Determiner Phrase Acquisition at the Syntax-Phonology Interface

DGFS-Workshop 2009: “Learning Meets Acquisition”

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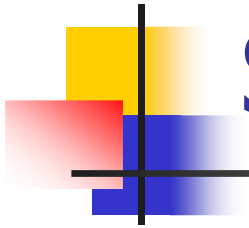
University of Amsterdam



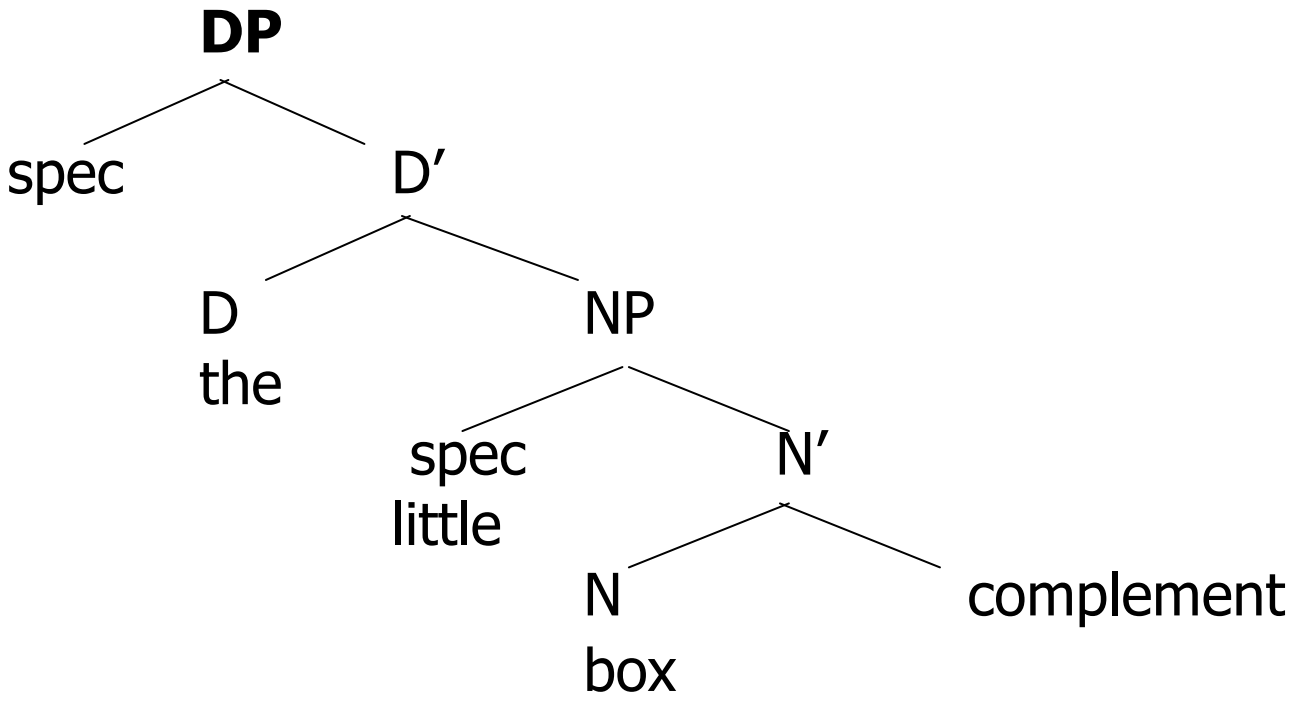
Structure of the talk

Focus: L1 Acquisition of the DP

1. D-layer not available
2. D-layer is available
3. Testcase: Learnability
4. Empirical study
5. Conclusion

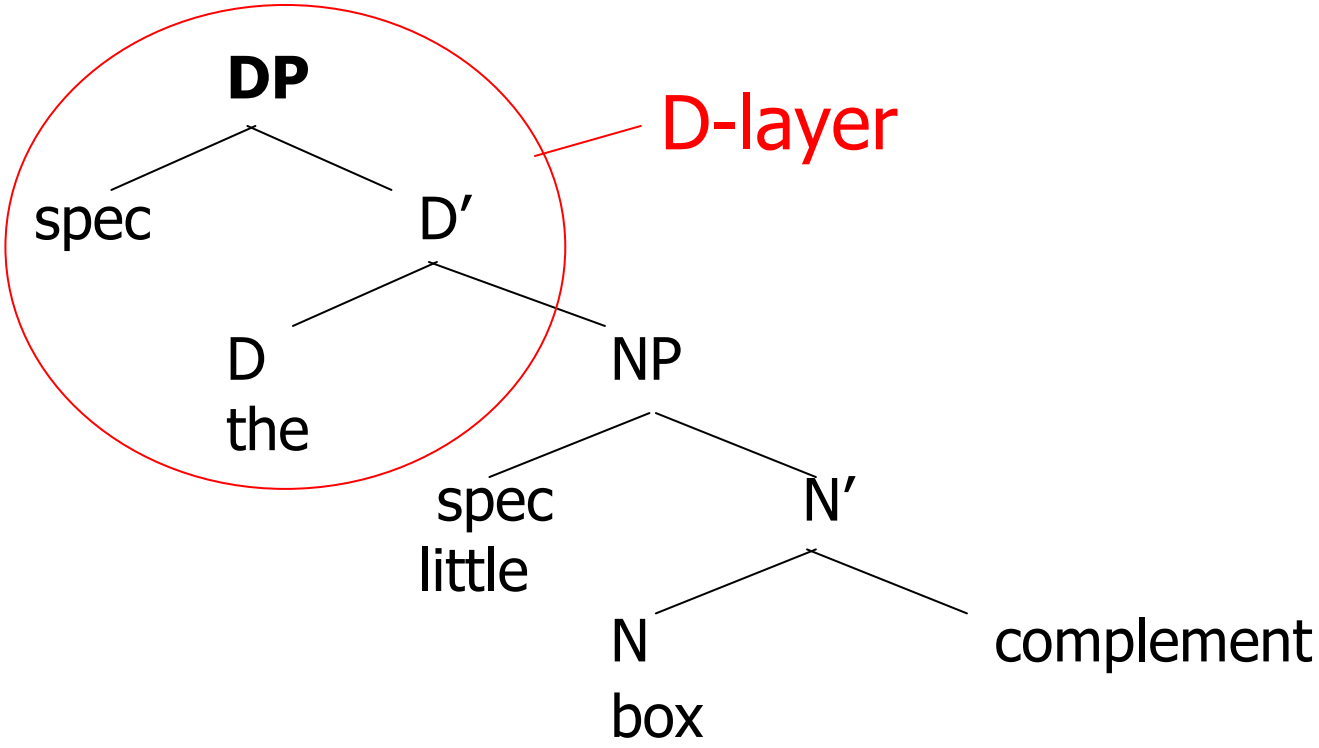
