of the Land & Predictions

Semantic Account I (Percus 1997, Kenesei 1986, 2006, Szabolcsi 1994):

Clefts syntactically derived from definite pseudoclefts:

(15) The one/s who mixed a cocktail is Max \Rightarrow

It is Max that mixed a cocktail.

(16) a. $\lambda z. [z \text{ mixed a cocktail}] = \text{Max};$

b. defined iff there is a maximal z , such that z mixed a cocktail.

\Rightarrow EXH-inference derived from identificational semantics plus maximality presupposition

2.2 Theoretical Lay of the Land & Predictions

Semantic Account II (Velleman et al 2012):

Clefts form the semantic counterpart of exclusive operators with MIN- and MAX-component exchanged

(17) It is BILL that mixed a cocktail.

- i. at-issue: $\lambda s_0. \text{MIN}(\lambda s. \text{BILL}_F \text{ mixed a cocktail in } s)$
- ii. not at-issue: $\lambda s_0. \text{MAX}(\lambda s. \text{BILL}_F \text{ mixed a cocktail in } s)$

⇒ **Clefts are focus-sensitive and anaphoric** in making direct reference to the current question, for which they provide a maximally informative answer (due to the workings of MAX)

2.2 Theoretical Lay of the Land & Predictions

Predictions on semantic behavior:

	<i>+/- parallel</i>	<i>+/- strength</i>
(A) <i>pragmatic</i>	–	–
(B) <i>semantic definite</i>	+	+
(C) <i>semantic IT-construction</i>	+/-	+

Table 1 Predictions of three theoretical approaches to cleft exhaustivity

⇒ **Our experiments:**

+

-

Findings not compatible with any existing theoretical account!

2.3 Procedure

- **32 speakers** for verification and falsification each
- Introduction (four roommates) + **3 practice trials**
- **Auditive stimuli:** 32 targets (8 lexicalizations per sentence type) plus 32 fillers
- Targets distributed over four lists in Latin Square design
- Target subjects: proper names; objects: unspecific NPs
- **Participants uncover pictures** until they give judgment
- **2000ms time delay** until next picture can be uncovered
- Participants were free to choose which picture to uncover, but experiment is programmed such that picture content always shows in the same order (no matter which boxes are uncovered)

2.4 Analysis

- **4x2 Factorial design** (sentence type x [+/- EXH] OR [+/- CAN])
- **Two dependent measures:**
 - EARLY RESPONSE (BOX2): Continue, Truth judgment
 - LATE RESPONSE (BOX3,4): Truth judgment (used as sanity check: OK)
- **Statistical analysis:** Generalized linear mixed effects model for binomial data to test statistically the likelihood of participants making a ('true', Exp.1) or ('false', Exp.2) judgment. At Box2.

3 Results German

3.1 Predictions

3.2 Results Verification and Falsification: Total

3.3 Results Verification and Falsification: Sub-Groups

3.4 Analysis

3.1 Predictions of different theoretical accounts for exps.

<u>Theory</u>	<u>Exp. I (Verifier): Early Response</u>		<u>Exp. II (Falsifier): Early Response</u>	
	<u>Clefts</u>	<u>Def. Pseudoclefts</u>	<u>Clefts</u>	<u>Def. Pseudoclefts</u>
(A) <i>pragmatic</i>	true	continue (probably)	continue	false (probably)
(B) <i>sem. def.</i>	continue	continue	false	false
(C) <i>sem. IT</i>	true (potentially)	continue (probably)	false	false (probably)

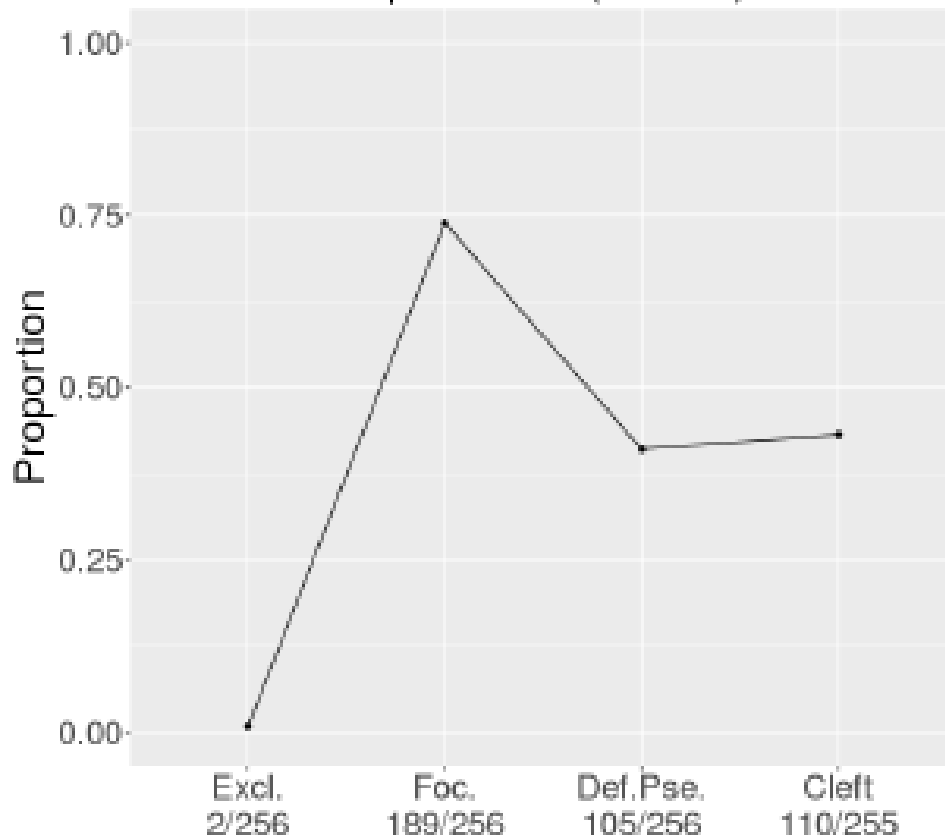
3.1 Conditions

- (18) a. Es ist MAX, der einen Cocktail gemischt hat. Cleft
,It is MAX that mixed a cocktail.'
- b. Derjenige, der einen Cocktail gemischt hat, ist MAX. def.Pseudo
,The one that mixed a cocktail is MAX.'
- c. Nur MAX hat einen Cocktail gemischt. EXCL
,Only MAX mixed a cocktail.'
- d. MAX hat einen Cocktail gemischt. FOC
,MAX mixed a cocktail.'

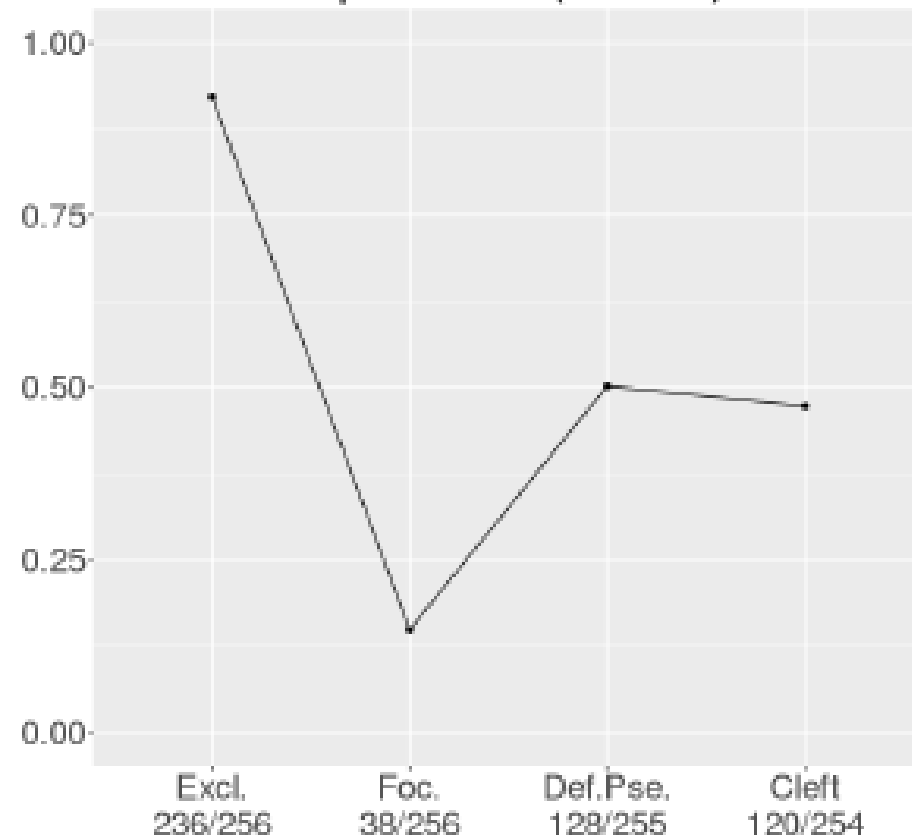
3.2 Results: Total

Early Response

Experiment I (Verifier)



Experiment II (Falsifier)



3.2 Results: Total

i. **Verifying AND Falsifying:**

No significant difference between cleft and def. pseudocleft

ii. **Verifying:** EXCL significantly more likely to elicit ,continues‘ and FOC significantly more likely to elicit ,true judgments‘

iii. **Falsifying:** EXCL significantly more likely to elicit ,false judgments‘ and FOC significantly more likely to elicit ,continues‘

⇒ None of the three theories can account for cleft-pseudocleft parallelism and midway exhaustivity!

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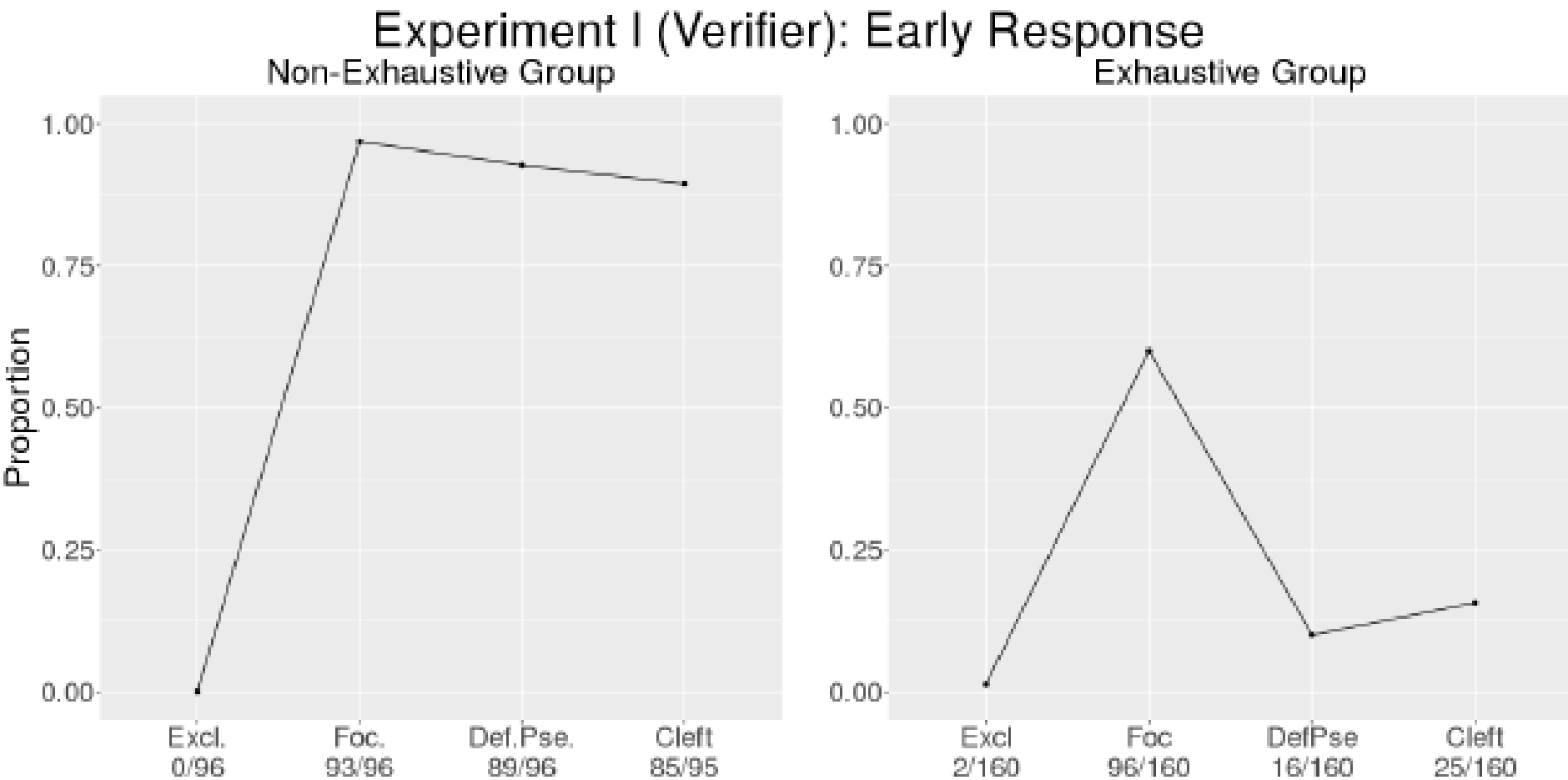
ii. **Verifying:** EXCL significantly more likely to elicit ‚continues‘ and FOC significantly more likely to elicit ‚true judgments‘

iii. **Falsifying:** EXCL significantly more likely to elicit ‚false judgments‘ and FOC significantly more likely to elicit ‚continues‘

⇒ None of the three theories can account for cleft-pseudocleft parallelism and midway exhaustivity!

