

# The syntax of plural marking in German and English pseudo-partitives

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## 1 Background

- English pseudo-partitives: plural marking on  $N_1$  obligatory with numerals higher than ‘one’:

(1) Two glasses of water

Two readings: **quantity/unit** ( $N_1$  = non-referential measure) and **container** ( $N_1$  = referential)

- Viennese German: non-standard units (*glass, cup, etc.*) can distinguish between the two readings morphologically (plural marking):

(2) a. Zwei Glas Wasser  
two glass.SG water  
‘Two glasses of water’ (quantity, **Q**)  
b. Zwei Gläs-er Wasser  
two glass-PL water  
‘Two glasses of water’ (container, **C**)

## 2 The data

These readings have different syntactic/semantic/ prosodic properties (Viennese German):

- Predicate selection:

- (3) ?\*Zwei Glas Wasser sind runtergefallen und zerbrochen (Q)  
 two glass.SG water are fallen.down and broken
- (4) Zwei Gläser Wasser sind runtergefallen und zerbrochen (C)  
 two glasses.PL water are fallen.down and broken  
 ‘Two glasses of water fell off and smashed.’

- Fronting of  $N_2$ :

- (5) Karotten<sub>i</sub> hab ich zwei Sack t<sub>i</sub> kauft (Q)  
 carrot.PL have I two sack.SG bought
- (6) ??Karotten<sub>i</sub> hab ich zwei Säck(e) t<sub>i</sub> kauft (C)  
 carrot.PL have I two sack.PL bought  
 ‘As for carrots, I bought two sacks.’

- Fronting of  $N_1 + N_2$

- (7) ??[ Sack Karotten ]<sub>i</sub> hab ich zwei t<sub>i</sub> kauft (Q)  
 sack carrot.PL have I two bought
- (8) ?\*[ Säck(e) Karotten ]<sub>i</sub> hab ich zwei t<sub>i</sub> kauft (C)  
 sack.PL carrot.PL have I two bought  
 ‘As for sacks of carrots, I bought two’

- Ellipsis

- (9) #Zwei Sack Karotten und zwei [ e ] Erdäpfel (Q)  
 two sack.SG carrots.PL and two potatoes.PL  
 Only possible reading: ‘Two sacks of carrots and two potatoes.’
- (10) #Zwei Säck(e) Karotten und zwei [ e ] Erdäpfel (C)  
 two sacks.PL carrots.PL and two potatoes.PL  
 Only possible reading: ‘Two sacks of carrots and two potatoes.’

- Word stress (Hankamer and Mikkelsen 2008):

- (11) zwei ‚Glas ‚Wasser (Q)  
 two glass.SG water
- (12) zwei ‚Gläs-er ‚Wasser (C)  
 two glass-PL water

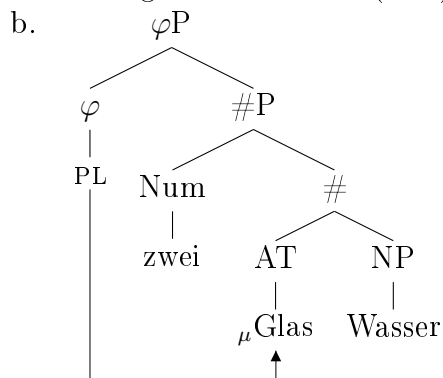
These diagnostics imply a structural difference between the two readings in German.

### 3 Proposal I: German, quantity

- Quantity reading:  $N_1$  = head of a functional category,  $N_1$  and  $N_2$  = non-referential

Sauerland (2003): interpretable number features of a noun are determined by  $\varphi$ P  
 $\rightarrow$  agrees with a measure noun  $\mu$  in #, cp. Scontras (2012):

- (13) a. Zwei Glas Wasser  
 two glass.SG water  
 ‘two glasses of water’ (unit)



$\mu$  fixes a partition of its kind-denoting complement (cp. Chierchia 2010), numeral = argument of  $\mu$ :