L1 Acquisition of the DP

- Determiner Phrase (DP) Hypothesis: Abney 1987



L1 Acquisition of the DP

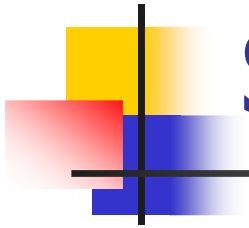
- Determiner Phrase (DP) Hypothesis: Abney 1987



L1 Acquisition of the DP

"box gone" Anne (1 year, 11 months)

"**The** box **is** gone"



Structure of the talk

1. D-layer is not available
2. D-layer is available

3. Testcase: Learnability
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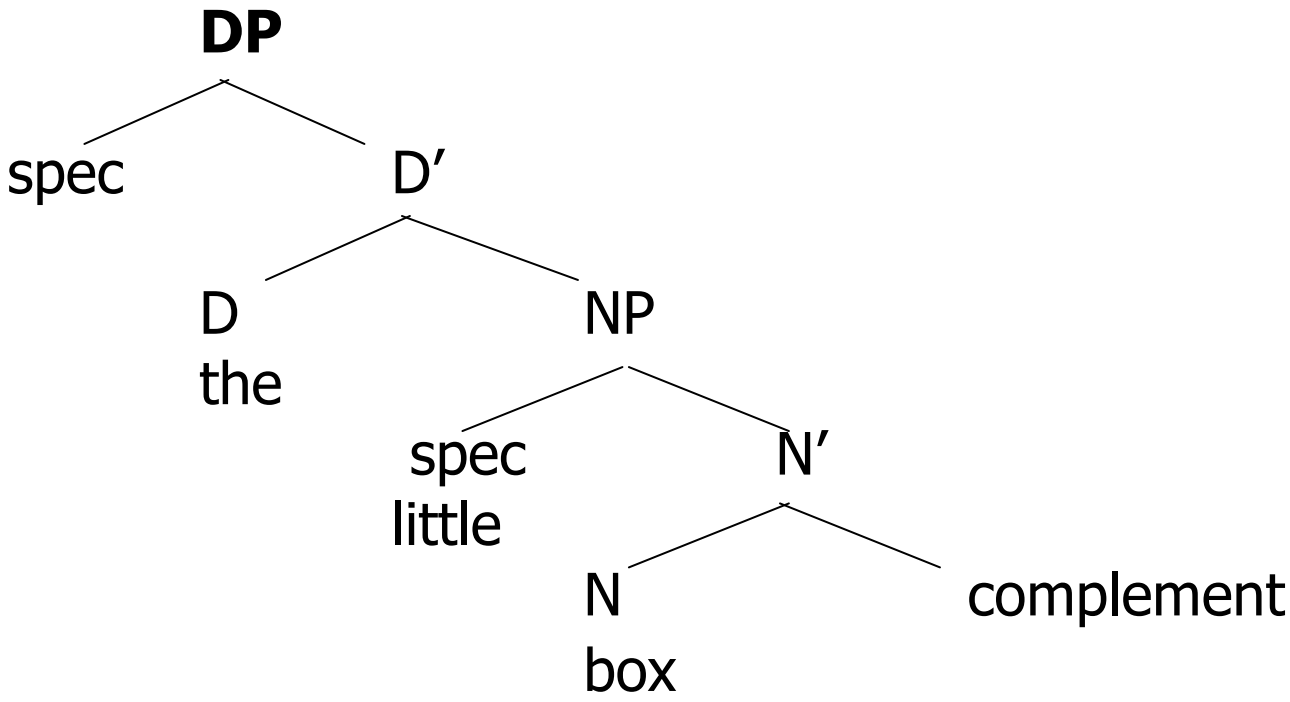
Bottom-up vs. top-down

