

An experimental view on the syntactic flexibility of German idioms

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This research is part of a cross-linguistic collaboration:

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Question: **What factors influence the syntactic flexibility of idioms?**

We present a study in which we manipulated the following factors:

- type of syntactic construction
- semantic decomposability of the idiom
- and context / information structure

→ The results are relevant for theories of **syntax-meaning mapping**.

Semantic decomposability — syntactic flexibility

Nunberg et al. (1994) claim that **decomposability** is the crucial factor for **syntactic flexibility** of **English idioms**. An idiom is decomposable if each constituent refers figuratively to an element of the interpretation.

- (1) a. The beans were spilled by Pat. → idiomatic
b. The bucket was kicked by Pat. → only literal



Semantic decomposability — syntactic flexibility

Observations about the syntactic flexibility of **German idioms**:

Some constructions also seem to be **limited to decomposable** idioms:

- *wh-movement, left dislocation* (Müller 2000)

But others seem to be able to **affect non-decomposable** ones:

- *passive* (Bargmann & Sailer 2015)

For some, it is **controversial**:

- *movement to the prefield* can affect non-decomposable items according to Ackerman & Webelhuth (1993), Müller (2000), Fanselow & Lenertová (2011) / only decomposable ones according to Frey (2005)

Crucial factor: syntax-meaning mapping?

A possible explanation for differences across languages and constructions:

Does the syntactic operation in any way affect/access the **individual meaning** of the displaced constituent?

- **Yes:** should work only for *decomposable* idioms
- **No:** should work even for *non-decomposable* idioms

Research questions

Our research questions:

- 1 Can it be confirmed that some syntactic operations can affect parts of **non-decomposable** idioms, and others can affect only parts of **decomposable** ones?
- 2 If so, is this due to the fact that the latter type of operation needs to access **the moved part's interpretation in isolation**?

Experiment: method design

We conducted an acceptability rating (1–7 scale) study with 41 participants and a $3 \times 5 \times 2$ design:

- **Factor 1: semantic decomposability** (within subjects)
non-idiomatic, decomposable idiom, non-decomposable idiom
- **Factor 2: syntactic construction** (within subjects)
canonical, object in the prefield, object left-dislocated, object scrambled, anaphoric control condition
- **Factor 3: context / information structure** (between subjects)
broad focus, polarity focus

Experiment: factor 1 — semantic decomposability

Factor 1: semantic decomposability. We selected 6 decomposable VPs (verb + direct object), 6 non-decomposable ones, and 6 non-idiomatic ones.

We backed up the intuitive categorization of the idioms based on the following criterion in a pilot study:

- Can the object be picked up by a pronoun? (if yes → decomposable)

(2) Peter threw in the towel, and Mary threw *it* in, too.

We included this *anaphoric control condition* again in the experiment to recheck our categorization.

Experiment: factor 1 — semantic decomposability

Non-decomposable idioms (V + DP-object):

den Garaus machen	'make the GARAUS'	kill
das Zeitliche segnen	'bless the temporary'	die
die Leviten lesen	'read the LEVITEN'	to tell somebody off
den Löffel abgeben	'hand in the spoon'	die
das Handtuch werfen	'throw the towel'	give up
die Sau rauslassen	'release the pig'	misbehave/party wildly

decomposable idioms (V + DP-object):

das Kriegsbeil begraben	'bury the hatchet'	end a conflict
den Braten riechen	'smell the roast'	suspect sth.
den Faden verlieren	'lose the thread'	lose track of the plot
den Laufpass geben	'give the run-pass'	break up with somebody
den Tiefpunkt erreichen	'reach the bottom'	be devastated
das Eis brechen	'break the ice'	overcome reticency

Experiment: factor 2 — syntactic construction

Factor 2: syntactic construction. We tested the following variants:

- (3)
- a. **Canonical word order** (unmarked):
Sie haben wohl das Handtuch geworfen!
they have apparently the towel thrown
'They apparently threw in the towel.'
 - b. **Object in the prefield** (contrastive, according to Frey 2005):
Das Handtuch haben sie wohl geworfen!
 - c. **LD** (usually assumed to host a topic):
Das Handtuch, das haben sie wohl geworfen!
 - d. **Scrambling above a particle** (topic, according to Frey 2000):
Sie haben das Handtuch wohl geworfen!
 - e. **Anaphoric control condition**

Experiment: factor 3 — context / information structure

Factor 3: context / information structure. We tested each item in two contexts. This also affected the form of the target answer.