Q: How does this midway-exhaustivity come about?

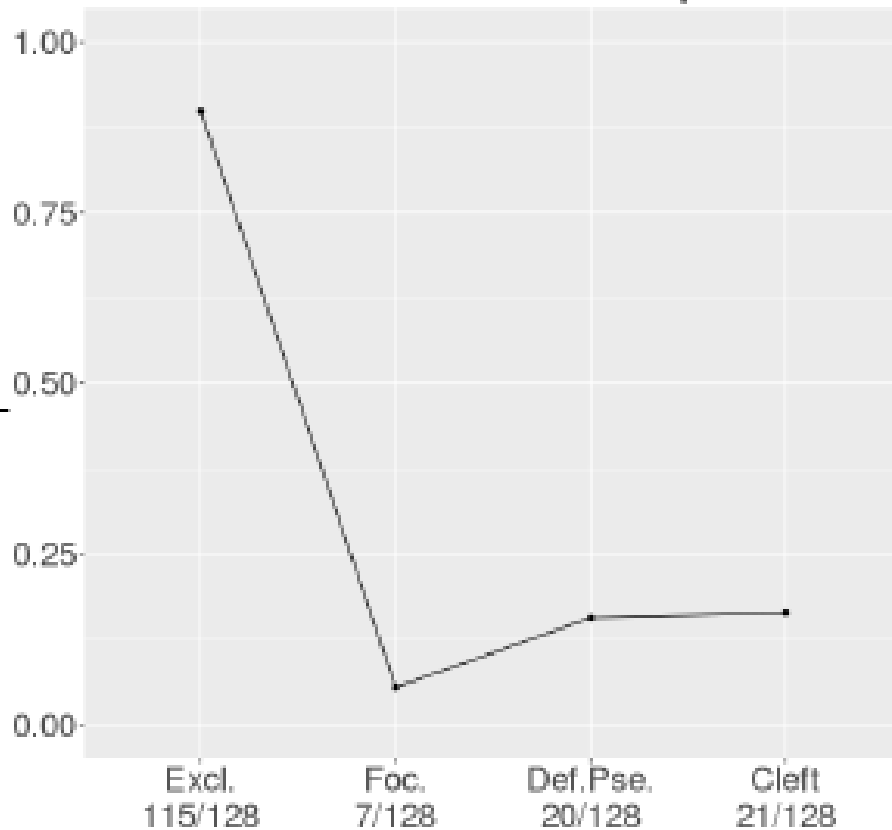
3.3 Post-hoc analysis: Subgroups



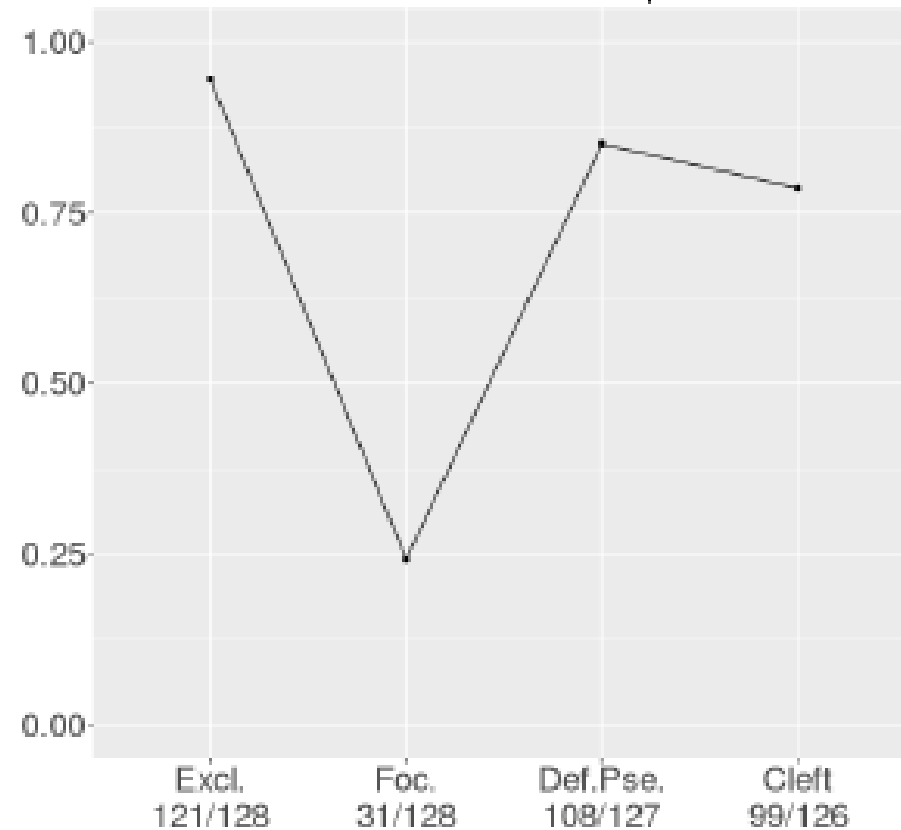
3.3 Post-hoc analysis: Subgroups

Experiment II (Falsifier): Early Response

Non-Exhaustive Group



Exhaustive Group



3.3 Post-hoc analysis: Subgroups

EXH-group: (Clefts = Def.Pseudoclefts) \approx EXCL

Non-EXH-group: (Clefts = Def.Pseudoclefts) \approx FOC

⇒ One group shows expected behavior on pragmatic analyses of EXH, the other shows expected behaviour on semantic analyses.

Q: How come?

3.3 Post-hoc analysis: Subgroups

EXH-group: (Clefts = Def.Pseudoclefts) \approx EXCL

Non-EXH-group: (Clefts = Def.Pseudoclefts) \approx FOC

\Rightarrow One group shows expected behavior on pragmatic analyses of EXH, the other shows expected behaviour on semantic analyses.

Q: How come?

\Rightarrow **Anaphoric nature of clefts and definite pseudoclefts!**

3.4 Analysis:

Pollard & Yavasul (in press) on *it*-clefts:

Optional EXH-inferences follow from discourse -anaphorictiy of clefts:

- (19) It's Carla that danced.
- i. Cleft presupposes: $\exists x [\text{[[BG]]}(x)]$ (i.e. some invididual danced)
 - ii. Normally, this presupposition is satisfied by a suitable **discourse antecedent** in the preceding context.
 - iii. Without context, there are different ways for **accomodating suitable discourse antecedent**:
maximal/definite antecedent vs indefinite antecedent

3.4 Analysis:

Accommodating discourse antecedents:

Option I: Antecedent maximal (DEF) ⇒ EXH

- (20) a. There's a **maximal individual z** that danced. **It's Carla** that danced.
b. QUD: Who's z? / Who's the maximal z that danced?
(Roberts 1996/2014, Beaver & Clark 2008)

Option II: Antecedent not maximal (INDEF) ⇒ non-EXH

- (21) a. **Somebody** danced. **It's Carla** that danced
b. QUD: Who danced?

3.4 Analysis:

Accommodating discourse antecedents:

Option I: Antecedent maximal (DEF) \Rightarrow EXH

- (20) a. There's a **maximal individual z** that danced. **It's Carla** that danced.
b. QUD: Who's z? / Who's the maximal z that danced?

\Rightarrow $\iota z.[\text{danced}'(z)] = \text{carla}$ (EXH)

Option II: Antecedent not maximal (INDEF) \Rightarrow non-EXH

- (21) a. **Somebody** danced. **It's Carla** that danced

b. QUD: Who danced? $\Rightarrow f_{\text{CH}}(\text{danced}') = \text{carla}$ (non-EXH)

3.4 Analysis:

Accommodating discourse antecedents:

$\lambda x.[danced'(x)]$ and $f_{CH}(danced')$ stand for two possible discourse antecedents, which may be modelled as possible value assignments to the cleft pronoun *it* (see Reeves (2012) on *it* as a referential pronoun)

The two different **discourse-based** resolutions of cleft-anaphoricity result in EXH- and non-EXH-reading, respectively.

Q: Are there more ways for constructing suitable antecedents/ QUDs?

3.4 Analysis: Summary

EXH or non-EXH interpretation of German clefts follows from anaphoric nature (\exists -presupposition) of clefts together with different strategies for accomodating suitable antecedents:

definite/maximal antecedent:

EXH

indefinite/non-maximal antecedent:

non-EXH

3.4 Analysis: Summary

EXH or non-EXH interpretation of German clefts follows from anaphoric nature (\exists -presupposition) of clefts together with different strategies for accomodating suitable antecedents:

definite/maximal antecedent: EXH

indefinite/non-maximal antecedent: non-EXH

⇒ **EXH-inference in clefts is pragmatic inference** (Horn 1981), but has nothing to do with exhaustification of alternatives, or scalar implicatures computed over Focus Alternatives, pace DeVeugh-Geiss et al. (2015)

3.4 Analysis:

Extending Analysis to Definite Pseudoclefts:

Analysis carries over to definite pseudoclefts built around the morphologically complex determiner *der/die/das-jen-ige* ,the-ANAP-adj'

(22) **Diejenige**, die getanzt hat war Carla. (‘The one that danced was Carla.’)

Such DPs are **familiarity definites** (Schwarz 2009): they refer to the unique/maximal **previously mentioned** individual z with property P

(23) $[[\text{der/die/das-jen}_i\text{-ige}]]^g = \lambda P. \iota x. [P(x) \wedge x = g(i)]$

3.4 Analysis:

Extending Analysis to Definite Pseudoclefts:

i. Same as clefts, definite pseudoclefts are illicit out of the blue

(24) #Hör mal! **Derjenige**, den ich gestern gesehen habe, war der Präsident!
‚Listen up! The one I saw yesterday was the president!‘

(25) Hör mal! Ich habe gestern den Präsidenten gesehen!
‚Listen up! I saw the president yesterday!‘

3.4 Analysis:

Extending Analysis to Definite Pseudoclefts:

- ii. Same as clefts, definite pseudoclefts can anaphorically relate to maximal or indefinite (non-maximal) discourse antecedents: EXH or non-EXH

- (26) a. Exactly/Only one person danced (MAX).
Diejenige, die getanzt hat, war Carla. OK
,The one that danced was Carla.'
- b. Somebody danced (INDEF).
Diejenige, die getanzt hat, war Carla. OK
,The one that danced was Carla.'