- Determiner Phrase (DP) Hypothesis: Abney 1987



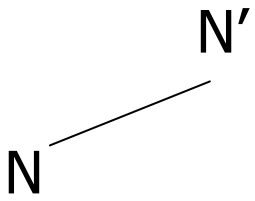
1. D-layer not available

Structure Building Hypothesis

- (Clahsen et al 1994, Müller 1994)

Stage 1:

"box gone"



1. D-layer not available

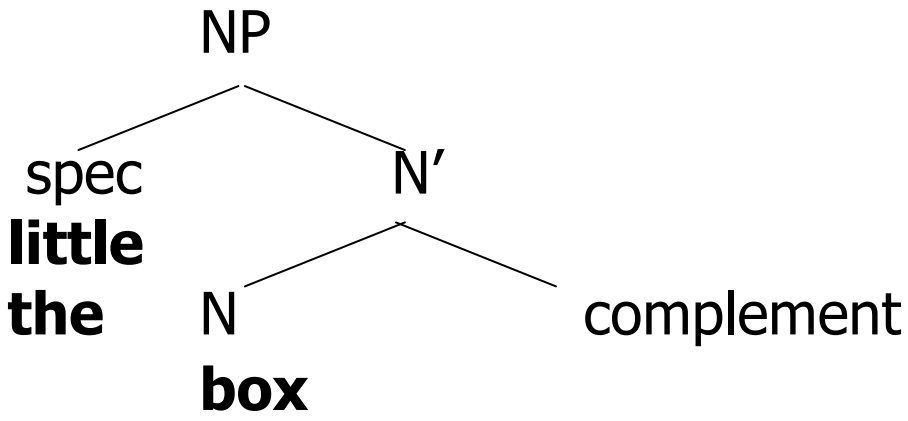
Structure Building Hypothesis

- (Clahsen et al 1994, Müller 1994)

Stage 2:

"the box

"little box"



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Structure Building Hypothesis

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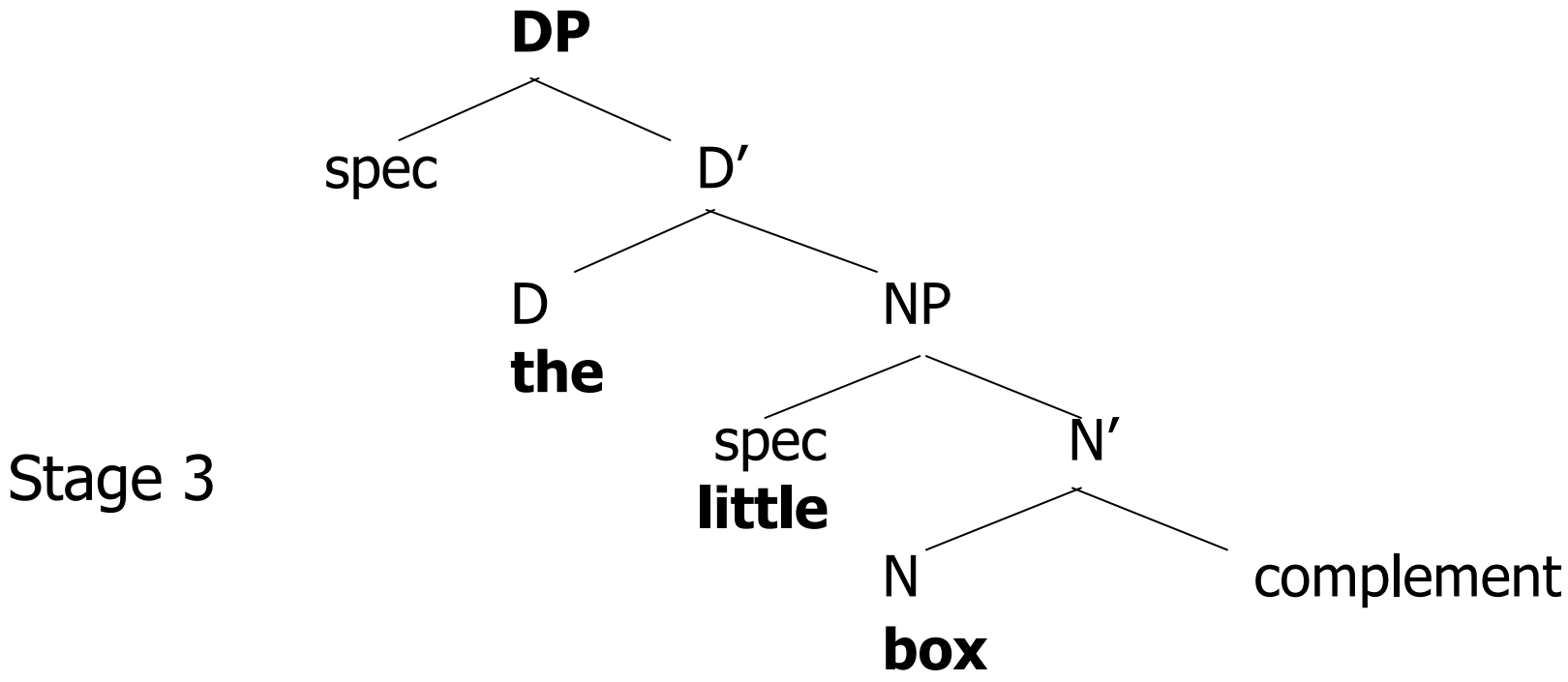
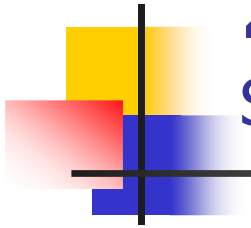