Q1 **why-question:** *induces broad focus*

Peter and Mary used to fight for employee rights.
Why haven't I heard anything about that lately?

A1 Das Handtuch haben sie wohl geworfen!
'They threw in the towel!'

Q2 **polar question:** *induces polarity focus and allows for a contrastive/topical interpretation of the remaining material*

Peter and Mary used to fight for employee rights.
Have they given up?

A2 Nein, das Handtuch würden sie nie werfen!
'No, they would never throw in the towel!'

Experiment: factor 3 — context / information structure

The **polar question** allows to interpret the moved constituent as a **(contrastive) topic** in non-idiomatic cases. This has been argued to be a preferred interpretation of fronted/scrambled/left-dislocated constituents and should thus **raise the acceptability** of these constructions:

Q The landlords are angry at Peter. Did he lose the front door key?

A **Den Hausschlüssel** hat er bestimmt nicht verloren!
the front.door.key has he certainly not lost

Possible continuation:

...aber vielleicht **den Briefkastenschlüssel**.

'...but maybe the mailbox key.'

Experiment: factor 3 — context / information structure

Frey (2005) argues that this kind of interpretation is possible with **decomposable idioms**, too—even though it is difficult to spell out the contrast explicitly in this case, an alternative to a part of the idiom is in principle conceivable.

Q Peter looked so sad when he came back from his girlfriend's place. Did she break up with him?

A **Den Laufpass** hat sie ihm bestimmt nicht gegeben!
the run-pass has she him certainly not given

Possible continuation:

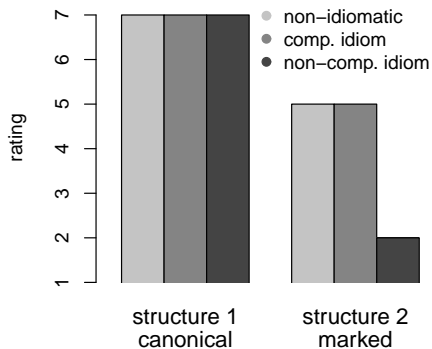
...aber vielleicht **was anderes**.

'...but maybe **something else**.'

→ Under this view, the polar question context should **facilitate** fronting of **decomposable** idiom parts, but **not of non-decomposable** ones.

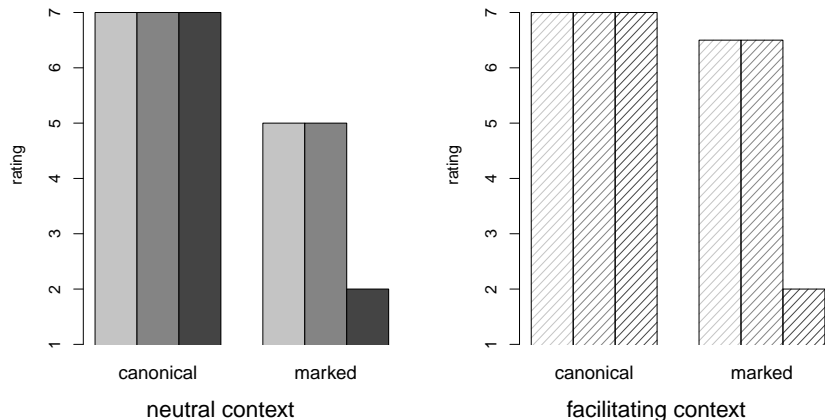
Experiment: predictions

Prediction 1: If it is true that some syntactic operations depend on decomposability, we should find an interaction between the two factors.