4 Cross-linguistic Comparison:

4.1 English

4.2 Russian

4.3 French (with E. Destruel)

4.4 Hungarian (with L. Pinter)

Prediction: If anaphoricity is cross-linguistically stable characteristic of focus-background partitioning, we expect parallel findings for EXH-inferences across languages

4 Cross-linguistic Comparison:

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4.4 Hungarian (with L. Pinter)

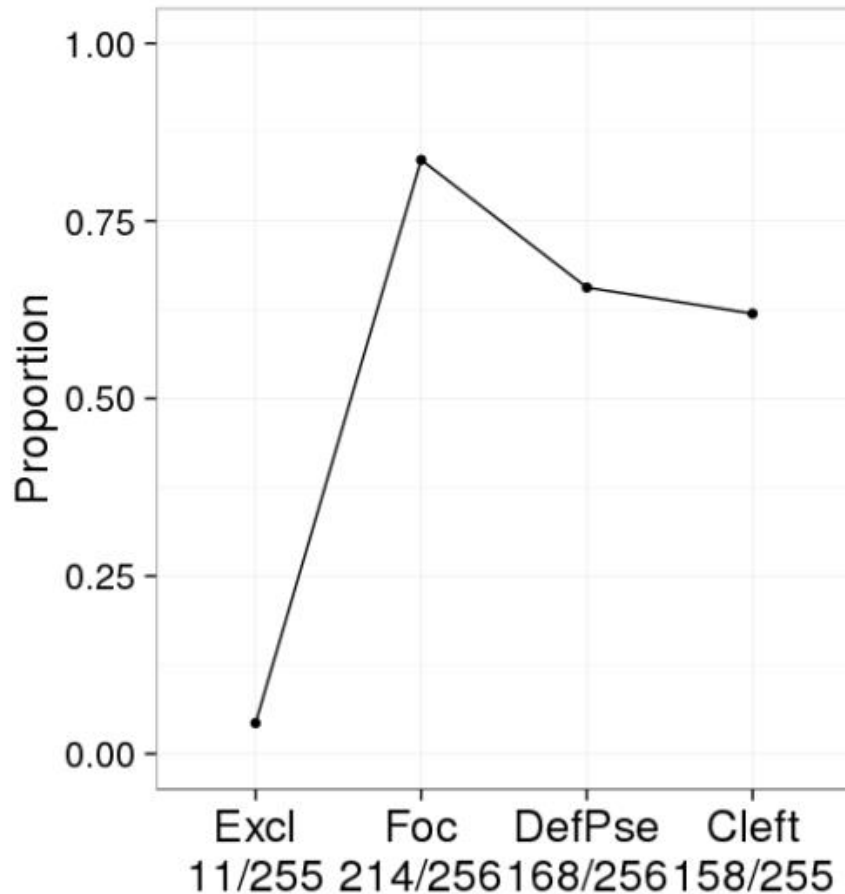
Prediction: If anaphoricity is cross-linguistically stable characteristic of focus-background partitioning, we expect parallel findings for EXH-inferences across languages

Findings: By and large parallel results for E., R., Fr., but somewhat different behaviour in Hungarian

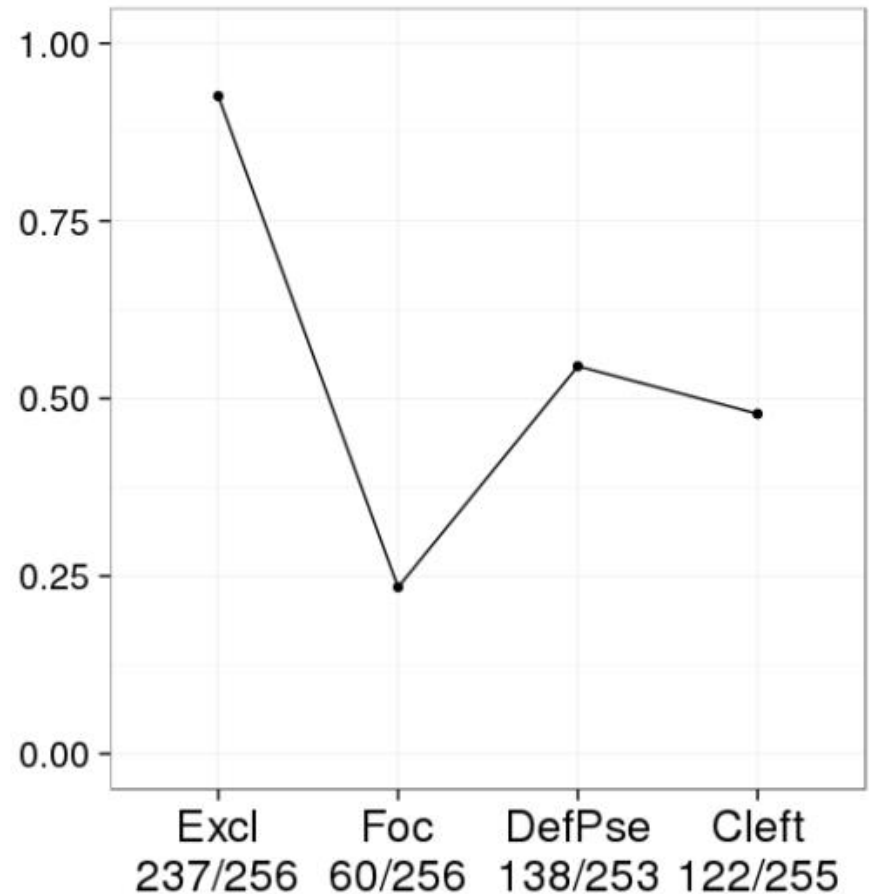
4.1 English: Total

Early Judgments

Experiment I



Experiment II



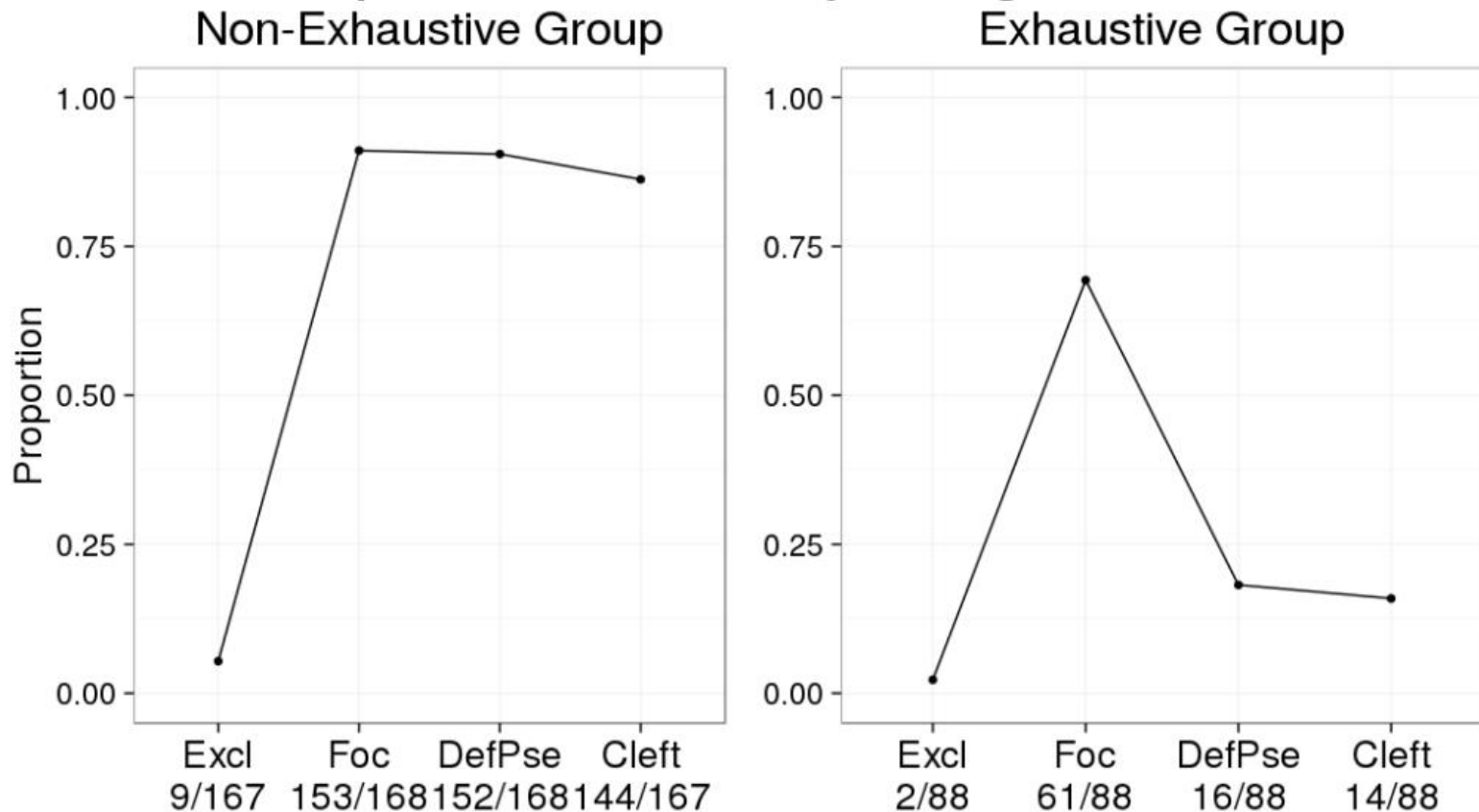
4.1 English (\approx German)

- i. **Verifying AND Falsifying:** cleft \approx def. Pseudocleft
- ii. **Verifying:** EXCL significantly more likely to elicit ‚continues‘ and FOC significantly more likely to elicit ‚true judgments‘
 \Rightarrow cleft/def.Pseudocleft somewhat less exhaustive than German
- iii. **Falsifying:** EXCL significantly more likely to elicit ‚false judgments‘ and FOC significantly more likely to elicit ‚continues‘

+ two participant groups: EXH vs non-EXH
|non-EXH| > |EXH| in Verifying!