Stage 3



2. D-layer is available

Structure Unravelling (Pannemann 2007)

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Structure Unravelling (Pannemann 2007)

- No insertion

  Halle and Marantz (1993)

- Correspondence rules connect phonological units with their syntactic representation

- Lexical entries can be larger or smaller than X °

  Jackendoff (1997)

2. D-layer is available

Structure Unravelling (Pannemann 2007)

Lexical entry “tractor”:

/træktə/←→ N ←→ “vehicle used on farms”

2. D-layer is available

Structure Unravelling (Pannemann 2007)

- default assumption:

wolf ←→ DP

Peter ←→ DP

he ←→ DP

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[the big wolf] $_{DP}$

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  [wolf] $_{DP}$

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~~the~~ [wolf] $_{DP}$

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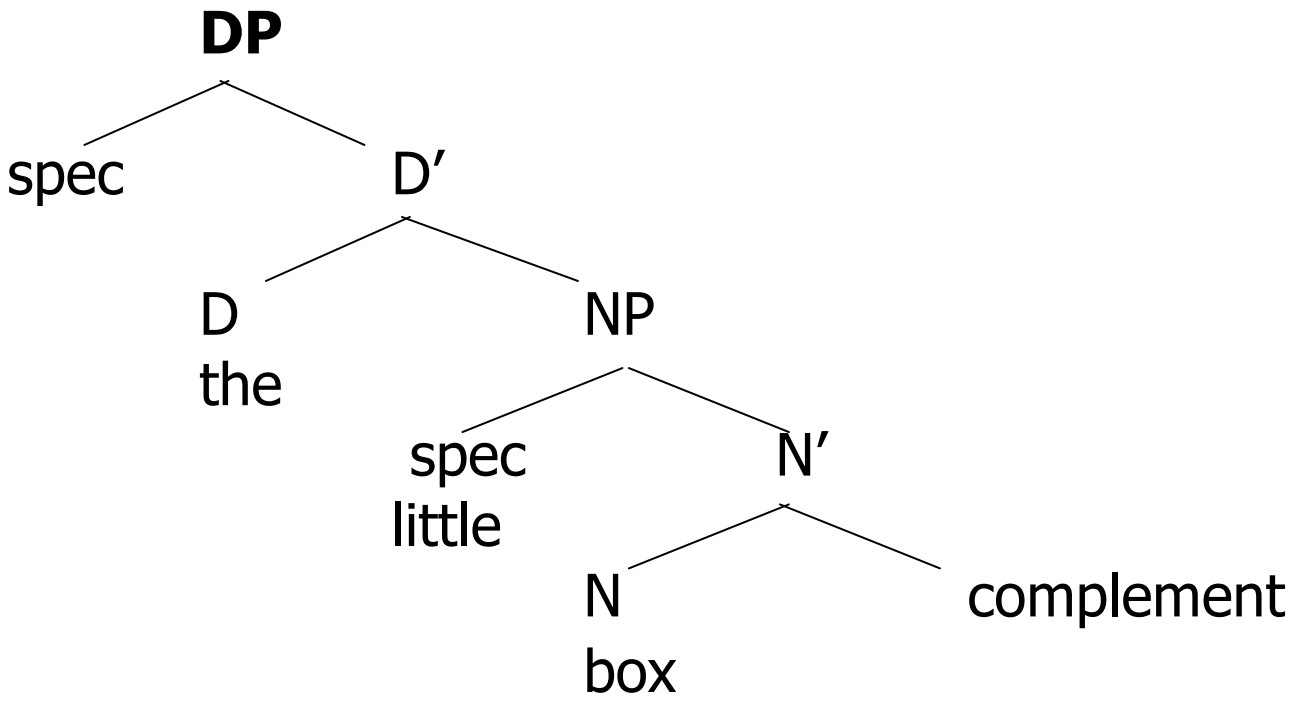

