LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

What counts as a gap? The case of typological hierarchies

PD Dr. Tabea Reiner
tabea.reiner@lmu.de

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AG 1: Grammatical Gaps: Definition, Typology and Theory (Strobel/Weiß)
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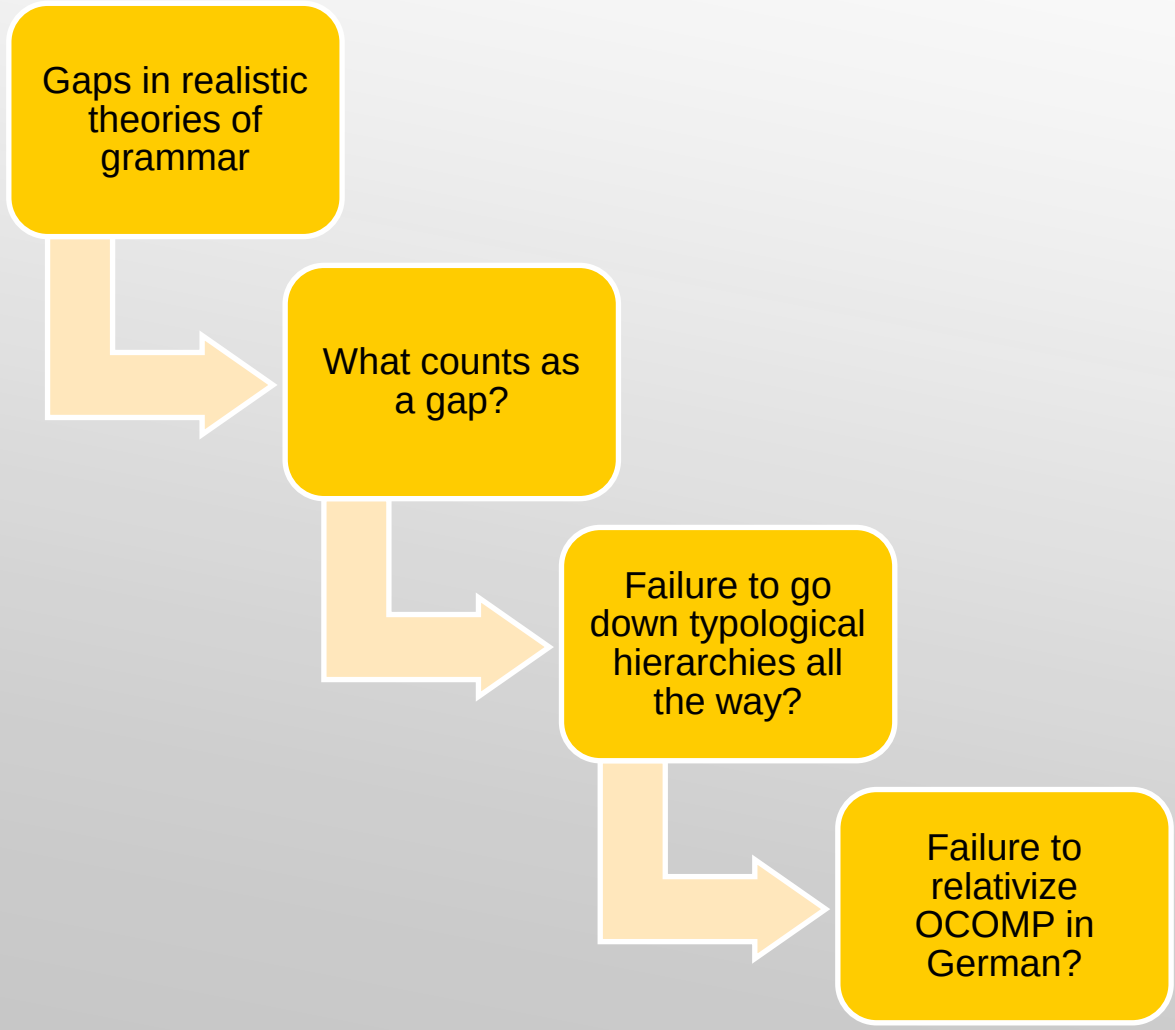
Outline



- Yes, this is a gap.
- No, this is not a gap.