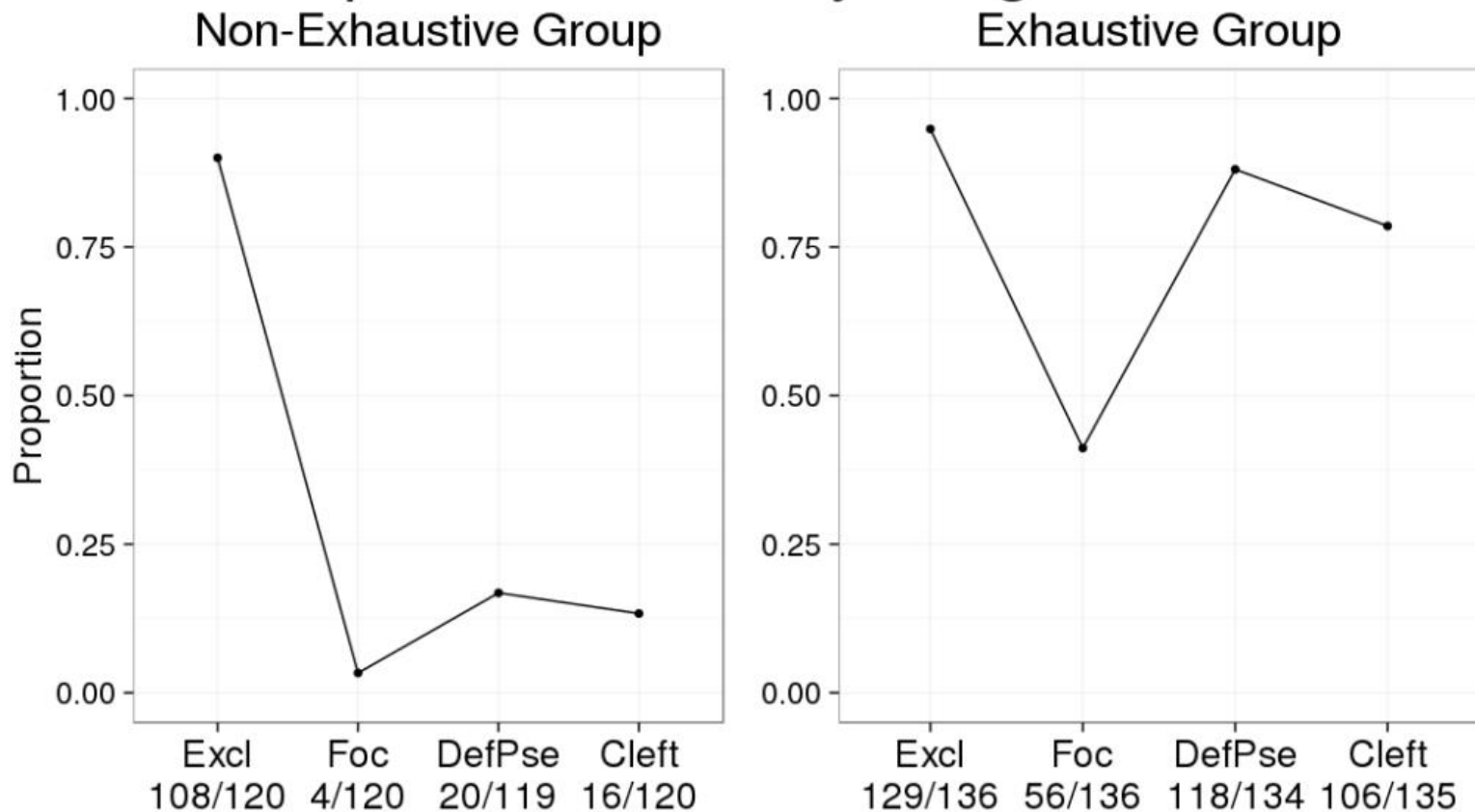
4.1 English: Split

Experiment I: Early Judgments



4.1 English: Split

Experiment II: Early Judgments

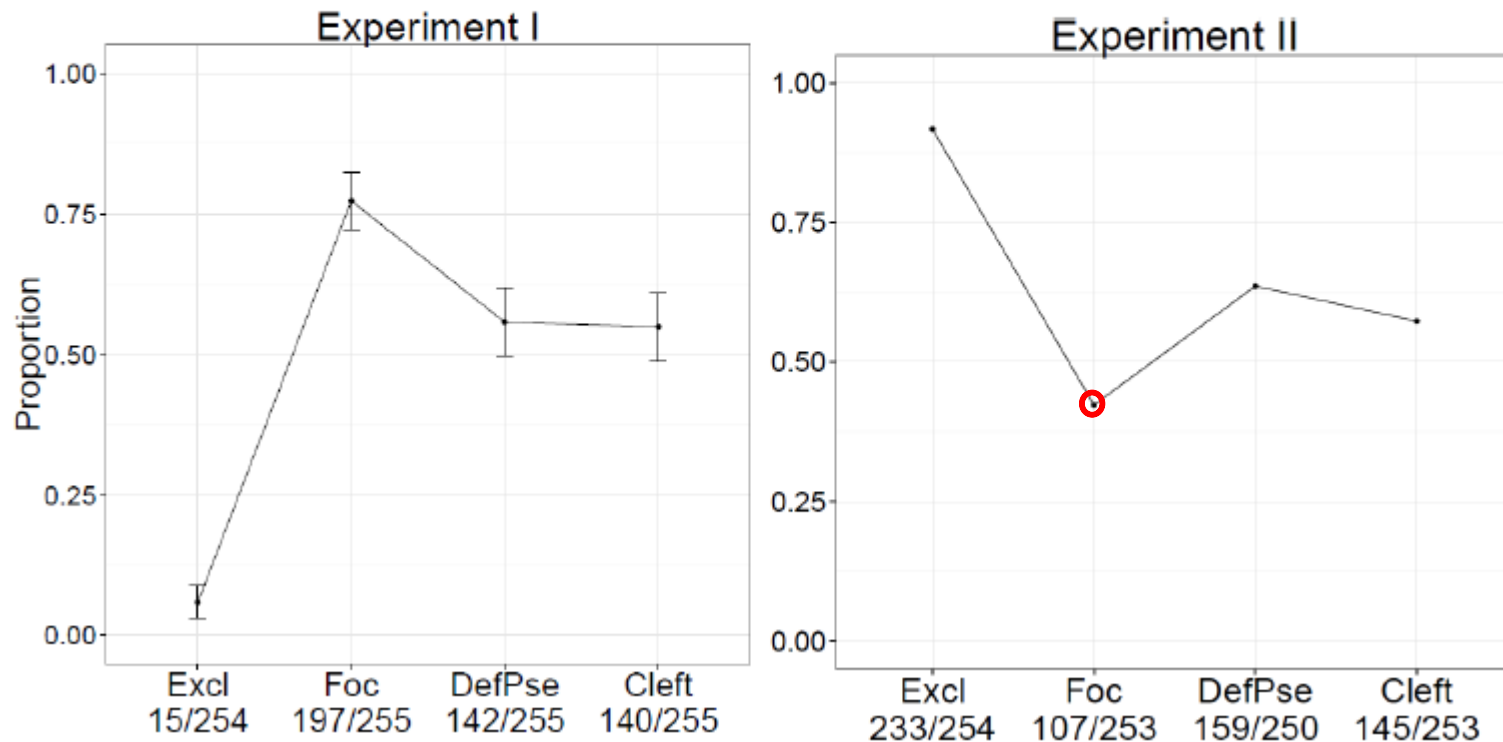


4.2 Russian (Shipova, in prep.)

- (27) a. Èto SASHA razbil okno. Cleft
DEM Sasha broke window
- b. Tem, kto razbil okno, byl SASHA. Def.Pseudocleft
that who broke window was Sasha
- c. Tol'ko SASHA razbil okno. EXCL
only Sasha broke window
- d. SASHA razbil okno. FOC
Sasha broke window

4.2 Russian: Total (Shipova, in prep.)

A1 early judgments: Russian

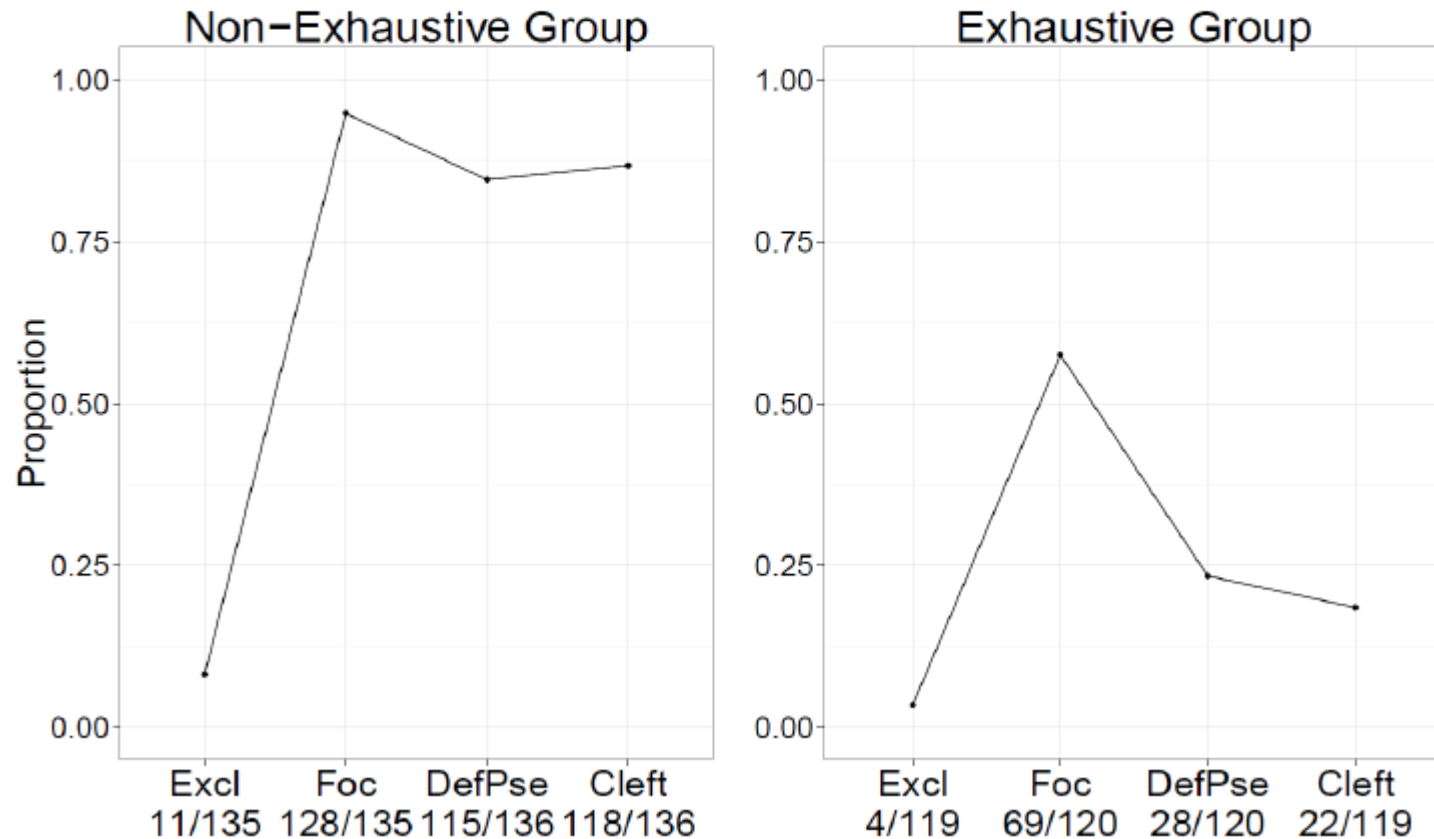


4.2 Russian (\approx German, English)

- i. **Verifying AND Falsifying:** cleft \approx def. pseudocleft
 - ii. **Verifying:** EXCL significantly more likely to elicit ,continues‘ and FOC significantly more likely to elicit ,true judgments‘
 - iii. **Falsifying:** EXCL significantly more likely to elicit ,false judgments‘ and FOC significantly more likely to elicit ,continues‘
- + two participant groups (EXH & non-EXH)

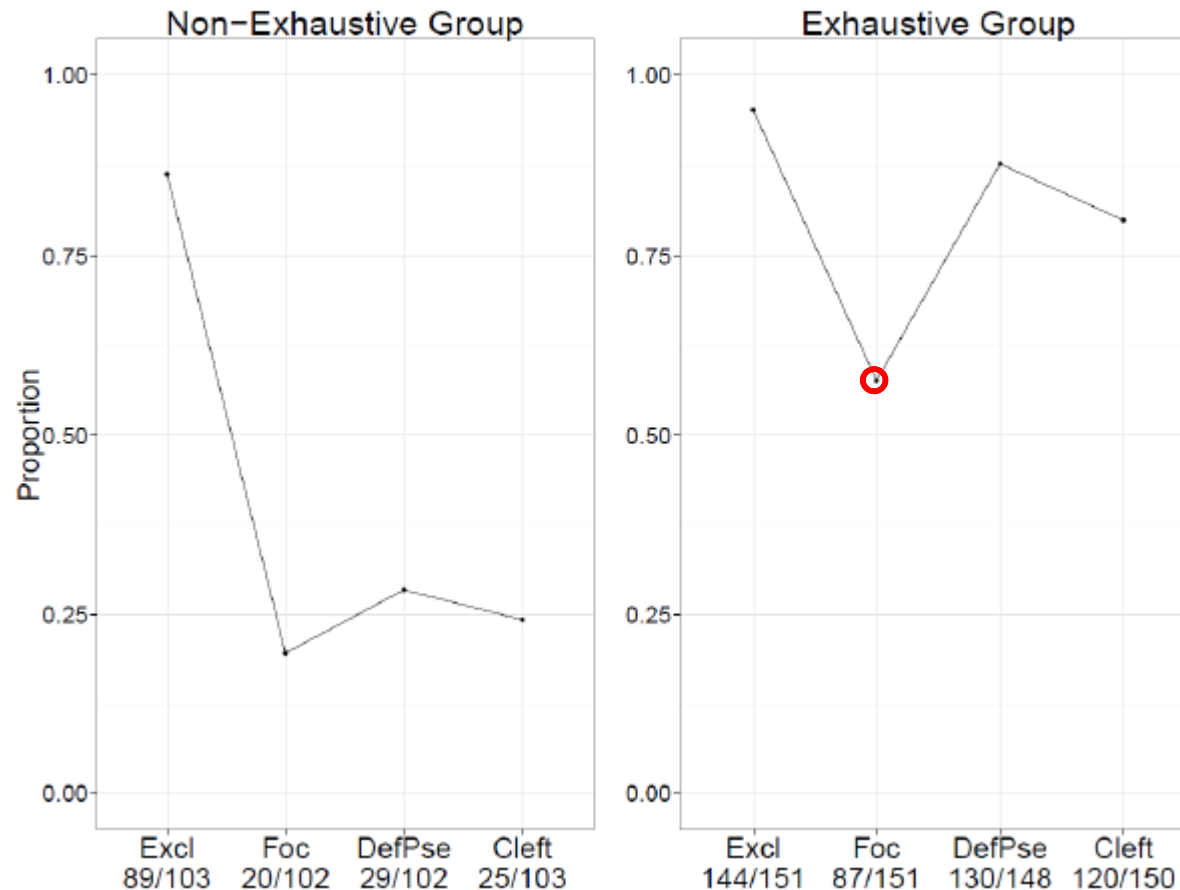
4.2 Russian: Split (Shipova, in prep.)