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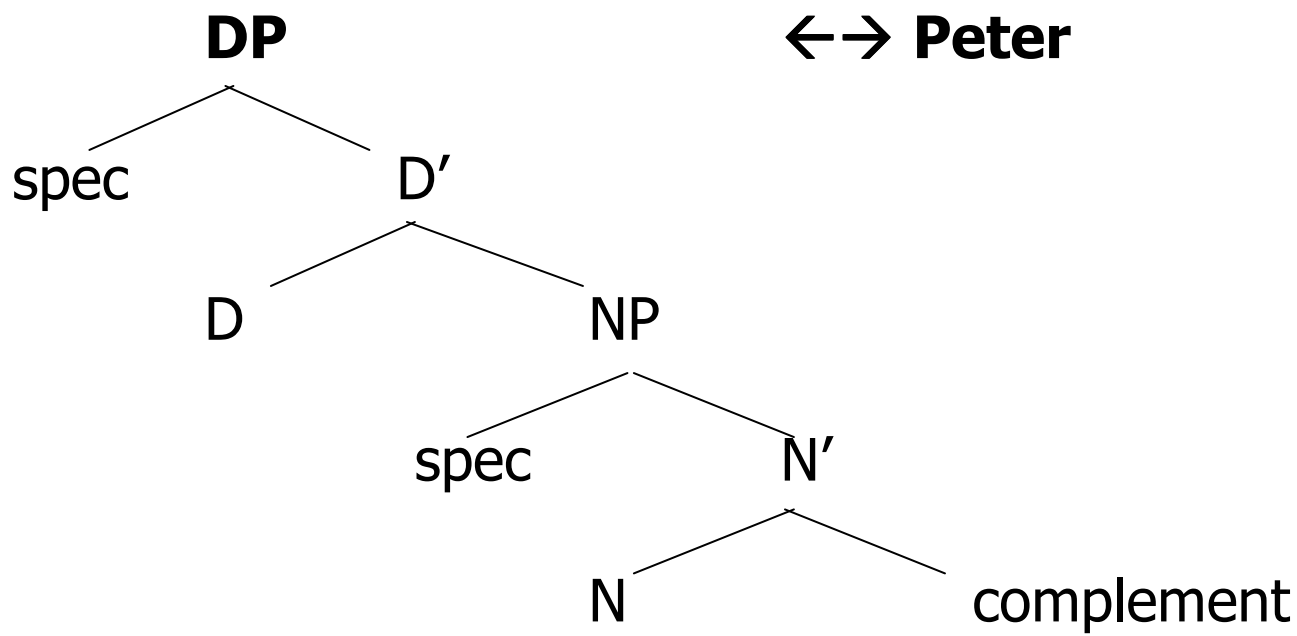

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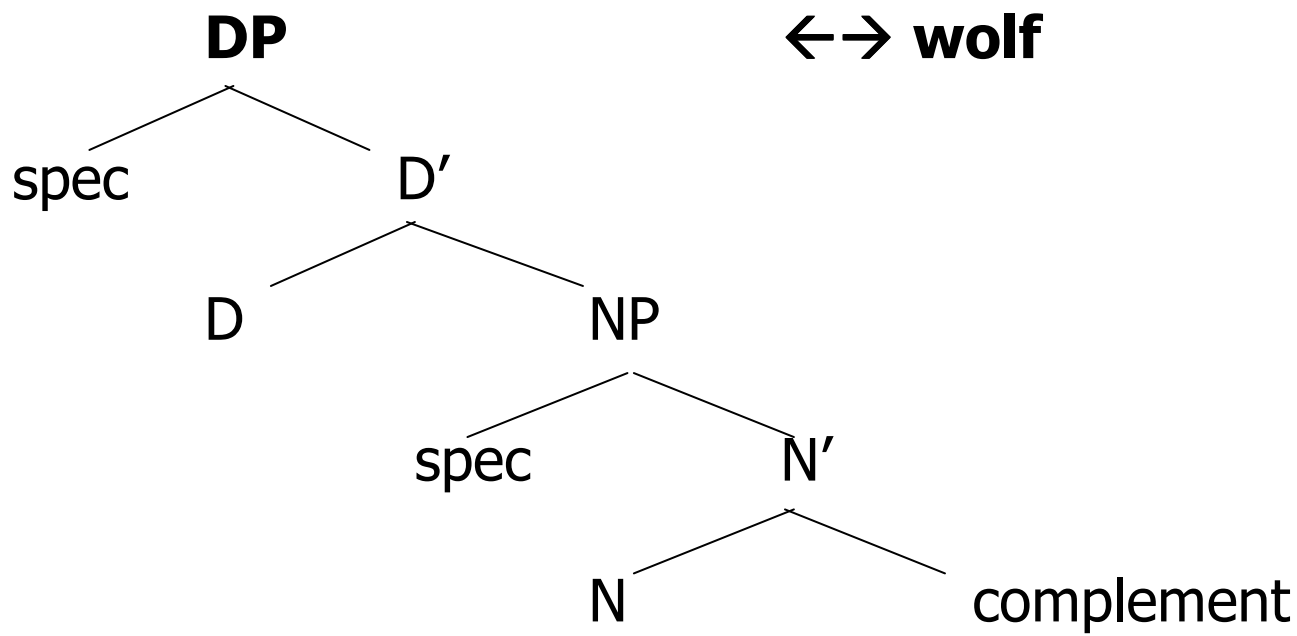