Gaps in realistic theories of grammar

- Realistic theories of grammar allow for situations where the language user is left without instructions

  ← Rules are not defined for a certain input

  ← Rules are in conflict with one another

  (Reis 1979, 2017)

GAPS

- However, perhaps these gaps exist just because our theory of grammar has not been completed yet (Vogel 2009:320)…
- So, strictly speaking, we need a criterion of **completion** before talking about gaps or even excluding data!

  ⇒ Realistic theory = metatheory

How to guess gaps without a criterion of completion

Three easy cases

1. Telling that a single given rule of the grammar fragment **leaves a gap** in that it is not defined for a certain input
2. Telling that two or more given rules of the grammar fragment **leave a gap** in that they are in conflict
3. Telling that a single given rule of the grammar fragment **does not leave a gap**

> A given rule R does not leave a gap iff for every conceivable application of R, the grammar [fragment] states whether the result is grammatical or ungrammatical (Reis 2017:256).

How to guess gaps without a criterion of completion

Three easy cases – outcomes still subject to completion

1. Telling that a single given rule of the grammar fragment **leaves a gap** in that it is not defined for a certain input

   additional rule may step in

2. Telling that two or more given rules of the grammar fragment **leave a gap** in that they are in conflict

   resolution rule may be added

3. Telling that a single given rule of the grammar fragment **does not leave a gap**

   set of conceivable applications grows

> A given rule R does not leave a gap iff for every conceivable application of R, the grammar [fragment] states whether the result is grammatical or ungrammatical (Reis 2017:256).

How to guess gaps without a criterion of completion

One difficult case

- Determining, for a certain portion of the grammar fragment, the interplay of rules and gaps from scratch (e.g. RNR in Reis 2017:267–272)
- Criterion: **robustness** (Reis 2017)
  - Values:
    - Rule guided behaviour is [+ robust].
    - Gap guided behaviour is [– robust].
  - Content: in speaker judgments there is…
    - …no uncertainty
    - …no reluctance
    - …no variation

Do typological hierarchies produce gaps?

- Typological hierarchy: set of feature bundles, ordered in such a way that certain grammatical operations that apply to one of the feature bundles **also apply to all feature bundles to the left** (rarely to the right).
- Famous examples:
  - Animacy Hierarchy (Silverstein 1976 +)
  - Noun Phrase Accessibility Hierarchy (Keenan & Comrie 1977/79b)

Do typological hierarchies produce gaps?

The Noun Phrase Accessibility Hierarchy (Keenan & Comrie 1977/79b)

SU	>	DO	>	IO	>	OBL	>	GEN	>	OCOMP
subject		direct object		indirect object		oblique		genitive		object of comparison

Predictions

1. All languages can relativize subjects.

   Terminology: strategy for relativizing subjects = **primary strategy**
2. If a language can use the strategy to relativize subjects also for some other position of the hierarchy, it can **use this strategy for all positions to the left**.
3. Every position is a possible **cut-off point**.

Do typological hierarchies produce gaps?

Dutch data (Keenan & Comrie 1979a + constructed)

(1) de man die Marie aanviel
the man who Mary attacked
'the man who attacked Mary'

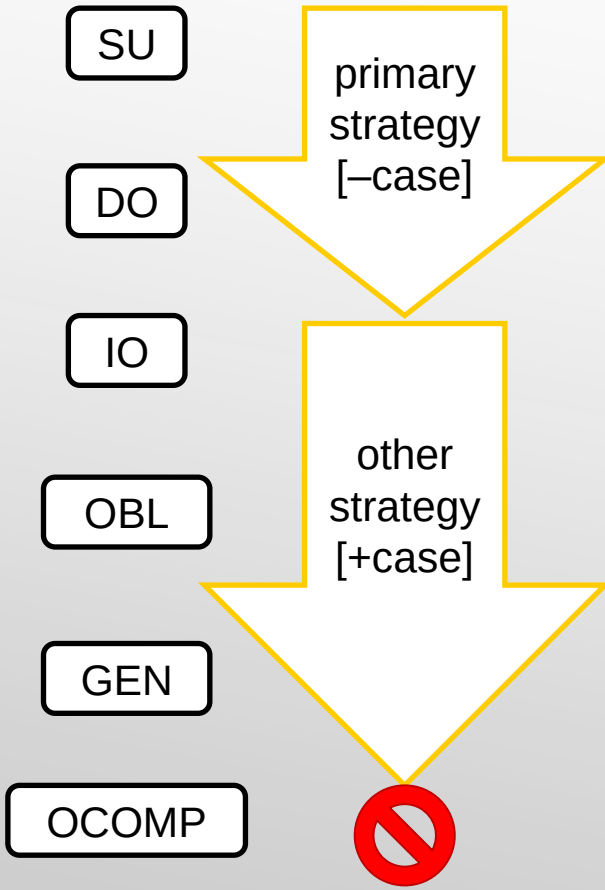
(2) de man die Marie aanviel
the man who Mary attacked
'the man who Mary attacked'