A1: early judgments



4.2 Russian: Split (Shipova, in prep.)

A2: early judgments

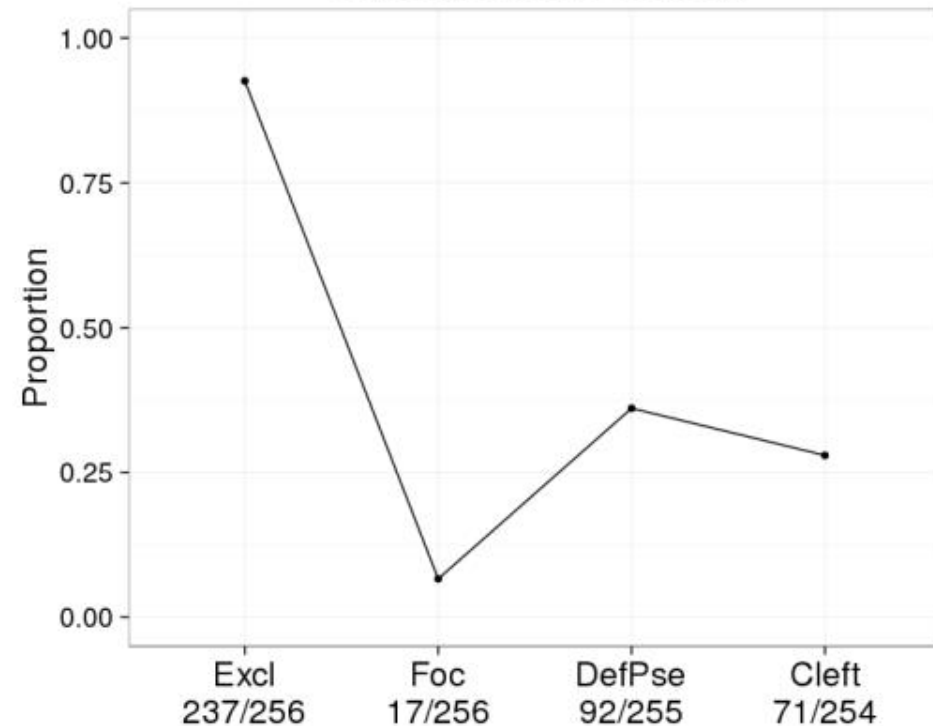


4.3 French (Destruel & DeVeaugh-Geiss, submitted)

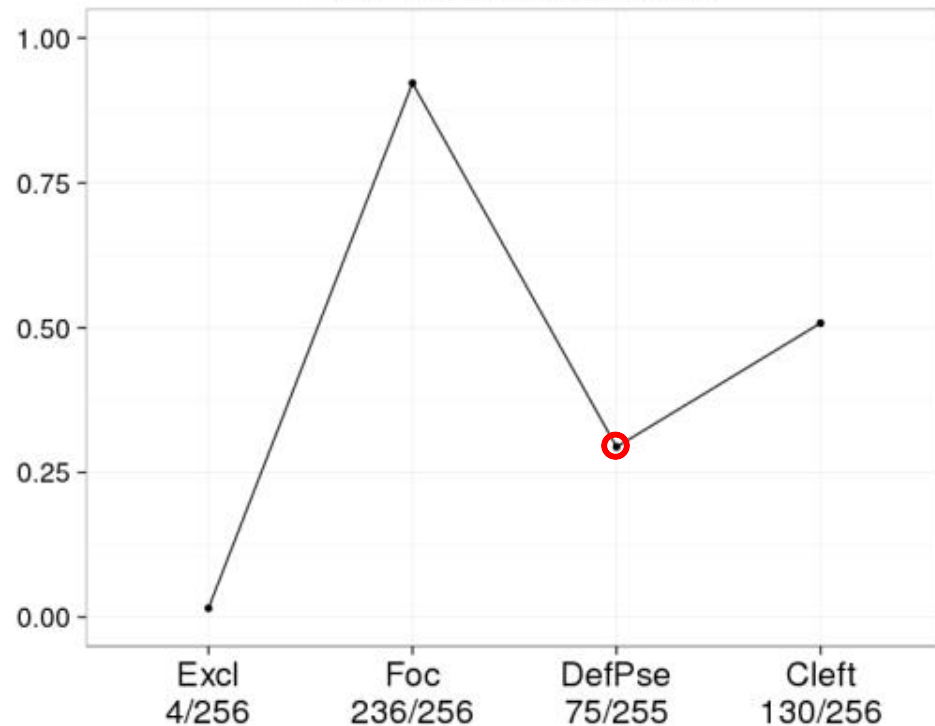
- (28) a. **C'est** MARC qui a préparé un cocktail. (Cleft)
DEM Marc REL has prepared a cocktail
- b. La personne qui a préparé un cocktail est Marc. (DEF. PSE.)
'The person who prepared a cocktail is Marc.'
- c. Seul Marc a préparé un cocktail. (EXCL.)
'Only M. a prepared a cocktail.'
- d. MARC a préparé un cocktail. (FOC.)
'M. prepared a cocktail.'

4.3 French: Total (Destruel & DeVeaugh-Geiss, submitted)

Experiment I (Falsifier)



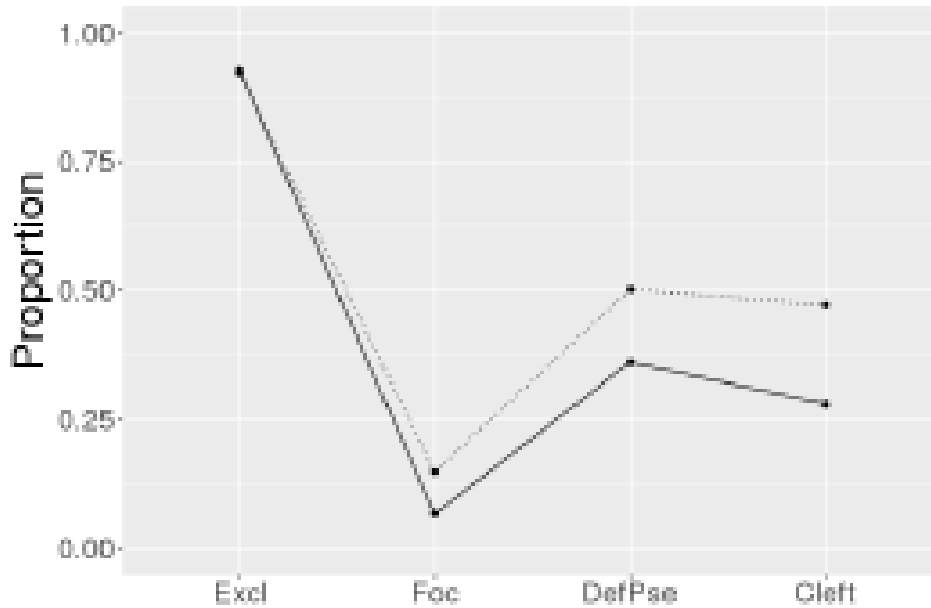
Experiment II (Verifier)



4.3 French (Destruel & DeVeaugh-Geiss, submitted) Comparison French - German

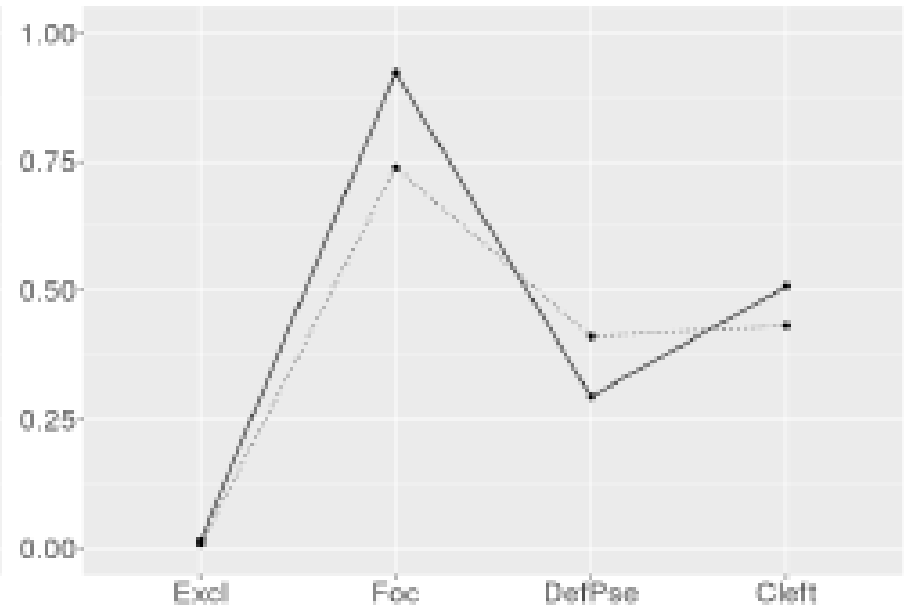
Experiment I (Falsifier)

— German — French



Experiment II (Verifier)

— German — French



Sentence Type

4.3 French (\approx German, English, Russian)

i. Verifying AND Falsifying:

\Rightarrow cleft $<_{\text{EXH}}$ def. Pseudocleft;

\Rightarrow cleft_{French} $<_{\text{EXH}}$ cleft_{German}

- French clefts more frequent: SUBJ_{FOC}-marking
- French clefts in wide focus context: situation referent
- Does head of def. pseudocleft (‘la personne’) introduce bias for accomodating maximal discourse antecedent?

4.3 French (\approx German, English, Russian)

- ii. **Verifying:** EXCL significantly more likely to elicit ,continues‘ and FOC significantly more likely to elicit ,true judgments‘
 - iii. **Falsifying:** EXCL significantly more likely to elicit ,false judgments‘ and FOC significantly more likely to elicit ,continues‘
- + two participant groups (5 non-EXH/22 EXH, 22 non-EXH/10 EXH)

4.3 French (\approx German, English, Russian)

- ii. **Verifying:** EXCL significantly more likely to elicit ,continues‘ and FOC significantly more likely to elicit ,true judgments‘
- iii. **Falsifying:** EXCL significantly more likely to elicit ,false judgments‘ and FOC significantly more likely to elicit ,continues‘

+ two participant groups (5 non-EXH/22 EXH, 22 non-EXH/10 EXH)

REMINDER: Group membership determined on the basis of def.pseudocleft condition!

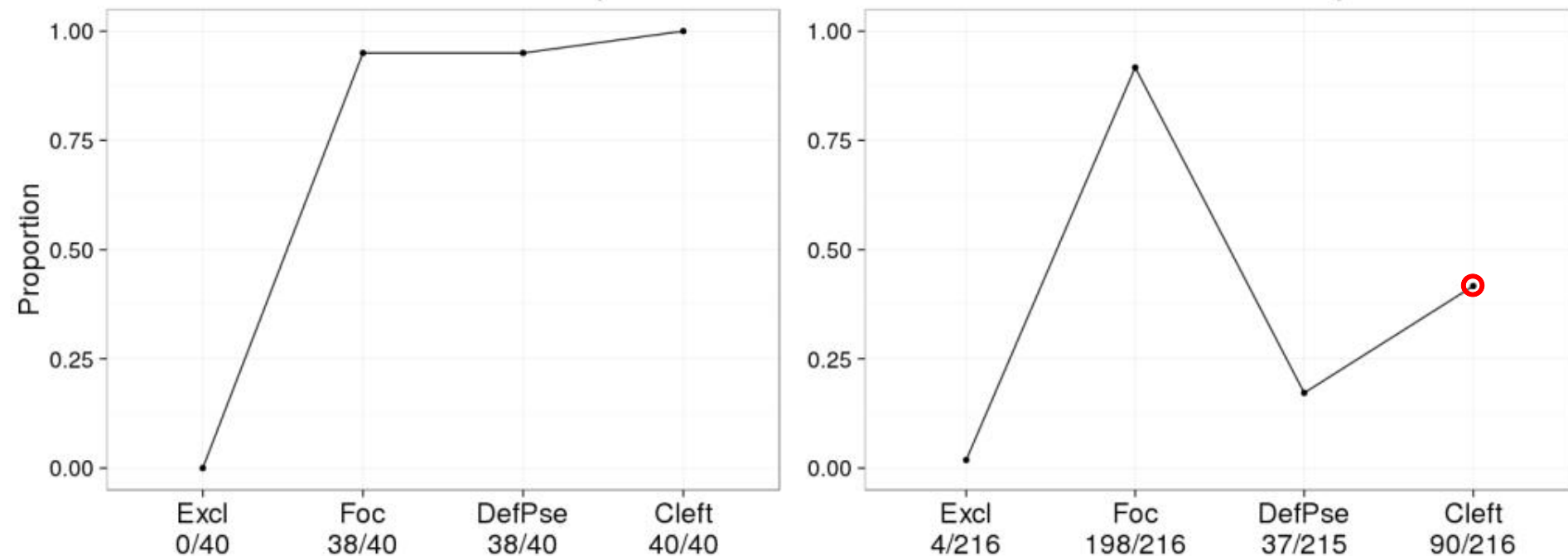
⇒ Even members of EXH group treat clefts as less exhaustive than def. pseudoclefts!