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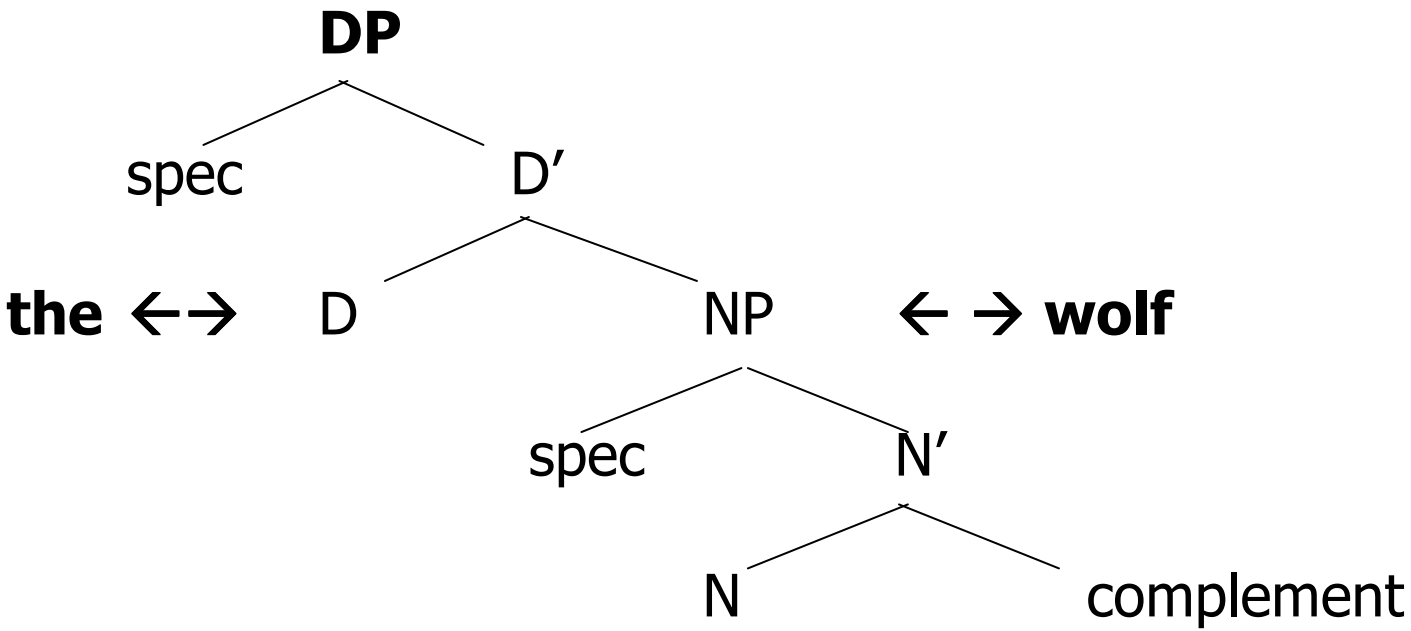

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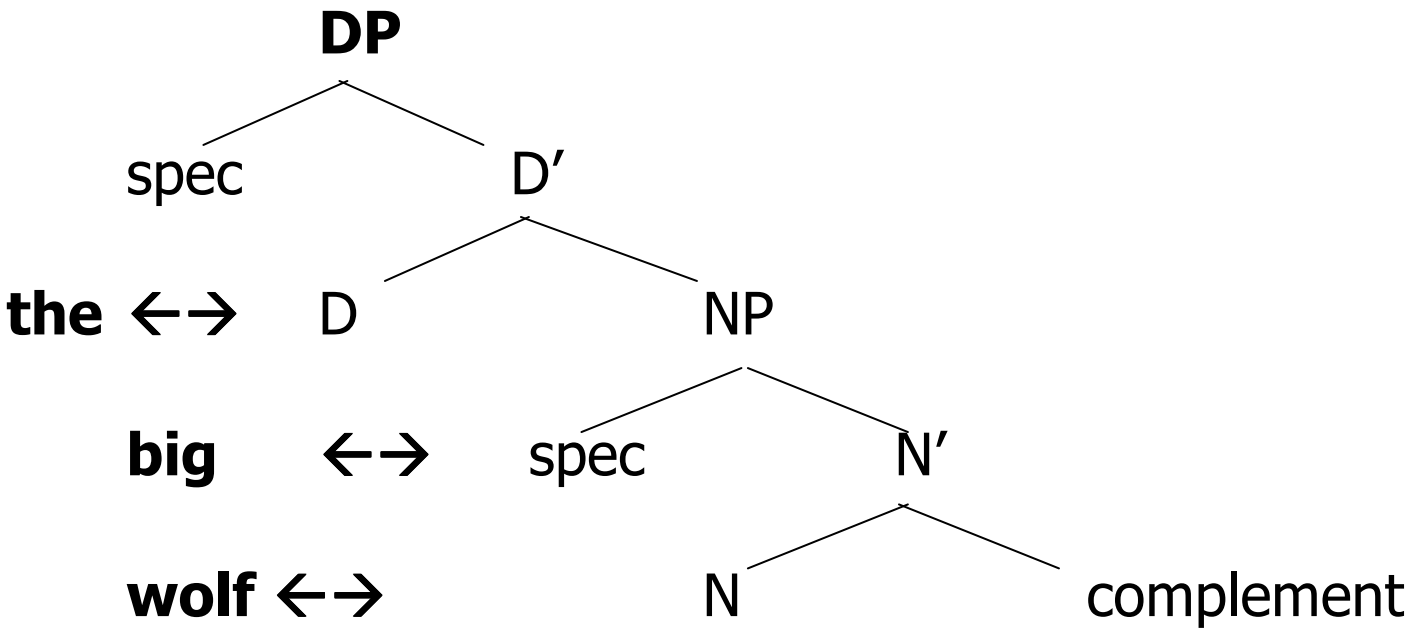
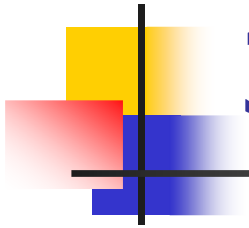