(3) de vrouw aan wie ik het boek gaf
the woman to whom I the book gave
'the woman to whom I gave the book'

(4) de vrouw op wie ik wacht (con.)
the woman PREP whom I wait
'the woman for whom I am waiting'

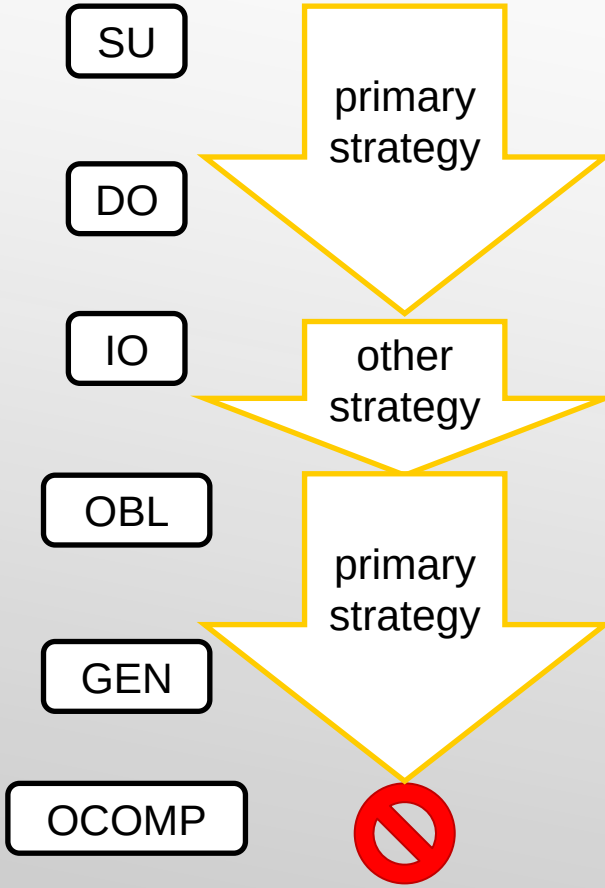
(5) de vrouw wier man in het ziekenhuis ligt
the woman whose husband in the hospital lies
'the woman whose man is hospitalized'

(6) *de vrouw dan wie iedereen groter is (con.)
the woman than whom everyone taller is
intended: 'the woman who everyone is taller than'



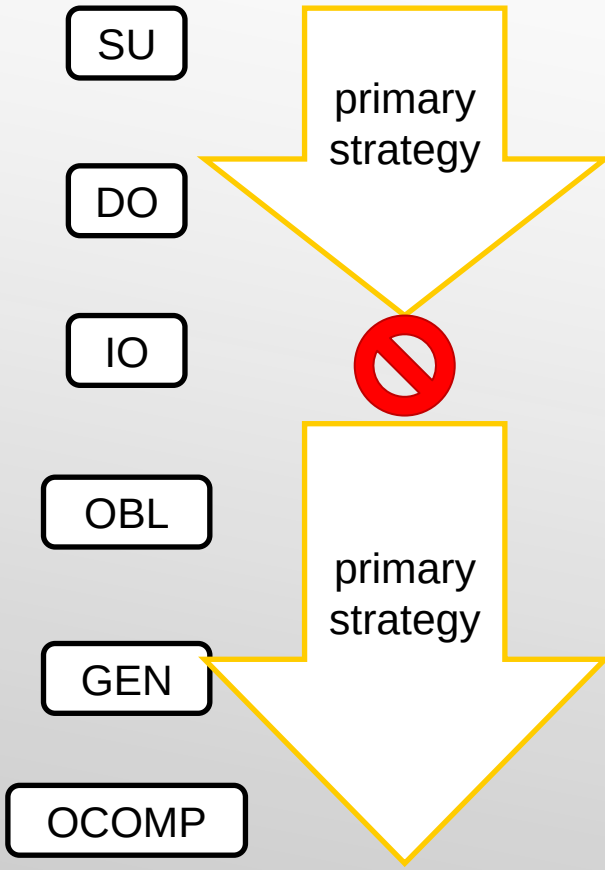
Do typological hierarchies produce gaps?

