

It's Not Just All in the Head Towards a Processing Model of Bracketing Paradoxes

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Bracketing Paradoxes

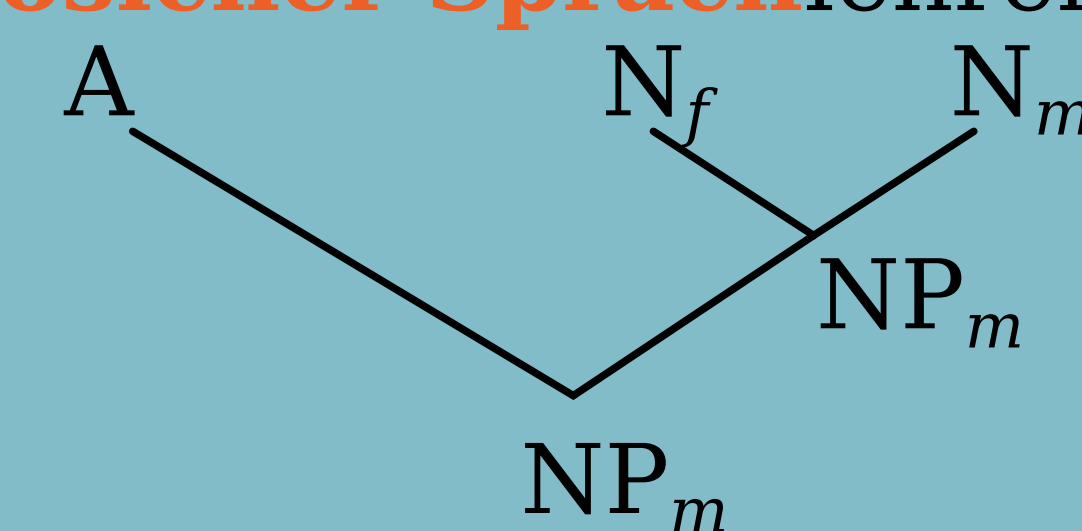
German compound nouns (*der Kirschbaum* 'the cherry tree') are common, productive, nearly unrestricted, may be structurally complex but are easy to interpret:

die Kirsch(e) 'the cherry' }
der Baum 'the tree' }

Adjective + nominal compound phrases can have two readings. The **canonical reading** is typical, grammatical, compositional (Frege 1892), and favored (1). The **bracketing paradox reading** is atypical, technically ungrammatical, possibly non-compositional, (Abramov 1992, Bergmann 1980), and attracts attention (2).

But some phrases are ambiguous or preferentially interpreted as a bracketing paradox (3)!

[[language.teacher]] **Französischer Sprachlehrer**
[[[language].teacher] **Französischer Sprachlehrer**



- (1) **Verrückter Chemieprofessor**
Crazy chemistry.professor
- (2) ?**Vierstöckiger Hausbesitzer**
Four.story house.owner
- (3) **Schwere Unwetterwarnung**
Severe storm.warning

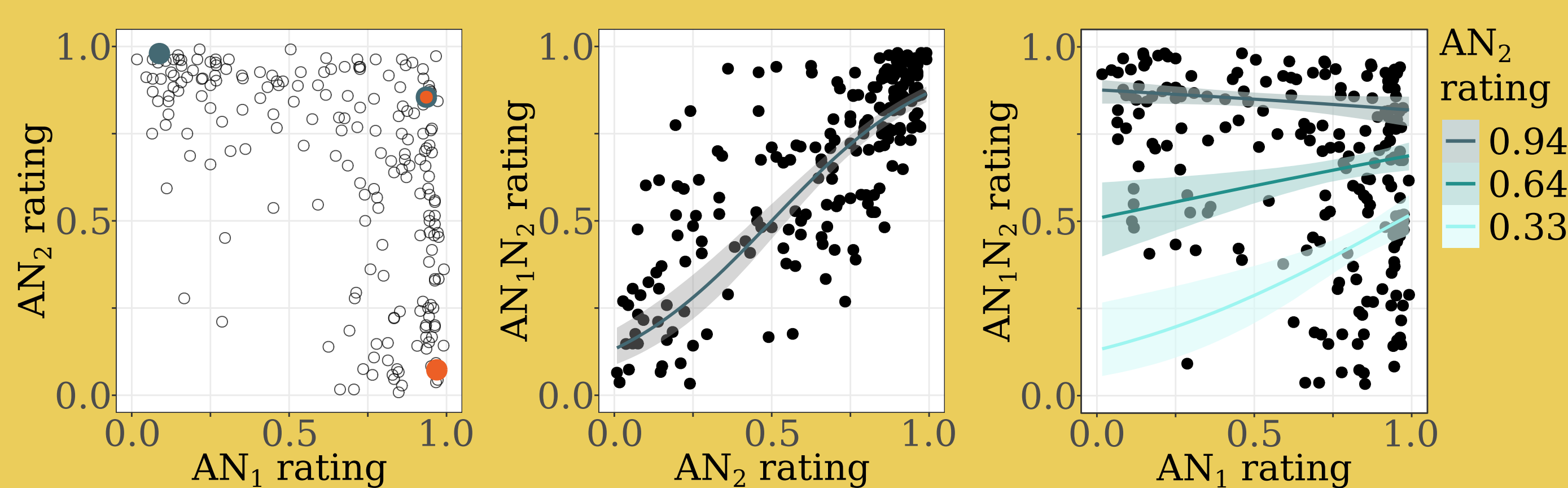
Why? Context, world knowledge, pragmatics, semantic adjective-noun compatibility, semantic transparency, morphosyntactic agreement, animacy, language economy, compound lexicalization, adjective type, ...

