Morphological vs. syntactic composition
the case of nominal compounds

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Introduction

Why does a language have **morphology**?

Why do we need **compounds**?

- Classical answers refer to the **naming function** of compounds, which somehow represent a **category** / a **lexicalized** concept.
- In contrast, **syntactic phrases** are often claimed to provide **descriptions**.

Problem:

- Many compounds are not established names: *Freitagsentscheidung, Nacktprotest, Terroropa*
- Many phrases are established names: *Grüner Tee, Kleiner Tümmler, Deutsch als Fremdsprache*

Can we perhaps say that novel compounds are “**suggestions for lexicalizations**”, cf. Lipka (1977); Motsch (2004)?
What is the **cognitive status** of morphological products like compounds?

Are they **lexicalized differently**?

- I will argue that compounds indeed deserve a special **status as names** and are, as morphological products, **memorized more effectively** than phrases.

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1. **Linguistic differences between compounds and phrases**
   - Grammatical differences
   - Semantic-pragmatic differences

2. **Learning study: adjective-noun compounds**

3. **Conclusion**
Grammatical differences

Compounds display **lexical integrity**:

(1)  
\begin{itemize}
  \item a. Mia ist Fahrerin eines Audis.  
  \hspace{1cm} \textit{Der} hat nun einen Motorschaden.  
  \item b. Mia ist Audifahrerin.  
  \hspace{1cm} *\textit{Der} hat nun einen Motorschaden.
\end{itemize}

The internal structure of (synthetic) compounds is not accessible to **syntactic operations**:

(2)  
\begin{itemize}
  \item a. a drunk driver and a melancholic one  
  \item b. *a truck driver and an Audi one
\end{itemize}

Semantic-pragmatic differences

Compounds often denote **kinds**:

(1)  
   a. ??Eine Flasche mit Bier hat einen Kronkorken.  
   b. Eine Bierflasche hat einen Kronkorken.

Novel compounds are often **marked**.  
Thus they are compatible with **sogenannte-contexts**:

(2)  
   a. ??Das ist ein sogenanntes langes Messer.  
   b. Das ist ein sogenanntes Langmesser.

(3)  
   a. ??Das ist ein sogenannter Henkel der Vase.  
   b. Das ist ein sogenannter Vasenhenkel.

cf. Bücking (2009); Carlson (1977); Krifka et al. (1995); Schlücker & Hünning (2009)
Compounds often have a **specialized** meaning. For example, an **intersective reading** is dispreferred with A-N compounds:

(1) *Max ist ein schöner Raucher.*
   → Max is a smoker and beautiful (intersective)
   → Max is somebody who smokes beautifully (non-intersective)

(2) *Max ist ein Schönraucher.*
   → Max is somebody who smokes beautifully (non-intersective)

Compounds are different from phrases.

Does this give us reason to believe that they are treated differently from a cognitive point of view?

- Morphology as an economic way of producing and memorizing complex linguistic structures, see Wunderlich (2008)

- Williams syndrome: selective impairment for lexical computation/access with grammatical computation left intact, see Clahsen & Almazan (2000)

- Aphasic data: selective impairment for syntactic phrases like strange fever with compound retrieval left intact, see Mondini et al. (2002)

Are novel compounds memorized differently than the corresponding phrases?
Learning phase: subjects were asked to memorize unknown picture labels.

**Compound**
- *eine Kurzsäge*
- $N = 6$

**Phrase**
- *ein breiter Kamm*
- $N = 6$
**Recall** phase: subjects were asked to decide on correct / incorrect labels

**Compound: learned**

- eine Kurzsäge

N = 6

- eine Flachsäge

N = 6

**Compound: not learned**

Response variable: **reaction times** to decide
**Learning study**

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

- **Phrase: learned**
  - *ein breiter Kamm*
  - $N = 6$
  - ✅

- **Phrase: not learned**
  - *ein tiefer Kamm*
  - $N = 6$
  - ❌

Response variable: *reaction times* to decide
Entire procedure was repeated over three days:

H1: Compounds are memorized **differently** than phrases over time.
Results: main effects

- Learned items are decided faster ($p < .001$)
- You get better over time ($p < .001$)
- Phrases are decided faster ($p < .01$)
Learning study

ITEM TYPE × DAY interaction (*not significant*)

- neither type is memorized better over time (*p < .26*)
Learning study

LEARNED × ITEM TYPE interaction ($p < .09$)

- 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 ($p < .001$)
Learning study

Error rates: LEARNED × ITEM TYPE interaction ($p < .001$)

- **compounds profit** from learning, phrases don’t ($p < .75$)
- compounds are decided **as correctly as phrases** when **learned** ($p < .99$)
Main findings

(1)

(2)
The data support a lexicalist view, which implies a separation between syntax and morphology.

Novel compounds of the A-N type are linguistically marked, which makes their processing more difficult in comparison to phrases.

When compounds are memorized, this markedness effect is leveled.

For compounds a stronger memorization effect was detected.

We conclude that compounds are indeed better candidates for lexicalization.
Thank you.

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References


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