Experiment: predictions

Prediction 2: If the reason for this is that the operation requires a certain interpretation of the displaced part, providing a context facilitating that interpretation should only raise the acceptability of decomposable items.



Experiment: statistical method

We analyzed the results using a linear mixed effects model.

We used the following **contrast coding**:

- **Decomposability: comparison of adjacent levels.**

non-idiomatic *decomposable idiom* *non-decomposable idiom*

The diagram shows two horizontal brackets with arrows pointing to the right. The first bracket starts under 'non-idiomatic' and ends under 'decomposable idiom'. The second bracket starts under 'decomposable idiom' and ends under 'non-decomposable idiom'.

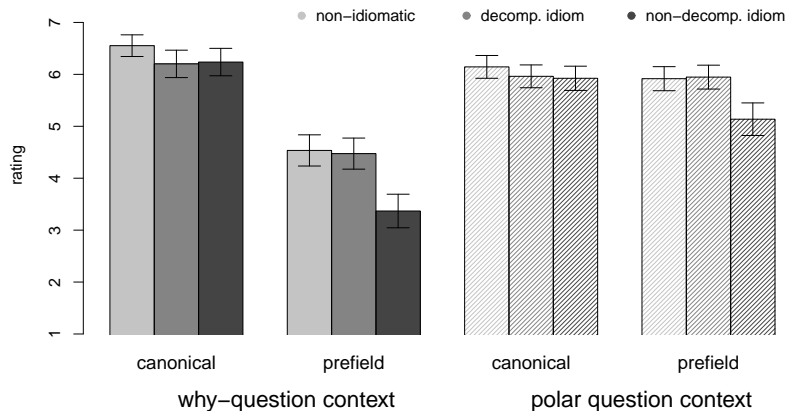
- **Syntactic construction: comparison to baseline.**

canonical *prefield* *LD* *scrambling* *anaphor*

The diagram shows four horizontal brackets with arrows pointing to the right. Each bracket starts under 'canonical' and ends under 'prefield', 'LD', 'scrambling', and 'anaphor' respectively.

- **Context: sum coding** (comparison of each level to the mean).

Experiment: results — canonical vs. object in the prefield

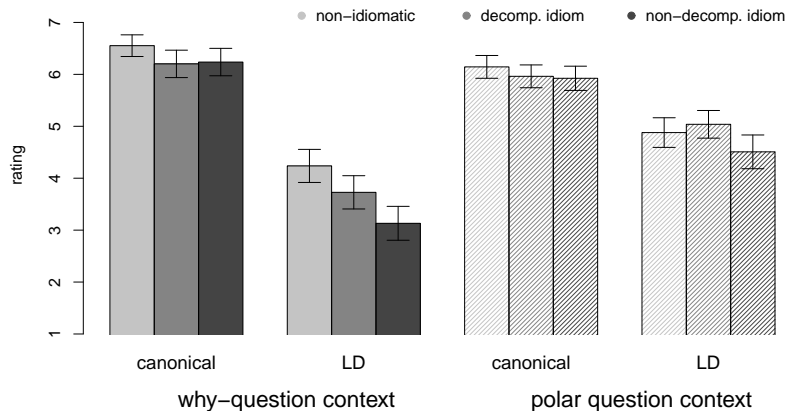


The acceptability difference between decomposable and non-decomposable idioms is significantly larger when the object is in the prefield than in the canonical baseline. This does not hold for non-idiomatic vs. decomp. idioms.