Experiment 1

Does semantic compatibility between the adjective and the individual nouns affect acceptability?

Online questionnaire, 36 participants, 204 AN_1N_2 compounds, 3 conditions, 3 lists, 1-5 scores for naturalness, comprehensibility, and stylistic form.
Bayesian Beta regression: AN_1N_2 ratings $\sim AN_1 \times AN_2$

Psychologische Beratungsstelle AN_1N_2
Psychological counseling.center
Psychologische Beratung AN_1
Psychological counseling
Psychologische Stelle AN_2
Psychological center

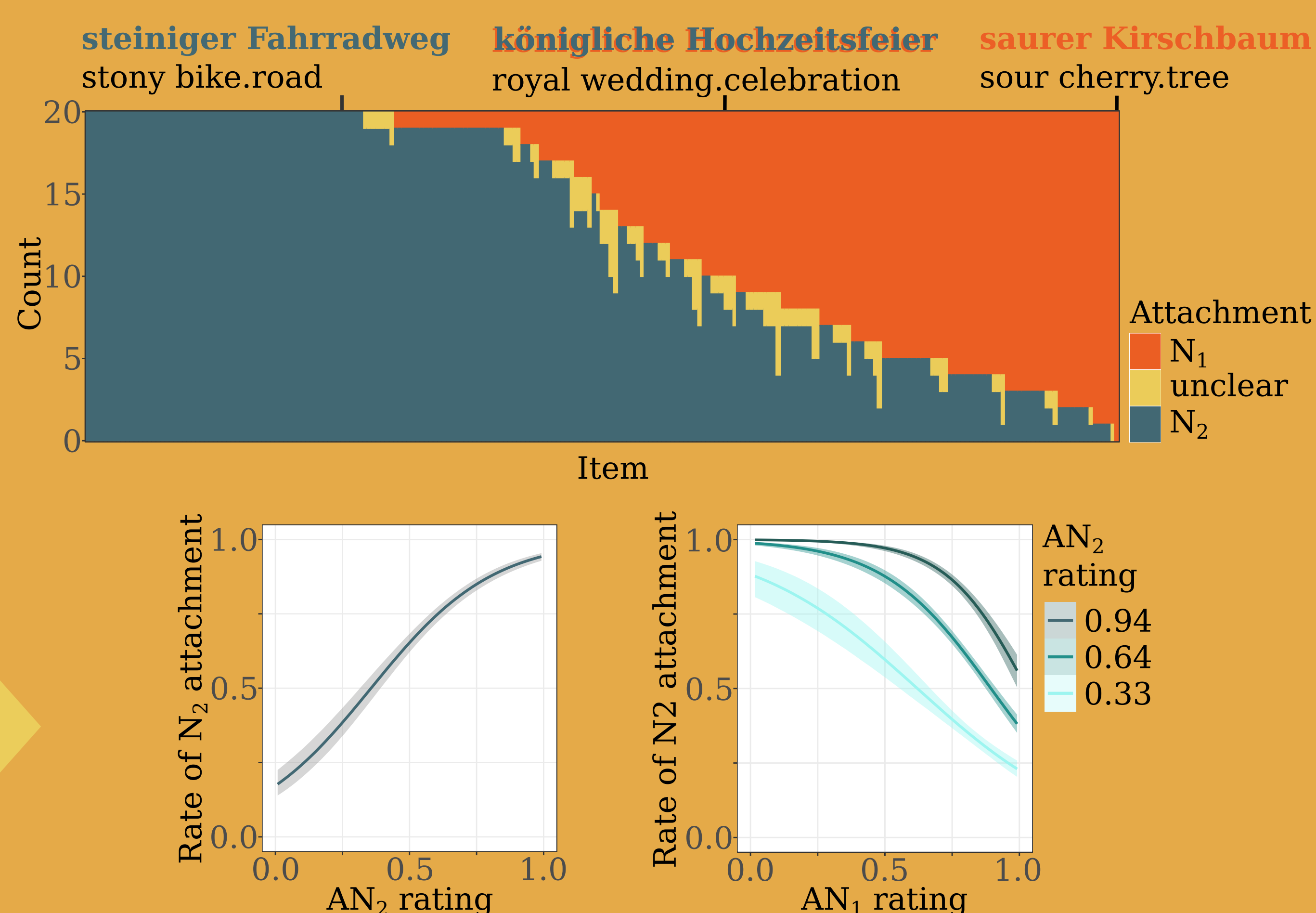


- High AN_2 ratings \rightarrow higher AN_1N_2 ratings
- High AN_1 ratings \rightarrow bit higher AN_1N_2 ratings
- Low AN_2 ratings \rightarrow AN_1 ratings have a strong positive effect
- High AN_2 ratings \rightarrow higher AN_1 ratings reduced AN_1N_2 ratings

Experiment 2

Which noun in a compound is modified by the adjective attribute?

Online questionnaire, 20 participants, 235 compounds, AN_1N_2 condition, 1 list, forced choice: N_1 or N_2 or unclear. Bayesian logistic regression: attachment site $\sim AN_1 \times AN_2$ ratings



- High AN_2 ratings \rightarrow more N_2 attachment
- Low AN_1 ratings \rightarrow more N_2 attachment
- Low AN_2 ratings \rightarrow high AN_1 has strong influence
- High AN_2 ratings \rightarrow AN_1 has weak influence

Summary and Conclusions

In German adjective + nominal compound phrases, the first noun plays an important role. It can become the adjective's modifiee if the (typically dominant) second noun is semantically unsuitable. Both nouns have a positive influence, but may compete for attachment. The preferences are unclear for many phrases, going against grammatical rules.

Compositional processing can be suspended to fulfill communicative goals, likely via semantic and pragmatic input.