4.3 French: Split (Destruel & DeVeugh-Geiss, submitted)

Experiment II (Verifier): Early Judgments

Non-Exhaustive Group

Exhaustive Group

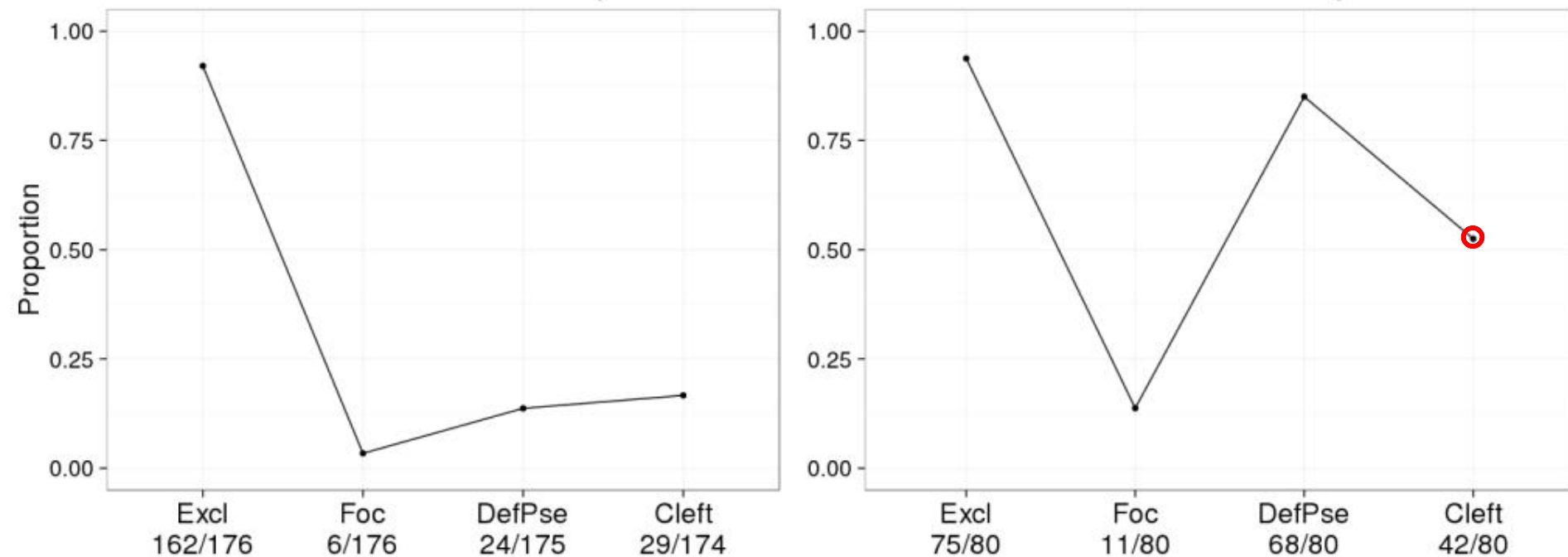


4.3 French: Split (Destruel & DeVeauh-Geiss, submitted)

Experiment I (Falsifier): Early Judgments

Non-Exhaustive Group

Exhaustive Group



4.3 French (Destruel & DeVeaugh-Geiss, submitted)

To do: Repeat study with different pseudocleft structure:

(29) [Ce qui a préparé un cocktail] est MARC

4.4 Hungarian

- (30) a. **Tamás az, aki** felvett egy pulóvert. (Biclausal Cleft)
Tamas that REL on.put a pullover
- b. **Az, aki** felvett egy pulóvert, **az Tamás.** (DefDescription)
that REL on.put a pullover that Tamas
- c. **Csak Tamás** vett fel egy pulóvert. (EXCL)
Only Tamas put on a pullover
- d. **Tamás** vett fel egy pulóvert. (Preverbális fókusz)
Tamas put on a pullover

4.4 Hungarian

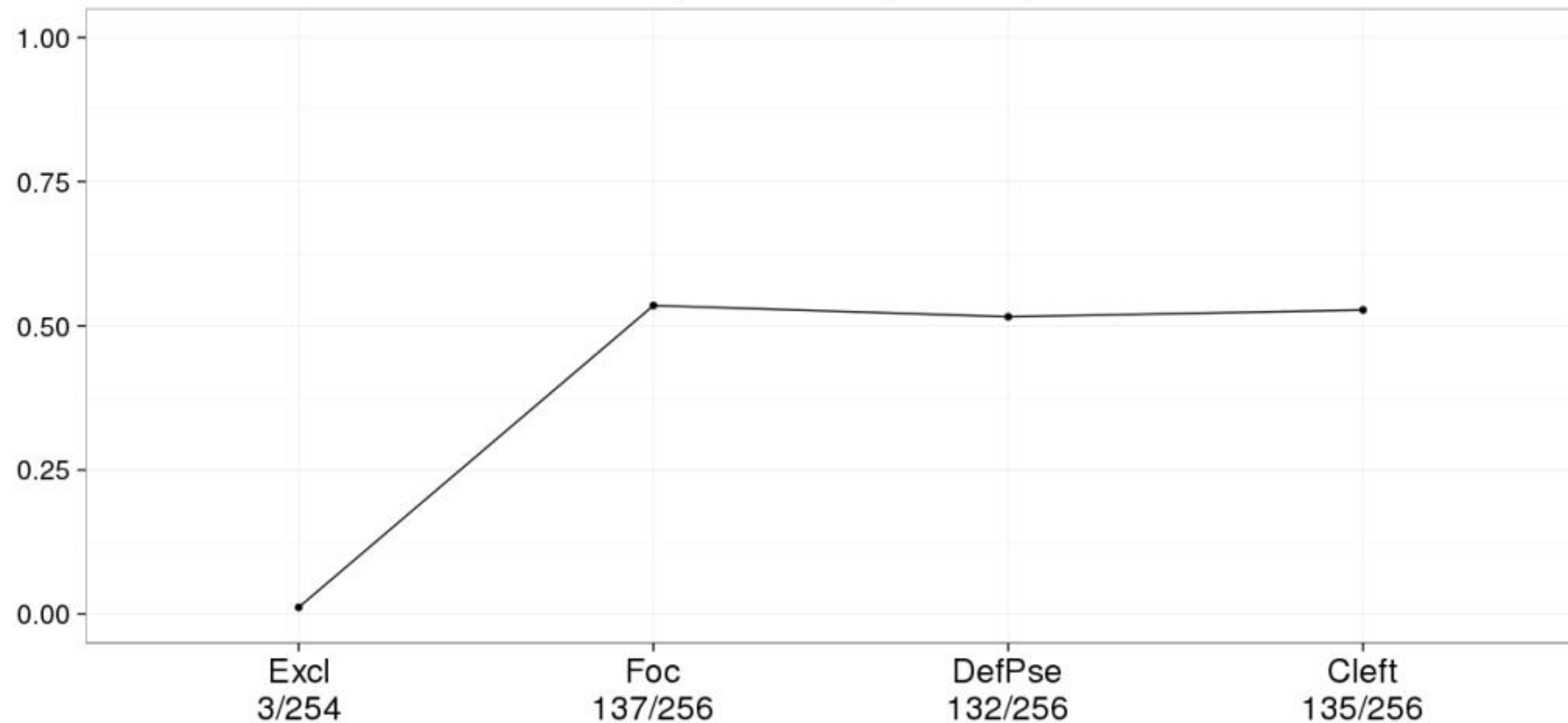
⇒ Preverbal focus is exhaustive to some extent, but not robustly across all participants and experiments, pace Horváth (2010)

⇒ EXH-inference with FOC rather robust in Falsifier experiment!

General problem: No clear non-EXH focus condition!

4.4 Hungarian: Total Verifier

Experiment II (Verifier)

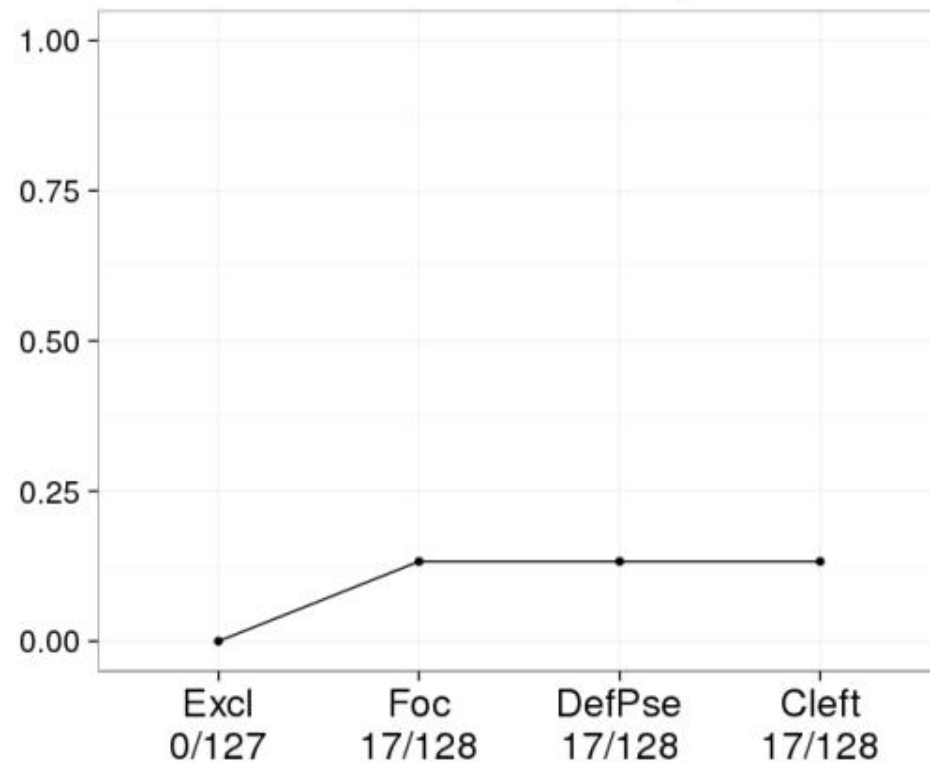
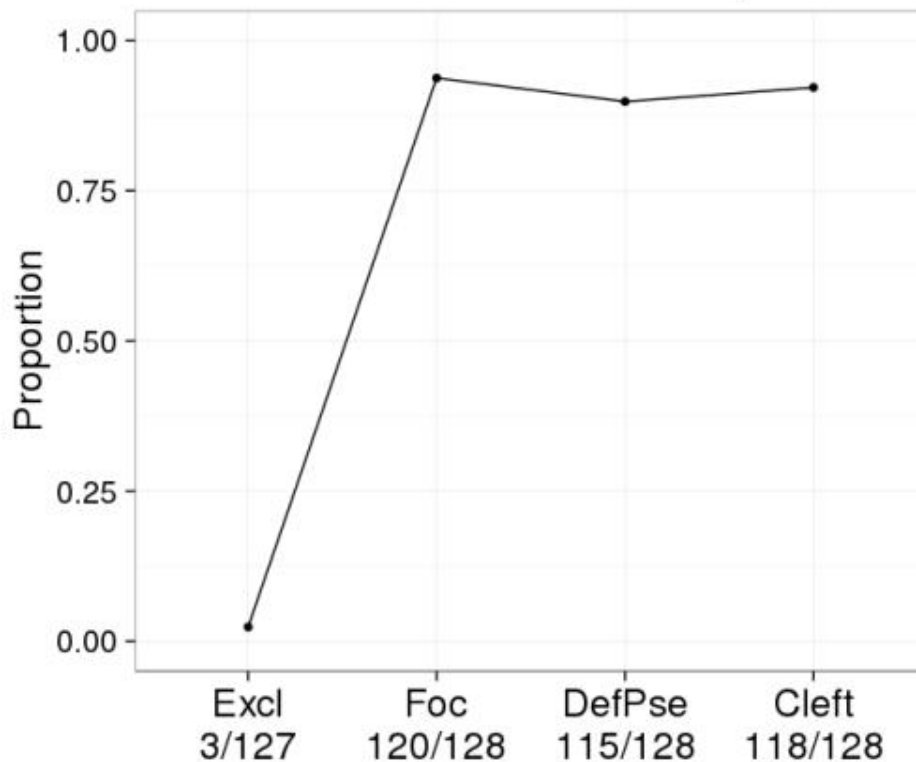


