

Processing wordplay: Individual differences in wordplay affinity among German speakers

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Background: Wordplay is a key element of everyday communication [1], yet little is known about how puns and alike are processed and which role individual differences in cognitive resources, linguistic knowledge, socio-biographic factors and personality play [2]. It stands to reason that (an enhanced) *metalinguistic aware-ness* defined as “the ability to recognize and analyze language itself as an object of observation” [3] plays a central role because wordplay requires a pronounced attention paid to the formal shape of language [4]. The importance of linguistic form is mirrored in the definition of wordplay as the intentional manipulation of linguistic form across various levels (sublexical, lexical, textual), often entailing a humorous effect [5, 6]. Wordplay thus encompasses a broad spectrum of different types with the most typical case involving “linguistic units which are identical or very close in form but different in meaning” [7], often referred to as *pun* [8].

The study examines individual differences in pun processing. The first aim of the study is to make metalinguistic awareness in adults as a presumed key factor in wordplay processing empirically measurable. A challenge in this endeavour is that most metalinguistic awareness tests target children and adolescents, focusing on literacy and language development [9], with few recent studies on adults [10, 11]. A second aim is to identify predictors of *wordplay affinity* [12] which may explain why some individuals excel at wordplay. [13] suggest that good punsters are better in controlling a “homophone-allowing setting”, enabling them to keep similar-sounding words activated longer, even in mismatching contexts. Accordingly, [14] emphasizes the role of qualitative and quantitative differences in the activation spread to decipher wordplay processing.

The following research questions are linked to these two aims:

- RQ1. (How) can individual differences in metalinguistic awareness in adults be measured?
- RQ2a. Which aspects of metalinguistic awareness, which cognitive and linguistic abilities, socio-biographic factors and personality related aspects play a role in the processing of wordplay?
- RQ2b. Can individual differences be identified that suggest varying degrees of wordplay affinity?

Method and expected results: The test battery serves to capture individual differences in metalinguistic awareness (building on and expanding [11, 15–17]), cognitive abilities (e.g., executive functions), language abilities [16], socio-biographic parameters (e.g., hobbies), and personality traits (states and traits) [18, 19]. It will help to better understand the nature of wordplay affinity. Participants with varying degrees of expected wordplay affinity according to their daily language related activities (e. g., poetry slammers) will be recruited.

Experiment 1: Experiment 1 tests the “homophone-allowing setting” hypothesis with a lexical decision task in a priming paradigm. The prime is a homophone and the target is semantically related to one of the two homophone’s meanings, one of which is more dominant. Participants with higher wordplay affinity are expected to show a reduced meaning dominance effect as they activate both homophone meanings more automatically. They are expected to be more or less equally fast in both conditions.

Experiment 2: In a self-paced reading task, participants read sentences with homophones in neutral or biased contexts [see example on page 2]. Participants with higher wordplay affinity are expected to process the disambiguating region more or less equally fast in both contexts.

Example of an experimental item of experiment 2 (taken from [20]), homophone in bold, disambiguating region in italics:

- (1) Neutral context: The man with a toothache had a **crown** made by the best *dentist in town*.
- (2) Biased context: The king with a toothache had a **crown** made by the best *dentist in town*.

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