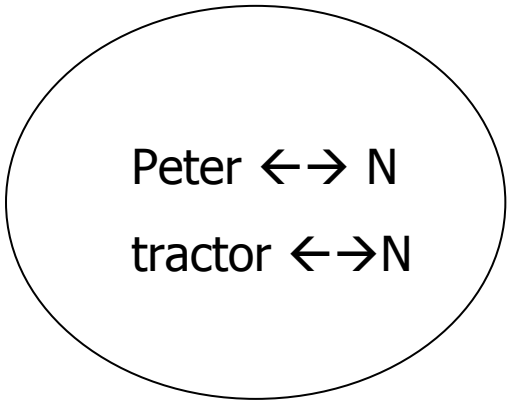


3. Learnability

- Subset principle
  - (Berwick 1985, Wexler and Manzini 1987)
- The learner opts for the most restrictive option
- Initial hypothesis can only be changed in the presence of positive evidence in the input

3. Learnability

- D-layer not available



3. Learnability

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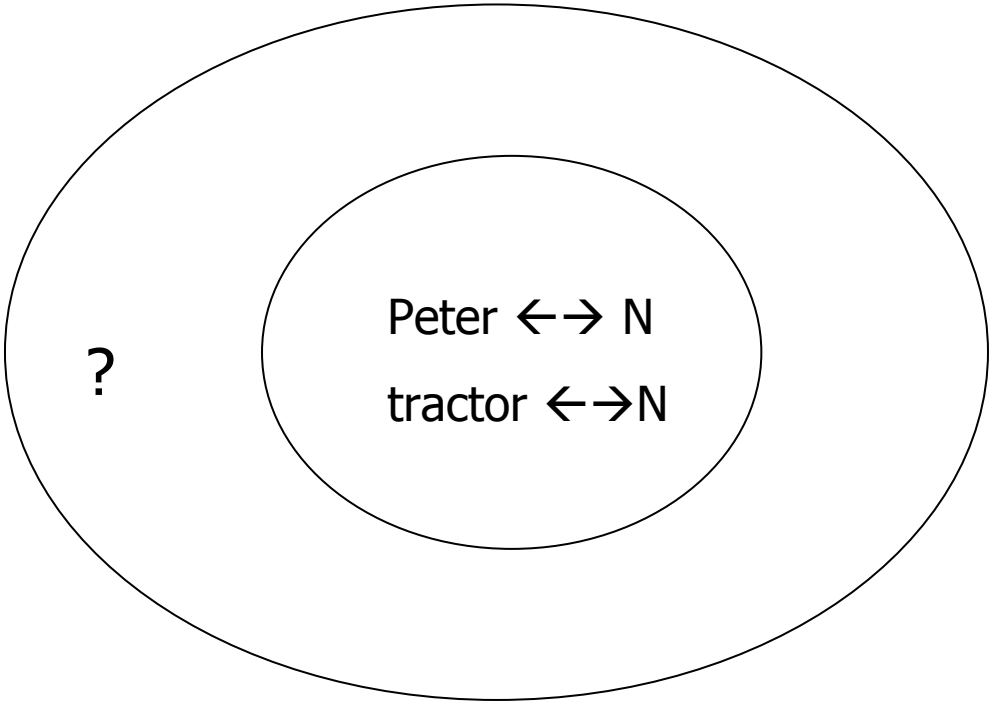

3. Learnability

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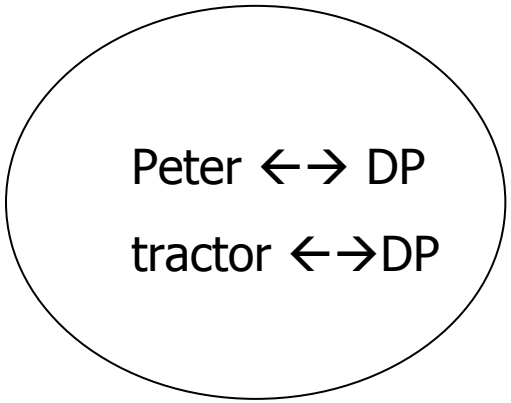

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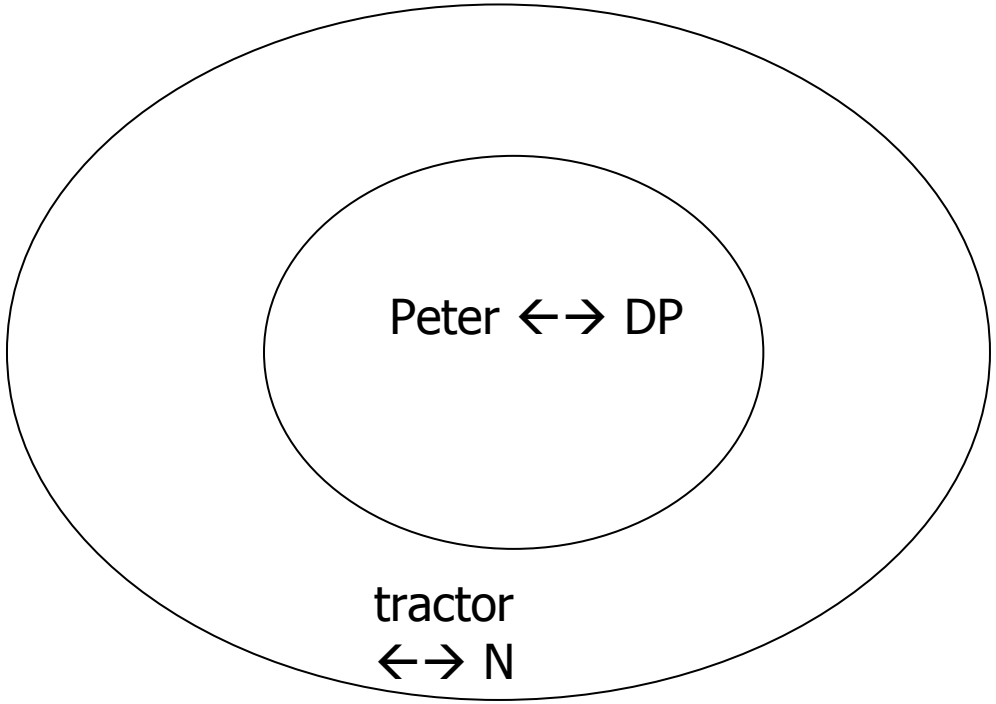