4.4 Hungarian: Split

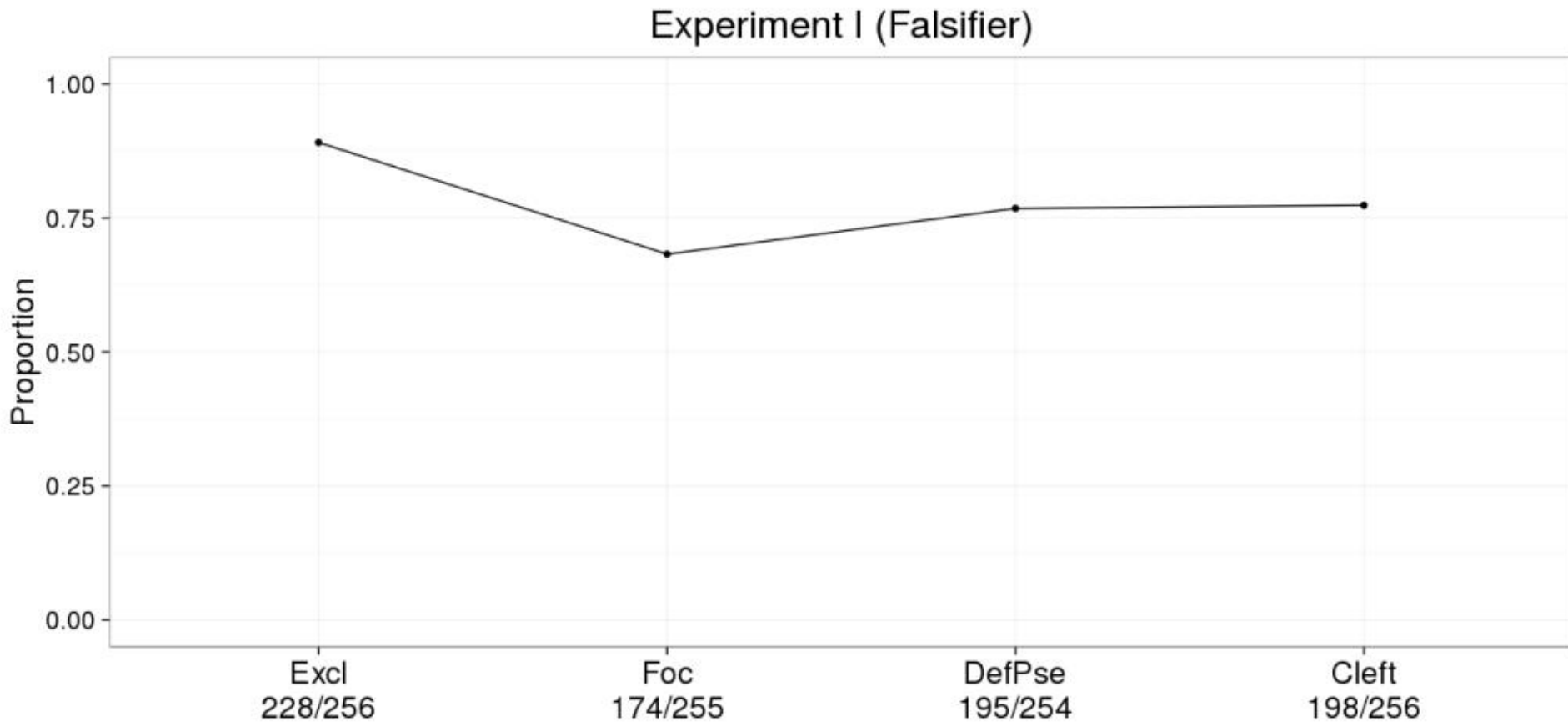
Experiment II (Verifier): Early Judgments

Non-Exhaustive Group

Exhaustive Group



4.4 Hungarian: Total Falsifier

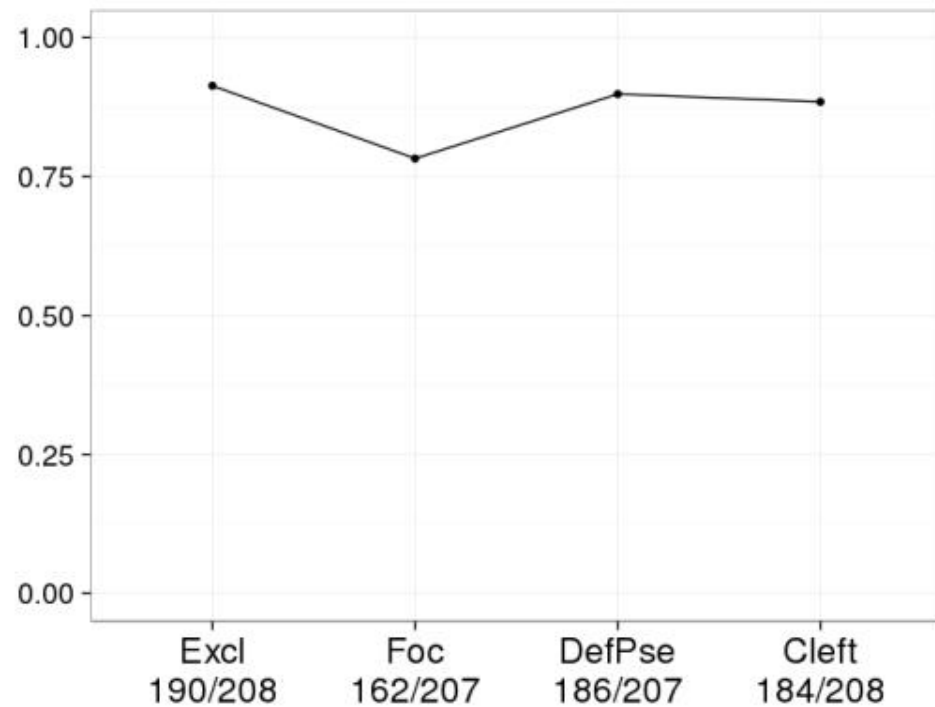
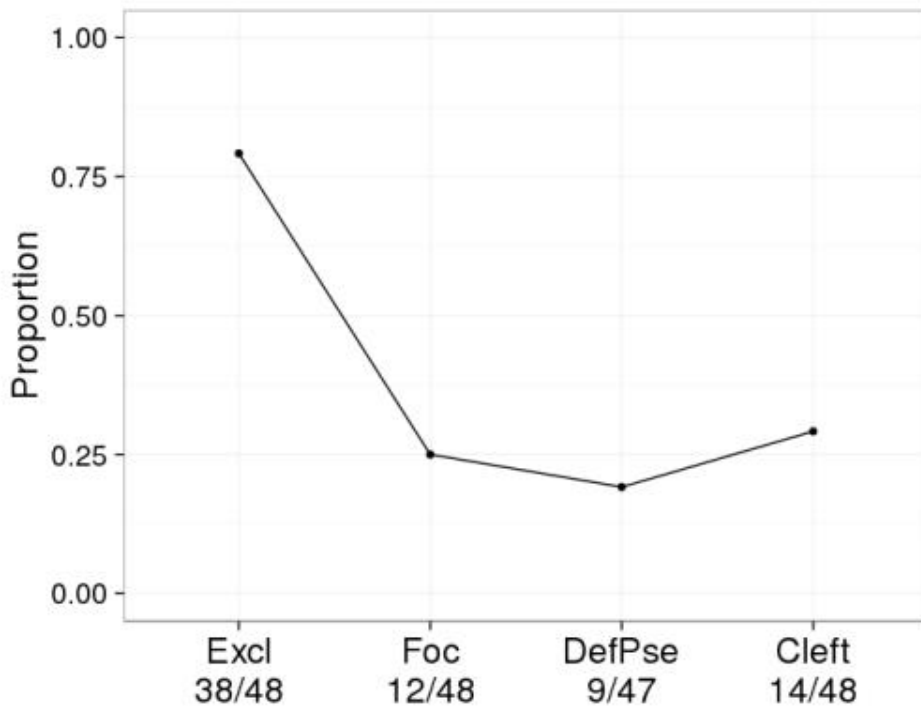


4.4 Hungarian: Split

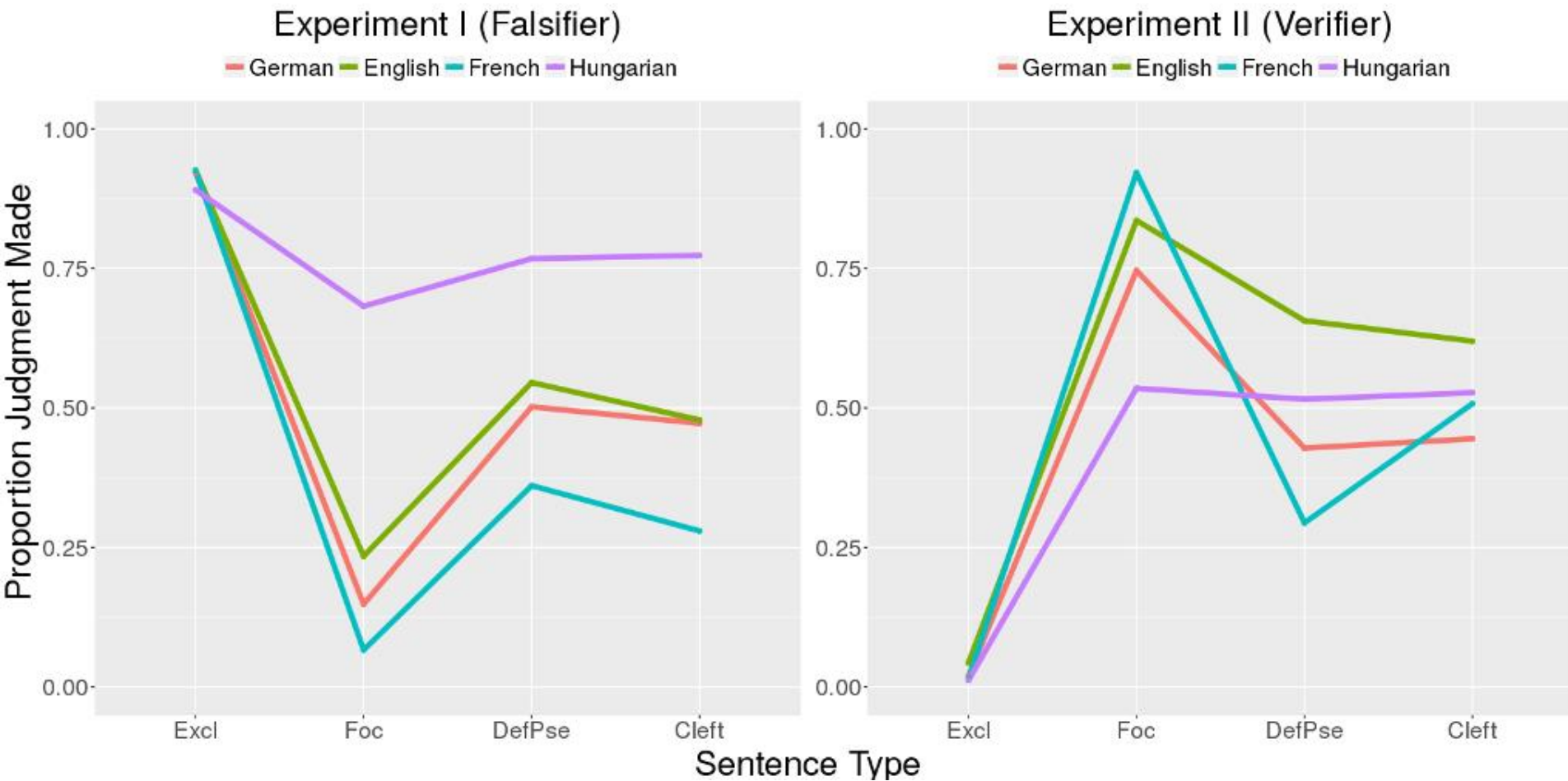
Experiment I (Falsifier): Early Judgments