predicted not to occur



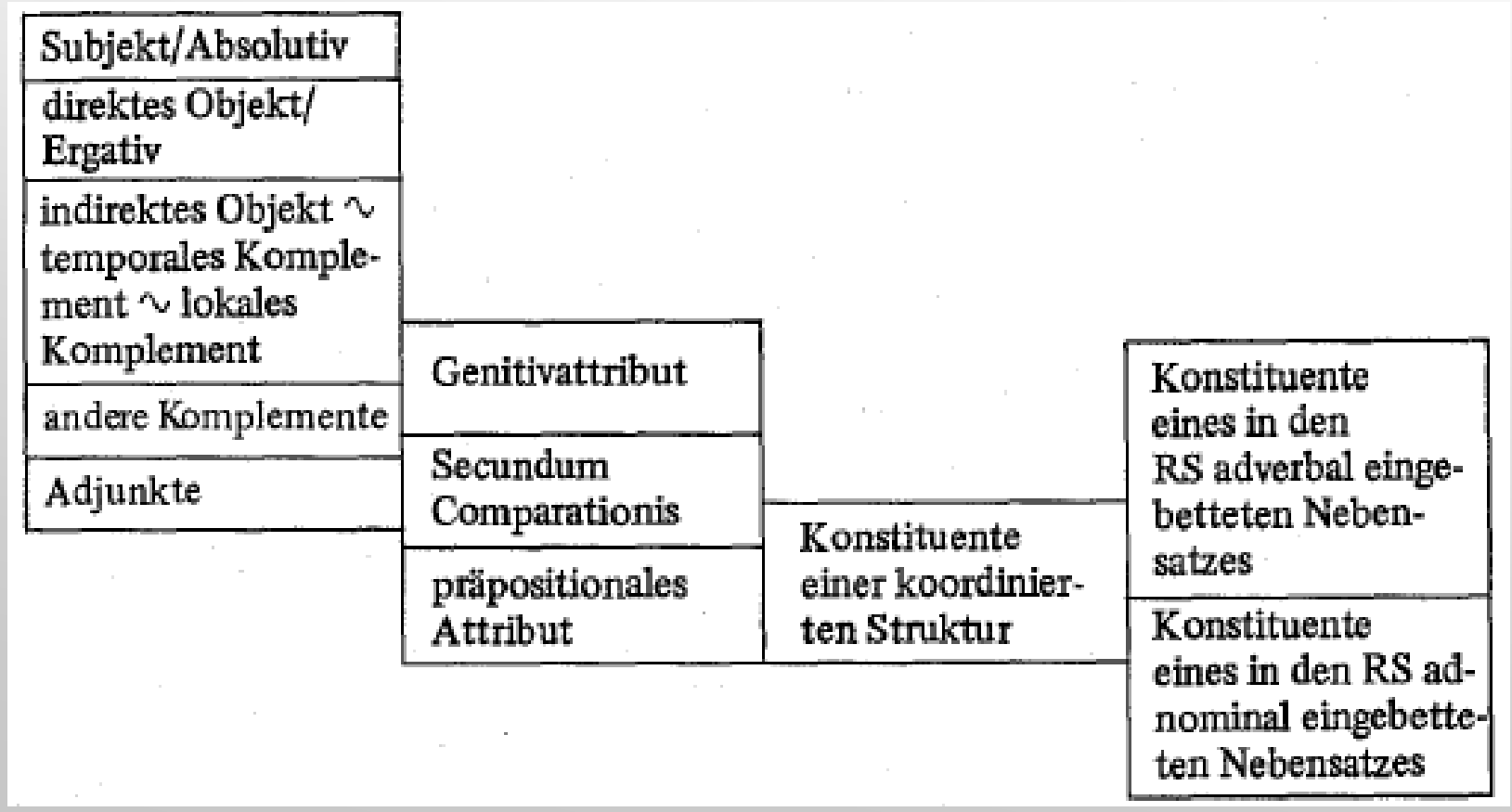
Do typological hierarchies produce gaps?