3. Learnability

Initial setting	Positive evidence in the input
D-layer not available /Peter/ ←→ N /tractor/ ←→ N	?
D-layer available /Peter/ ←→ DP /tractor/ ←→ DP	the tractor

4. Empirical study

- Different predictions:

D-layer not available	the (big) Peter the (big) he
D-layer available	correct use of determiner

4. Empirical study

- Determiners + proper name
- Hast du den Peter gesehen?

  have you the Peter seen?

  (German, Hungarian, Greek)

- der Rhein, die Niederlande

  (geographical names)

Data: CHILDES

FRENCH		
Grégoire	1;9.18 - 2;5.13	9 recordings
Max	1;9.19 - 3;2.23	20 recordings
DUTCH		
Tomas	1;07.05 - 3;1.02	16 recordings
Daan	1;08.21 - 3;03.30	20 recordings

Method

- Included:
  - possessives, numerals, quantifiers, partitives, demonstratives, protodeterminers
  - nouns expressing family relations
    Where is mummy?
    This is the mummy of Peter.

Method

- Excluded:
  - repetitions, imitations, completion, incomprehensible utterances of the type 'DET xxx'
  - vocatives
    (*Der) Peter, komm' her!
    the Peter, come here

Results proper names

Results proper names Grégoire

Age	Overt D %	Proper names without determiner	Proper names with determiner
G (1) 1;9.18	15	49(5)	0
G (2) 1;9.28	27	68(6)	0
G (3) 1;10.3	47	23(4)	0
G (4) 1;11.22	38	17(6)	0
G (5) 2;0.5	67	63(6)	0
G (6) 2;1.25	88	9(3)	0
G (7) 2;3.01	83	35(5)	0
G (8) 2;5.1	95	28(9)	3 (mon pinpin)
G (9) 2;5.13	99	19(7)	4 (mon pinpin)

Results proper names Grégoire

- **Grégoire:** mon pinpin (2;5.1)

  my rabbit (→ lapin)

Results proper names
Other children

- French: Max
- Dutch: Tomas and Daan

- similar pattern
- total of 886 instances of proper names, cf. Pannemann 2007

Method pronouns

Dutch

Included pronouns:

Ik, ikke, 'k, me, mij, jij, je, jou, hij, ie, hem, 'm,zij, ze, haar, 'r, d'r, het 't, die, dat, dit, deze

(only singular forms)

French

Included pronouns:

Je, me, moi, tu, te, toi, il, le, lui, elle, la, celui, cela, ceci, chacun

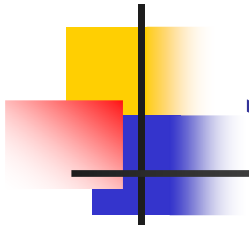
Results pronouns

	Total	Not modified	Determiner /adjective-pronoun	Pronoun-adjective
Grégoire	664	664	0	0
Max	2216	2216	2	0

Results pronouns

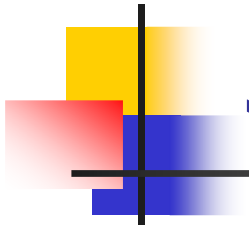
- Other children: similar pattern
- total of 9090 instances of pronouns,
  cf. Pannemann 2007
- Replicates partly Bloom's (1990) results for English L1

- Protodeterminers:
  Tomas: wat doet *ə* die? (2;07.10)
  what does ə that?



5. Conclusion

- Children
  - are aware very early which item can be preceded by a determiner, and which not
  - distinguish very early the syntactic category of common nouns and proper names/pronouns

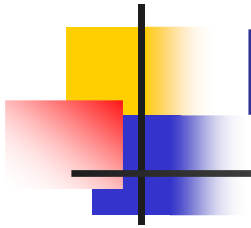


5. Conclusion

1. D-layer is not available (bottom-up)
2. D-layer is available (top-down)

Viewpoint 1. is challenged by

- Learnability considerations (subset principle)
- Empirical observations (absence of "errors")



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Thank you! Danke!

Questions? Fragen?

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presentation soon available at

http://home.medewerker.uva.nl/m.pannemann/

Correspondence Law

Vergnaud and Zubizarreta 1992

- **D-layer:**
  - refers to particular instances
- **N-layer:**
  - reference to kinds

→psycho-developmental reality of L1 acquisition (*Theory of Mind*).

Correspondence Law

Vergnaud and Zubizarreta 1992

(1) Cats are mammals →kind

(2) The cat in the yard is black instance →particular

*CHI: maman veut tirer tracteur

mum wants to.pull tractor

Daniel (1;10.14)