Non-Exhaustive Group

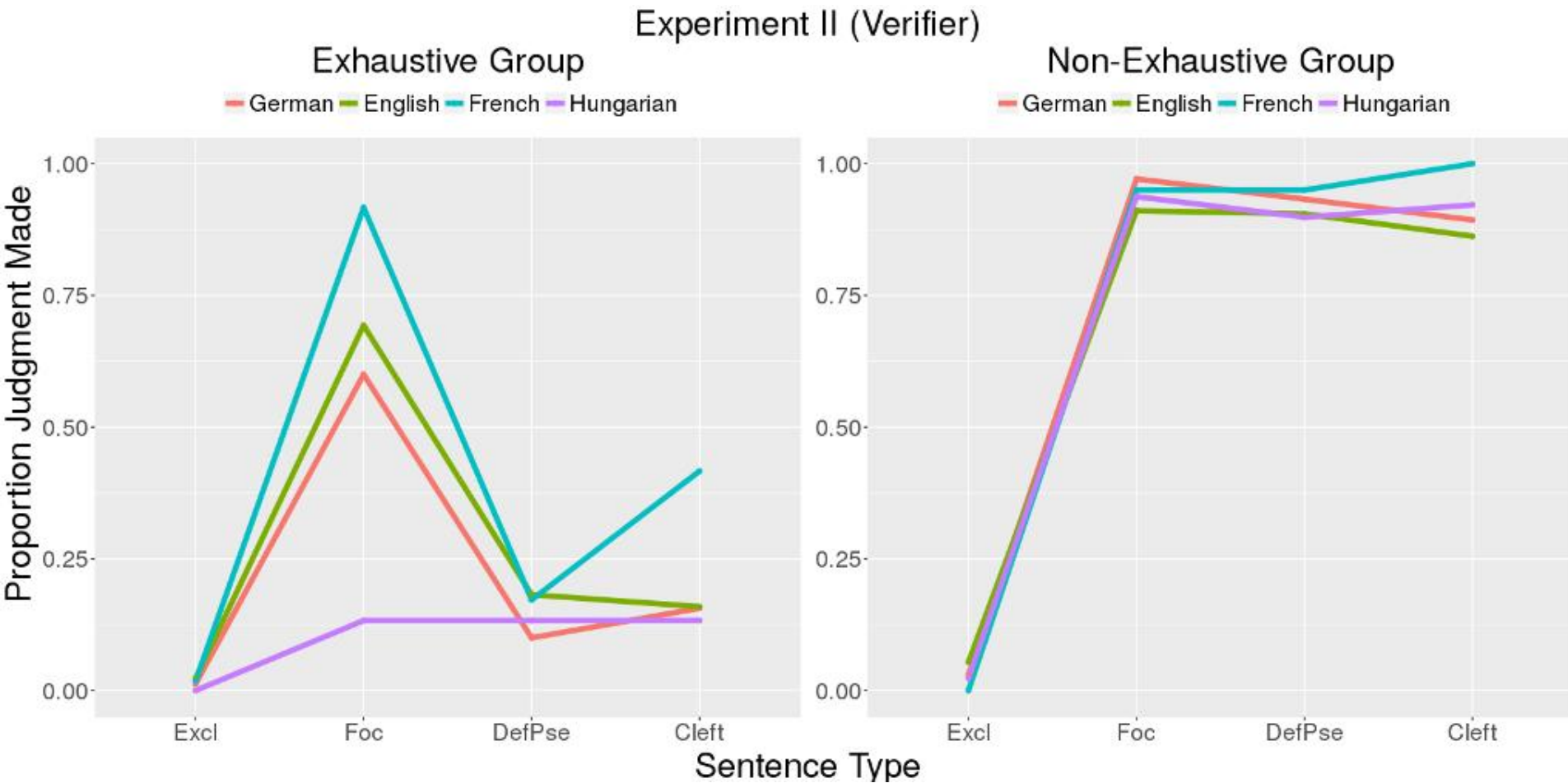
Exhaustive Group



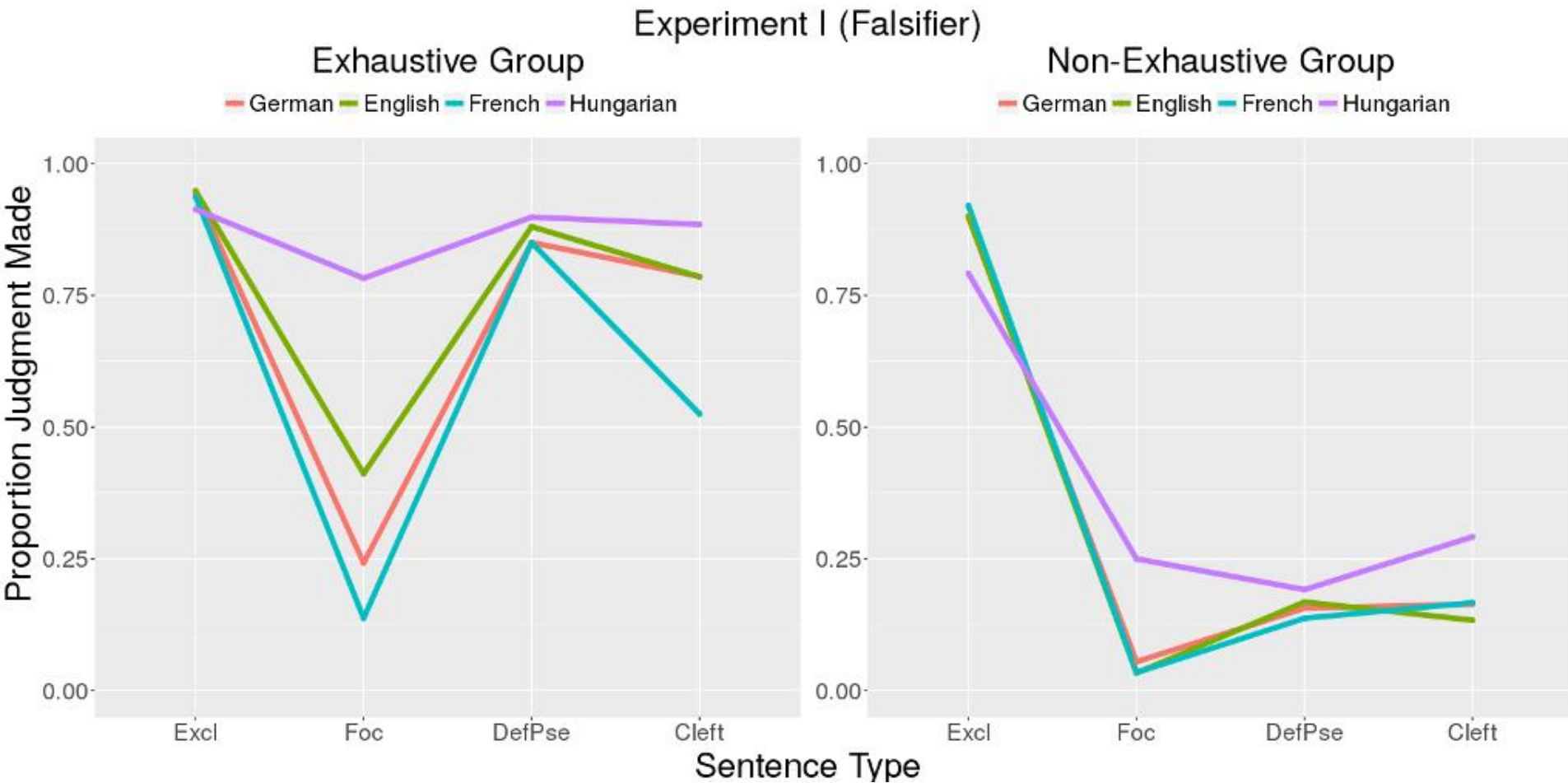
4.4 All languages



4.4 All languages: Split



4.4 All languages: Split



4.4 Hungarian: Summary

- i. Only language in sample with no real mirror results in the two exps.
- ii. Rather robust EXH-inference with focus, clefts, definites in Falsifier:
- iii. Hungarian preverbal focus = Hungarian clefts (as often postulated in cross-linguistic comparison; cf. É.Kiss 1998 on English-Hungarian)
- iv. Hungarian preverbal focus \neq German, English, French, Russian clefts

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- iv. Hungarian preverbal focus \neq German, English, French, Russian clefts

WHY? What's the difference?

4.4 Hungarian: Summary

Potential reasons for diverging behavior of Hungarian focus

- i. Experimental artifact: no clear non-EXH condition
⇒ general bias for EXH?
- ii. Underlying semantics the same (non-EXH), but Hungarian speakers show preference for accommodating maximal discourse antecedents
Hungarian clefts are default answers to wh-questions ⇒
default accommodation of SG question: ki/mi_{SG} vs kik/mik_{PL} ?
- iii. Hungarian focus semantically EXH, but at not-at issue layer:
frequently ignored in verifier task: $|non-EXH| = 16$
rarely ignored in falsifier task: $|non-EXH| = 6$
compatible e.g. with Kenesei (1986, 2006), Szabolcsi (1994), ...

5 Discussion: Anaphoricity vs EXH

- i. Cross-linguistic parallels in interpretation of focus-background partitioning, in spite of morpho-syntactic differences.

follows if:

Focus-background partitioning is a cross-linguistically unified construction type, defined by discourse-semantic factors:

Discourse-semantic function: anaphoricity/ \exists -presupposition
(typically reflected in morpho-syntax; see below)

5 Discussion: Anaphoricity vs EXH

ii. EXH-inferences neither robust nor systematic:

EXH-inference no defining characteristic of focus-background partitions

iii. **Focus-partition structures underspecified for EXH:**

EXH-inference arises when maximal discourse antecedent accommodated

⇒ Formal analysis of cleft semantics not based on [exhaustive]-feature

iv. Empirically, EXH-inference in between exclusives (entailment) and plain focus (conversational implicature), in agreement with most speaker's pre-theoretical intuitions and the divided theoretical landscape.

5 Discussion: Formal marking

There is regular morpho-syntactic marking of anaphoricity/
familiarity in focus-background partitioning,

German, English: Referential pronoun *it* + de-accenting (\Rightarrow givenness;
Schwarzschild 1999)

Russian, French: Demonstrative (familiarity lexically coded: Schwarz
2009, Elbourne 2008)

5 Discussion: Formal marking

There is regular morpho-syntactic marking of anaphoricity/familiarity in focus-background partitioning, possibly even in Hungarian:

Verb movement indicative of backgrounding/familiarity marking (Onea 2007:170, É.Kiss & Pintér 2014, É.Kiss 2015)?

- (31) a. Péter meg-sebesült. A tegnap **sebesült meg** Péter? $e_1=e_2$
 Peter PRT hurt the yesterday hurt PRT Peter
 ,Peter got hurt. Did Peter get hurt YESTERDAY?
- b. Péter meg-sebesült. A tegnap **meg-sebesült** Péter? $e_1 \neq e_2$
 Peter PRT hurt the yesterday PRT hurt Peter
 ,Peter got hurt. Did Peter get hurt YESTERDAY (too)?

5 Discussion: The bigger picture

Too strong a focus on focus in theoretical literature, often ignoring backgrounding effect, with notable exception of Delin (1992)

(32) [FOC] [BG]

⇒ Results are in line with traditional insights from functional grammar (Sgall et al. 1986) and functionalist-cognitive approaches (Erteshik-Shir 1997):

Background: anaphoric, coherence, **backward-looking**

Focus: at-issue, **forward-looking**

5 Discussion: The bigger picture

Too strong a focus on focus in theoretical literature, often ignoring backgrounding effect, with notable exception of Delin (1992)

(32) [FOC] [BG]

⇒ Results also agree with recent formal approaches acknowledging the importance of background: É. Kiss (2015), É.Kiss & Pintér (2014:5):

„ In fact, the main motivation for the formation of a focus construction can be the need of indicating that the background is presupposed”

see also Büring (2015) on *Unalternative Semantics*,

and the discussion of independent FOCUS and BACKGROUND marking in African languages (Grubic 2015, Güldemann 2016):

5 Discussion: The bigger picture

Focus AND Background-Marking (Güldemann 2016, Zimmermann 2015)

- (33) a. (Aali) **ko hannde** (Aali) sood-**i** pucc-u ngu [Fulani]
Ali FOC today Ali buy- DEP-PST horse-10 DEF.10
'(As for) Ali (he) has bought the horse TODAY.' (Sylla 1993: 110)
- b. **Kiifii (nèe)** Kànde ta-**kèe** dafàa-waa [Hausa]
fish PRT Kande 3SG.F-IPFV.REL cooking
'It is fish that Kande is cooking.' (Hartmann & Zimmermann 2007)

5 Discussion: The bigger picture

Languages exhibit different strategies for expressing FOCUS-BACKGROUND partitioning (Zimmermann 2015):

(32)		[FOC]	[BG]	
	focus-only:	X		(e.g. morphol. focus marking)
	focus-background	X	X	(clefts, syntactic focus)
	background-only		X	(morpholo. BG marking)

5 Discussion: The bigger picture

Background-only marking in Ngamo (Grubic 2015, Schuh 2005):

- (33) Kule sal-ko-**i/ye** bano a Potiskum
Kule build-PFV-**BG** house at Potiskum
'Kule built A HOUSE in Potisum.'

⇒ No marking of focus *bano* in terms of prosodic or structural prominence, or alignment!

6 Conclusion

It is the **BACKGROUND** that matters for semantic interpretation of focus-background partitioning

Focus-background partitions are anaphoric devices and trigger existence presupposition!

EXH-inferences may arise depending on how this existence presupposition is resolved!

KÖSZÖNÖM!

to former and present members of XPRAG.project *Exhaustivity in clefts*: Anna Christina Boell, Joseph DeVeaugh-Geiss, Edgar Onea, Swantje Tönnis

as well as to Emilie Destruel-Johnson for cooperation on French, Lilla Pintér for support on Hungarian, and Jevgenya Shipova for the Russian experiments

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