Phrasal vs. compound structure building: Two separate cognitive routes?

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Many researchers have argued that compounds are more prone to be lexicalized as names in German.

On the other hand, we know that phrase-like expressions can also function as names and are as such included in our lexical inventory:

*blauer Brief, grüner Tee, roter Wein, Mann von Welt*

Do compounds, compared to phrases, show a **preference** to be lexicalized as names?

How can this lexical affinity be **explained**?

Is the compounds’ lexical affinity reflected **cognitively**?

Are potential effects indeed related to the **difference** between compounds (“morphology”) and phrases (“syntax”)?

Or are there systematically **confounding factors** that we have to consider?
Roadmap

1. Differences in semantic compositionality
2. Cognitive differences and experimental studies
3. Summary
Hypothesis:

Novel compounds lose **descriptive properties** at their formation and begin to **specialize in meaning** immediately.

**Kind reference**

- A-N compounds allow kind reading **without previous lexicalization**
  
  (1) a. ?? *Die schwarze Hyäne ist ausgestorben.*
  
  b. *Die Schwarzhyäne ist ausgestorben.*

**Intersectiveness**

- A-N compounds allow **non-intersective readings** only
  
  (2) a. *ein schöner Tänzer*  
  → intersective: sb. who is beautiful
  → non-intersective: sb. who dances beautifully
  
  b. *ein Schöntänzer*  
  → non-intersective: sb. who dances beautifully

[see Barz 1996; Booij 2010; Bücking 2010; Egg 2006; Schäfer 2011; Schlücker 2012]
Temporal dissociation

- Compounds, in contrast to phrases, allow a **temporal dissociation** of the predicative better, see (2):

  (1) a. ??Nur einer der Rentner ist ein Baby.

  (2) a. ??Nur einer der Professoren ist ein Schüler mit Bestnoten.

In a nutshell:

- Novel phrases and compounds differ in their semantic compositionality.
- These differences can be associated with the naming function of compounds.

[see Rapp 2013]
Questions

- Are novel compounds processed differently in comparison to phrases?
- Are potential effects due to a **categorial difference** between morphological and phrasal products?
- What **confounding** factors do we have to consider?
Memorization study

Memorization of picture labels

**Learning** phase: subjects were asked to **memorize unknown picture labels** over three days (1, 4 & 8)

![Diagram](Compound)

![Diagram](Phrase)

**Recall** phase: subjects were asked to decide on correct / incorrect labels

![Diagram](Compound: learned)

![Diagram](Compound: not learned)

[see Kotowski et al. 2012, Böer et al. 2012]
Results
Neither type is memorized better over time \((p < .26).\)
Results

More pronounced learning effect for compounds:

- **not learned compounds** take longer to decide than phrases ($p < .001$)
- this difference disappears when the compounds are learned ($p < .67$)
- stronger effect of memorization for **compounds** ($p < .001$)

![LEARNED × ITEM TYPE interaction ($p < .09$)](chart.png)
Results

The effect is also reflected in the error rates:

- **Compounds profit** from learning, phrases don’t ($p < .75$)
- Compounds are decided **as correctly as phrases** when learned ($p < .99$)
A categorial difference?

Are these effects indeed a manifestation of a **categorial** and **functional difference** between compounds and phrases?

Or are they better explained by **problems of lexical segmentation / access**?

**Reading time study**

Non-transparent compounds require **longer reading times** than non-transparent phrases (presented in contexts like *Der Weitlehrer fürchtet Ina ...* )
Effects within sentences

Questionnaire study
Do novel AN-compounds modulate context effects of implicit verb causality?

Sentences containing psychological verbs and causal sentences:

(1) Exp-Stim verb: Max beneidet die Direktorin, weil sie/er …
    Stim-Exp verb: Die Direktorin fasziniert Max, weil sie/er …
(2) Phrase-Stim: Die flache Säge begeistert Christoph, weil …
    Comp-Stim: Johanna schätzt das Schmalmesser, weil …

Results
More causal attributions to Stim if it is a novel compound, compared to phrases:

<table>
<thead>
<tr>
<th></th>
<th>EXP</th>
<th>STIM</th>
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<tbody>
<tr>
<td>Total</td>
<td>177</td>
<td>314</td>
</tr>
<tr>
<td>Compound</td>
<td>80</td>
<td>168</td>
</tr>
<tr>
<td>Phrase</td>
<td>97</td>
<td>146</td>
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</tbody>
</table>

STIM vs. EXP (p < .0001)
COMPOUND vs. PHRASE (p < .09)
Compounds and kinds

We hypothesize a link between the **linguistic markedness** of novel AN-compounds and their affinity to express **kinds**.

**Questionnaire study**

Suitability ratings for contradictory AAN-complexes:

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**Results**

Main effect ($p < .0001$) compounds vs. phrases

[see Barz 1998]
Summary

- Generally, our results are compatible with a “separatist” view towards morphological structure building.

- Compounds have a naming function, which is reflected in their semantic compositionality. [slides 5 – 6]

- Experimentally, we have found indications for
  - a stronger memorization effect for novel compounds, [8 – 11]
  - enhanced impact of implicit verb causality with novel compounds, [13]
  - improved acceptability for contradictory AAN-compounds. [14]

- Confounding factors are associated with segmentation problems [12] as well as linguistic markedness. [14]

- The latter requires further investigation: Is linguistic markedness simply a by-product of word-formation or rather a constitutive feature?

Thank you.
Acknowledgements / Literature

Parts of this paper have been done in collaboration with Katja Böer and Peter Schöpperle (see Kotowski et al. 2013; Böer et al. 2012), to whom many thanks are due for discussion and valuable help. We are also grateful to Oxana Lapteva for the technical support.