- (14) [[Zwei Glas Wasser]] (quantity):  
 $\lambda k \lambda n \lambda x [\cup k(x) \wedge \mu_{Glas}(x) = n](2)(Wasser)$   
 $\rightarrow \lambda x. \cup Wasser(x) \wedge \mu_{Glas}(x) = 2$

### 4 German, container

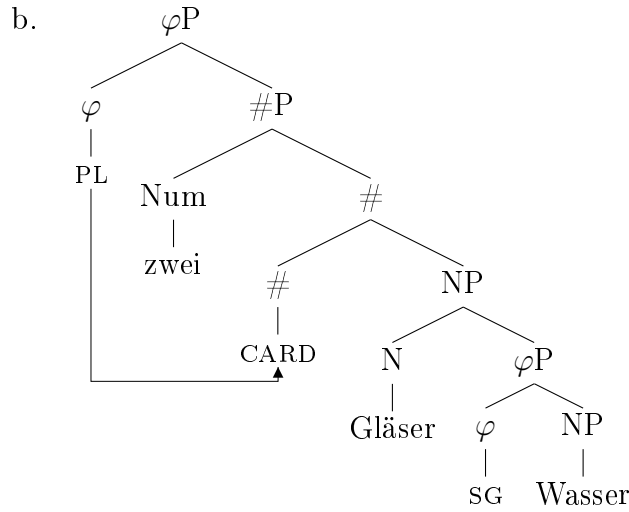
- Container reading:  $N_1$  = head of NP, only  $N_2$  = non-referential

Relation R holds between container ( $N_1$ ) and thing/substance being contained ( $N_2$ ).

Merging the

numeral = counting the instances of containers for which this relation holds:

- (15) a. Zwei Gläser Wasser  
 two glass.PL water  
 ‘two glasses of water’ (container)



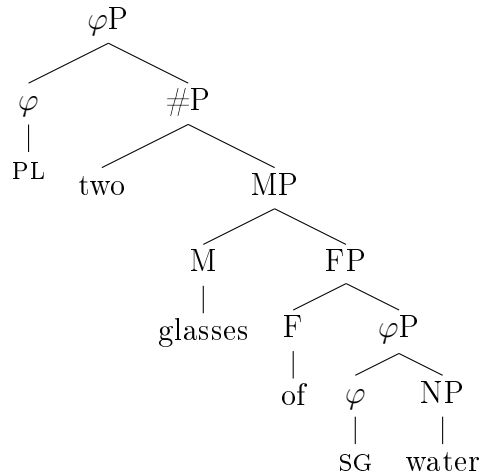
- (16) [[Zwei Gläser Wasser]] (container):  
 $\lambda n \lambda k \lambda x. [Glas(x) \wedge R(x, \cup k) \wedge n(x)](Wasser)(2)$   
 $\rightarrow \lambda x. [Glas(x) \wedge R(x, \cup Wasser) \wedge 2(x)]$

## 5 Proposal II: English

- One structure for both readings

Stickney (2009): measure noun heads ‘semi-functional’ category MP

- (17) two glasses of water (quantity/container)

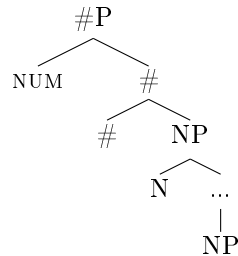


- Both readings can be assigned to this structure because the container reading entails the quantity reading.

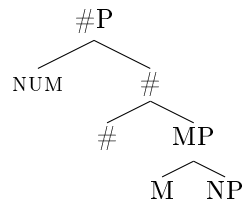
## 6 Diachrony

Grammaticalization process: phrasal categories → heads (Van Gelderen 2011):

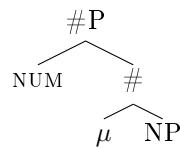
(18) a. German, container:



b. English, quantity/container:



c. German, quantity:



## 7 Conclusion

- Plural marking on  $N_1$  in German pseudo-partitives only in the container reading
- Morphological difference = structural difference: quantity reading : 1 NP, container reading: 2 NPs
- English has one structure for both readings
- Different levels of grammaticalization of partitive structures in German vs. English

## References

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