predicted not to occur



Do typological hierarchies produce gaps?

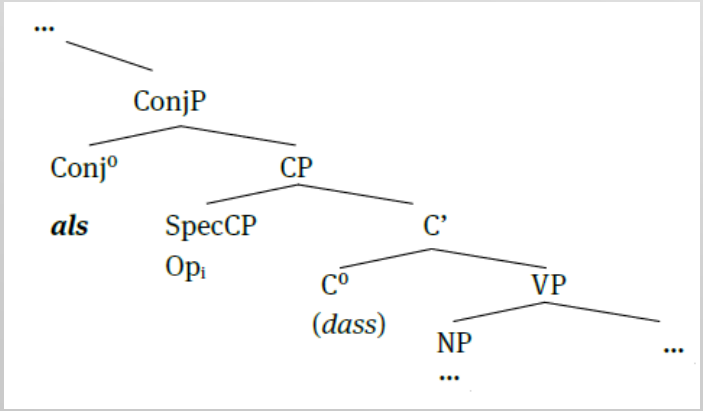
A more elaborated version of the hierarchy: Lehmann (1984:219)



Do typological hierarchies produce gaps?

- In a general sense: **yes**. A rule like “In order to relativize XP, substitute it by a relative pronoun and move it to the front as far as you can” seems not to apply to a certain kind of input (**de vrouw dan wie iedereen groter is*, **die Frau als die jeder größer ist*).
- Systematically possible at least in German since the comparative particle and the relative pronoun do not compete for a position:

Jäger (2018:456)



shortened

Do typological hierarchies produce gaps?

- However, in the sense of realistic theories, these are **not gaps** in our fragment of grammar. Recall (Reis 2017:256):

  > A given rule R does not leave a gap iff for every conceivable application of R, the grammar [fragment] states whether the result is grammatical or ungrammatical.

- In the case of relativization in German:
  - applying the rule to SU, DO, IO, OBL or GEN
    → grammatical
  - applying the rule to OCOMP
    → ungrammatical

Do typological hierarchies produce gaps?

- Still, the question remains: what stops speakers (and L1-acquirers) from extending the application of the rule/extending the pattern by analogy?
- One potential answer: processing principles like Early Immediate Constituents (EIC, Hawkins 1994, ch. 3)

➢ Captures the overall picture but does not answer the question above.

- Another answer: variation is emergent from mental grammar + input + general cognitive principles (Roberts 2019).

➢ Application to relativization? Feature Apply-Process[Non-PSA]?

➢ But similar to EIC: Don’t get more complex than your input forces you to get!

Case study: Relativizing OCOMP in German

- Question: is the break in the data as clear as it is predicted to be?
- Method: online survey from 26 January to 7 February 2021

➢ Rating sentences with postmodifying restrictive relative clauses:

- I am sure that this is a German sentence. (3 points)
- I am not sure whether this is a German sentence. (2 points)
- I am sure that this is not a German sentence. (1 point)