[canonical vs. prefield] × [non-idiomatic vs. decomp. idiom]: $t = 1.4$

[canonical vs. prefield] × [decomp. idioms vs. non-decomp. idiom]: $t = -5.4$

Experiment: results — canonical vs. left-dislocated object

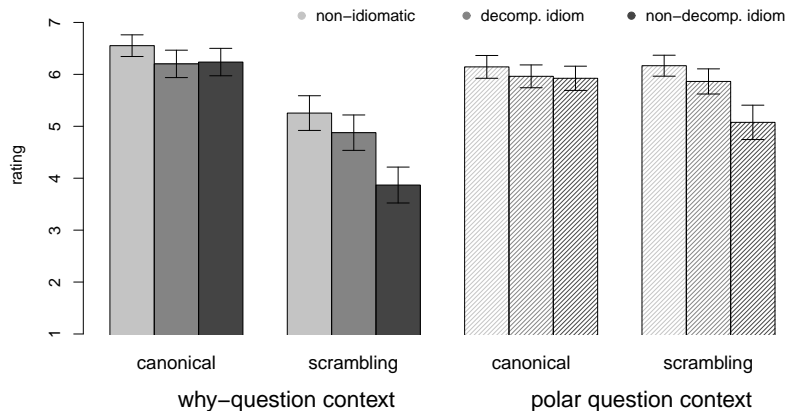


The acceptability difference between decomposable and non-decomposable idioms is significantly larger when the object is left-dislocated than in the canonical baseline. This does not hold for non-idiomatic vs. decomp. idioms.

[canonical vs. LD] × [non-idiomatic vs. decomp. idiom]: $t = 0.5$

[canonical vs. LD] × [decomp. idioms vs. non-decomp. idiom]: $t = -3.2$

Experiment: results — canonical vs. scrambled object



The acceptability difference between decomposable and non-decomposable idioms is significantly larger when the object is scrambled above a particle than in the baseline. This does not hold for non-idiomatic vs. decomp. idioms.

[canonical vs. scrambling] \times [non-idiomatic vs. decomp. idiom]: $t = -0.4$

[canonical vs. scrambling] \times [decomp. idioms vs. non-decomp. idiom]: $t = -5.1$

Experiment: results — context / information-structure

For all marked syntactic structures (prefield, LD, scrambling), the **polar question context reduced the acceptability difference** in comparison to the baseline condition significantly.

[canonical vs. prefield] × context: $t = 12.9$

[canonical vs. LD] × context: $t = 9.9$

[canonical vs. scrambling] × context: $t = 9.4$

The factor context did not enter any significant interaction with decomposability: the acceptability of non-idioms, decomposable idioms and non-decomposable idioms was **equally raised**.

Evaluation of the research questions:

- 1 Can it be confirmed that some syntactic operations can affect parts of non-decomposable idioms, and others can affect only parts of decomposable ones?
- **Non-decomposable** idioms indeed show **less syntactic flexibility** in our results. However, even dislocation of parts of non-decomposable idioms is **not categorically unacceptable**: in a suitable context, such structures can be as acceptable as > 5 on a 7-point scale.

Evaluation of the research questions:

- 2 If so, is this due to the fact that the latter type of operation needs to access the moved part's interpretation in isolation?
- The findings concerning the **context factor** put this explanation in question: if it held, providing a context in which the required interpretation is more easily available should facilitate dislocating parts of decomposable idioms, but not of non-decomposable ones.

Open questions:

- What causes the **degradedness of the non-decomposable idioms** in marked syntactic constructions, if it is not due not the need to access the moved part's interpretation?
- The polarity question context also raised the acceptability of the **anaphoric control condition**, which is unexpected. Did the context manipulation work as intended at all?

Summary

- Prefield movement, LD and scrambling in German are **less acceptable** when they involve a **non-decomposable idiom part** than when they involve a non-idiomatic or decomposable VP part.
- In polar question contexts, which invite a contrastive topic interpretation of the VP or the object, all the tested marked structures are more acceptable, **irrespective of decomposability**.
- **Possible interpretation:** An individual contrastive/topical interpretation of the dislocated element is not required.
- **But:** did the context manipulation work in the intended way?

- How do idioms behave with respect to constructions in **other languages** which are reported to be linked more closely to a particular interpretation (e.g. focus/topic position in Hungarian)?
→ ongoing cross-linguistic work on Hungarian and Serbian

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