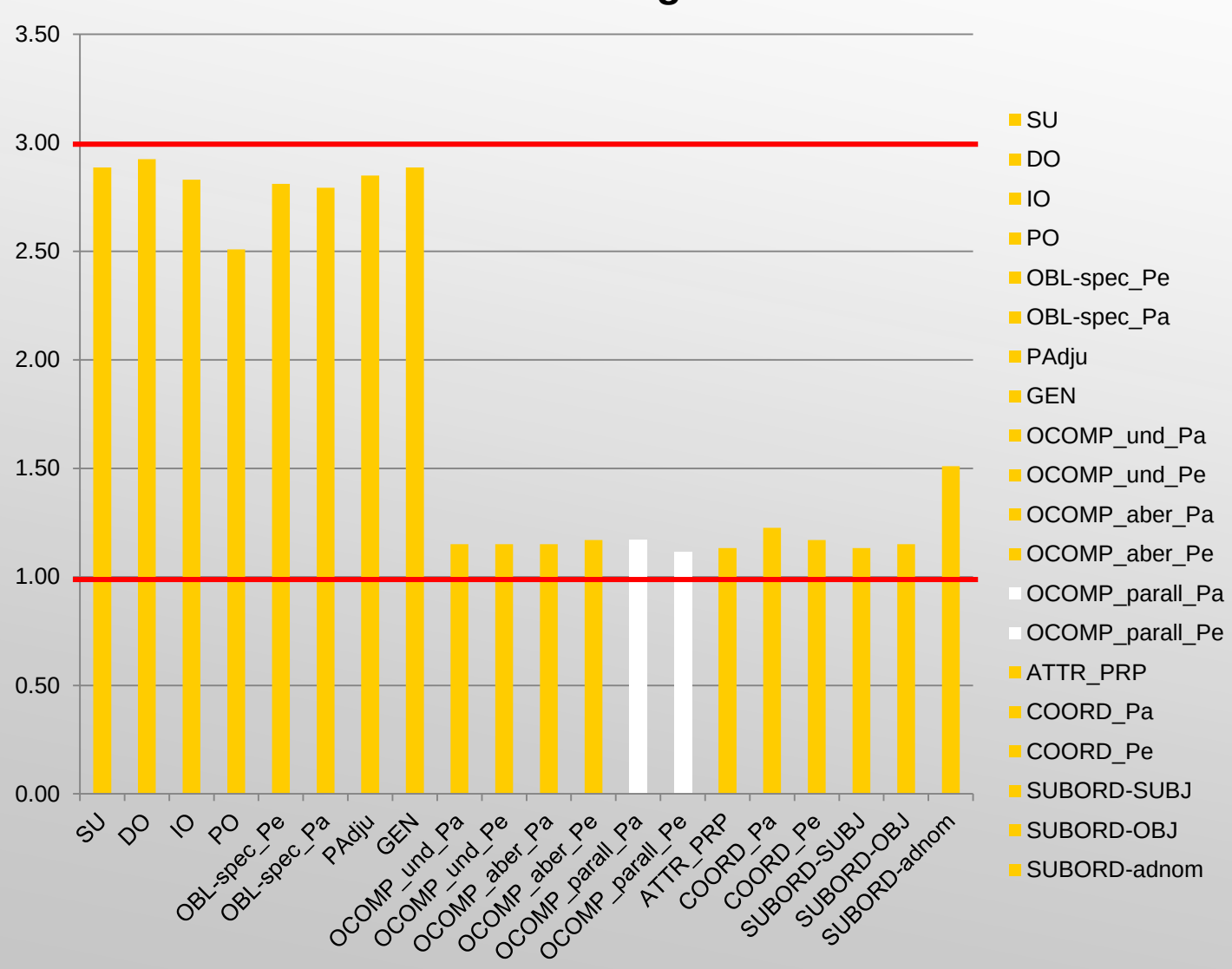
➢ Example stimuli (order randomized):

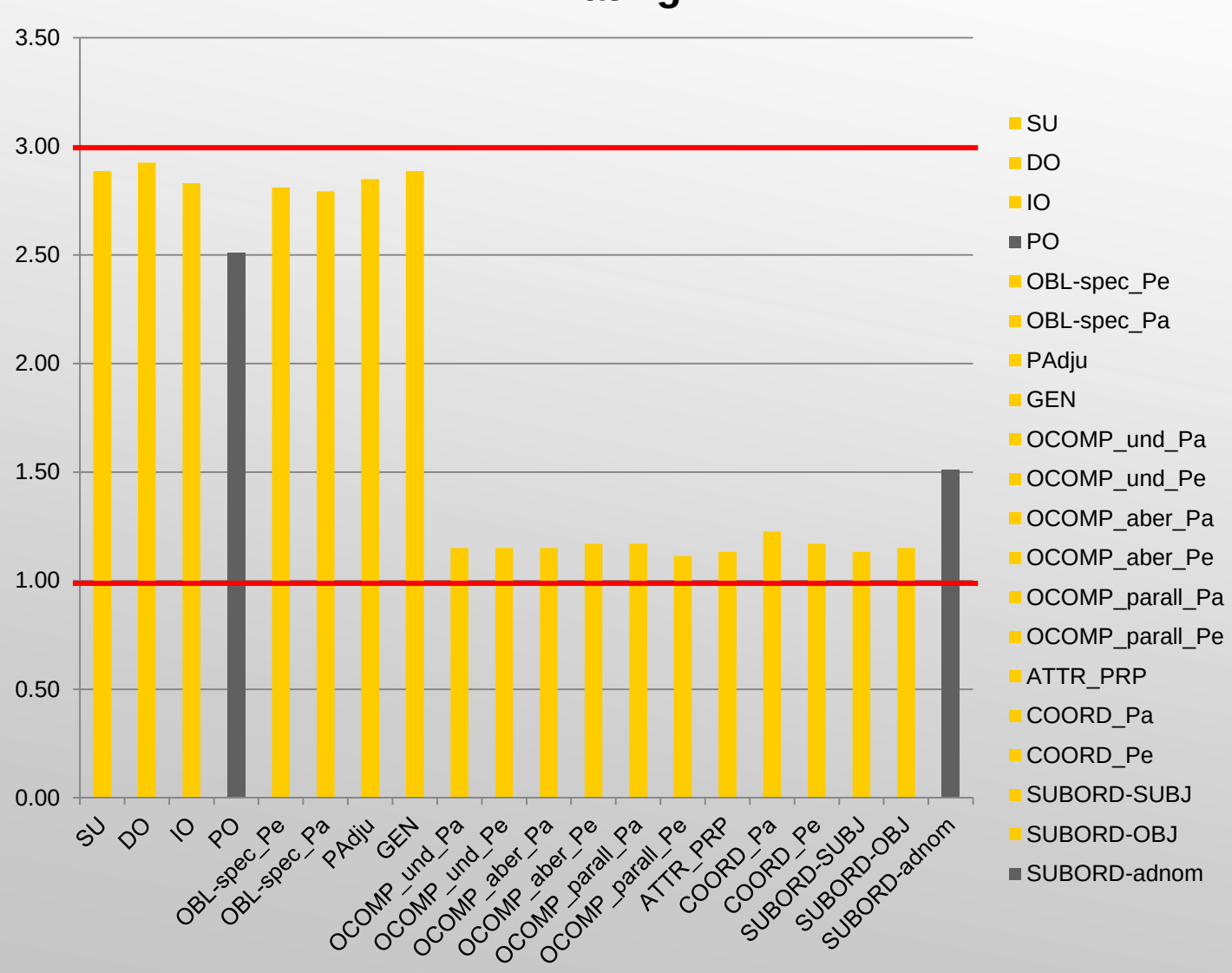
- Paul ist 2,00m groß und **jemand**, dessen Riesenschuhe man immer sofort erkennt.
- Paul ist 2,00m groß und steht meistens neben **jemandem**, als der er größer ist.

➢ Participants: 53 native speakers, aged from 30 to 73, from diverse professional backgrounds

Case study: Relativizing OCOMP in German

- Question: is the break in the data as clear as it is predicted to be?
- Answer: mostly, yes…


rating
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
SU
DO
IO
PO
OBL-spec_Pe
OBL-spec_Pa
PAdju
GEN
OCOMP_und_Pa
OCOMP_und_Pe
OCOMP_aber_Pa
OCOMP_aber_Pe
OCOMP_parall_Pa
OCOMP_parall_Pe
ATTR_PRP
COORD_Pa
COORD_Pe
SUBORD-SUBJ
SUBORD-OBJ
SUBORD-adnom


rating
3.50
3.00
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SU
DO
IO
PO
OBL-spec_Pe
OBL-spec_Pa
PAdju
GEN
OCOMP_und_Pa
OCOMP_und_Pe
OCOMP_aber_Pa
OCOMP_aber_Pe
OCOMP_parall_Pa
OCOMP_parall_Pe
ATTR_PRP
COORD_Pa
COORD_Pe
SUBORD-SUBJ
SUBORD-OBJ
SUBORD-adnom

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Attempt at applying Roberts (2019) to relative clauses

1. UG provides or from UG can be derived:
   - Variable PSA (borrowed from Van Valin/LaPolla 1997, ch. 6)
   - Set of syntactic processes, including relativization (in terms of Cinque 2020?)
   - Feature A[Non-PSA], read: Apply process to non-PSAs
2. Input:
   - Specifies PSA (e.g., nominative argument or absolutive argument) and non-PSAs
   - ➢ Contains evidence on which processes are applied to the PSA vs. non-PSAs
3. General cognitive principles:
   - Recognize applications of processes to non-PSAs
   - ➢ Evoke feature A[Non-PSA]

Still coarse…

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Cinque, Guglielmo. 2020. *The syntax of relative clauses* (Cambridge Studies in Linguistics 166). Cambridge: CUP.

Appendix: stimuli

AL01_01 Paul ist 2,00m groß und ich kenne fast niemanden, der größer ist als er.
AL01_02 Peter ist nur 1,57m groß und ich kenne fast niemanden, den er überragt.
AL01_03 Paul ist 2,00m groß und niemand, dem man normalgroße Arbeitskleidung geben kann.
AL01_04 Peter ist nur 1,57m groß und beim Basketball niemand, an den man denkt.
AL01_05 Paul ist 2,00m groß und hat im Freizeitsport großen Erfolg, dessen er sich gerne rühmt.
AL01_06 Peter ist nur 1,57m groß, aber es gibt in seinem Leben keinen bösen Spott, dessen er sich entsinnen kann.
AL01_07 Paul ist 2,00m groß und niemand, bei dem man in der Wohnung viele Tritthocker vermuten würde.
AL01_08 Paul ist 2,00m groß und jemand, dessen Riesenschuhe man immer sofort erkennt.
AL01_09 Paul ist 2,00m groß und steht meistens neben jemandem, als der er größer ist.
AL01_10 Peter ist nur 1,57m groß und steht meistens neben jemandem, als der er kleiner ist.
AL01_11 Paul ist 2,00m groß, aber ich kenne jemanden, als der Paul kleiner ist.
AL01_12 Peter ist nur 1,57m groß, aber ich kenne jemanden, als der Peter größer ist.
AL01_13 Paul ist 2,00m groß und er ist größer als so mancher, als der sonst niemand größer ist.
AL01_14 Peter ist nur 1,57m groß und er ist kleiner als so mancher, als der sonst niemand kleiner ist.
AL01_15 Peter ist nur 1,57m groß und besitzt einen Tritthocker, die Beine von dem man in der Höhe verstellen kann.
AL01_16 Paul ist 2,00m groß und ich kenne keinen Mann, der und Paul gleich groß sind.
AL01_17 Peter ist nur 1,57m groß und ich kenne keinen Mann, der und Peter gleich groß sind.
AL01_18 Paul ist 2,00m groß und wir kennen fast niemanden, der wir sagen würden, dass größer ist.
AL01_19 Paul ist 2,00m groß und wir kennen fast niemanden, den wir sagen würden, dass er nicht überragt.
AL01_20 Paul ist 2,00m groß und es gibt keinen Blaumann, an dem seine Kollegen sagen würden, dass die Hosenbeine lang genug sind.

Appendix: absolute numbers

	SU	DO	IO	PO	OBL-spec_Pe	OBL-spec_Pa	PAdju	GEN	OCOMP_und_Pa	OCOMP_und_Pe	OCOMP_aber_Pa	OCOMP_aber_Pe	OCOMP_parall_Pa	OCOMP_parall_Pe	ATTR_PRP	COORD_Pa	COORD_Pe	SUBORD-SUBJ	SUBORD-OBJ	SUBORD-adnom
3 points	49	50	47	36	45	44	48	48	3	3	3	4	2	2	2	3	2	2	3	8
2 points	2	2	3	8	6	7	2	4	2	2	2	1	5	2	3	6	5	3	2	11
1 point	2	1	3	9	2	2	3	1	48	48	48	48	46	49	48	44	46	48	48	34

Appendix: with or without linguists