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The influence of formal and extralinguistic factors on the creativity of name-based word formation in German

This paper explores the creativity of name-based word formation in German using personal name blends (henceforth PN blends) as a testbed. PN blends emerge when (usually) two personal names (i. e., first names, second names, or nicknames) are combined. One or both name constituents are shortened, such as in *Renastian* < *Renate* and *Bastian*. In terms of their semantic and pragmatic properties, PN blends refer to both name bearers as a whole (e. g., as a couple) and are often used in headlines (cf. Filatkina 2019). By drawing on experimentally elicited PN blends, this paper investigates whether and how PN blends comprising first names with different formal and extralinguistic properties differ regarding the degree of their perceived creativity. Linguistic creativity is defined as a graded and complex phenomenon that must be operationalized on the basis of specific aspects for empirical analysis. Here, creativity is operationalized as a combination of the perceived originality assigned to PN blends and the recoverability of the name constituents underlying PN blends.

Since, to the author's knowledge, PN blends in German have not been investigated systematically regarding their formal, semantic, and pragmatic properties, the paper at hand presents a first step toward ascertaining the creativity of PN blends in German with the help of an experimental approach. Given the variety of formal, semantic-pragmatic, and extralinguistic factors that can influence the perceived creativity of PN blends, the paper focuses on factors related to the properties of German first names: the number of syllables in male and female first names (Nübling 2017) and the degree of familiarity of name constituents as an extralinguistic factor (cf. Zimmer 2018).

In this paper, we test the hypothesis that individual differences among language users regarding the frequency of exposure to PN blends affect the perceived creativity of PN blends in that PN blends comprising a canonical combination of two familiar (bisyllabic male + trisyllabic female) first names will be perceived as less original compared to noncanonical combinations of two unfamiliar (trisyllabic male + bisyllabic female) first names. Similarly, we assume that PN blends comprising a canonical combination of familiar names are easier to reconstruct than PN blends with a noncanonical combination of first names. The distinction between canonical and noncanonical combinations of name constituents results from the fact that most male names in German are bisyllabic, while most female names are trisyllabic (cf. Nübling 2017, p. 107).

To test these hypotheses, a rating experiment was conducted. The stimuli were obtained from a production task carried out with a different group of participants before the rating experiment. The ratings of the originality and recognizability of experimentally elicited PN blends were analyzed using statistical methods. The results were discussed with regard to their relevance for the research on linguistic creativity (cf. Bergs/Kompa 2020) and word formation creativity (cf. Körtvélyessy/Štekauer/Kačmár 2021).

1. Creativity of personal name blends in German

The starting point of this study is the concept of linguistic creativity and its operationalization for the study of linguistic creativity at word-formation level, especially in name-based word formation. Given the variety of definitions and the complexity of the term 'creative', linguistic creativity is defined as a combination of originality and effectiveness (Runco/Jaeger 2012). Effectiveness is further operationalized as the recognizability of name constituents in PN blends. The PN blends elicited in the production task (see below) can be defined as PN blends in which both first names are equivalent (e. g. *Renastian* from *Renate* and *Bastian*) in the sense that they have no modifier head structure and are similar to coordinative compounds (*Renate and Bastian*).

2. Rating task

The rating task investigated whether PN blends with name constituents that deviate from the typical formal characteristics (number of syllables in male and female first names) and extralinguistic properties (familiarity with the name constituents) of German first names are perceived as more original and whether their constituents are more difficult to recognize than those based on typical formal and extralinguistic characteristics of German first names.

The stimuli for the rating experiment consisted of PN blends elicited from name pairs (combinations of a male and a female first name) in a production task. The production task was carried out with a different group of participants before the rating task. The stimuli for the production task consisted of 16 name pairs (e. g. *Renate and Stefan*), formed from 16 male and 16 female German first names. The names were controlled for gender (male and female), syllable number (bi- and trisyllabic first names), and familiarity with the name constituents (familiar and unfamiliar first names). The production experiment yielded 2,752 tokens (31% hapax legomena). For each name pair, the most frequent PN blend was used as a stimulus for the rating task.

The rating task was conducted in a within-subject design. The stimuli were divided into four conditions based on the combination of familiarity (both name constituents familiar vs. both unfamiliar) and constituent order (canonical vs. uncanonical). Before the experiment, participants (n=64, 51 female, 13 male; mean age: 24.25 years) provided information about their use of social media as it is assumed that the more social media they consume, the more frequently they are exposed to PN blends. In the post-questionnaire, the participants' frequency of exposure to PN blends was tested through a multiple-choice question in which the participants had to select all PN blends they are familiar with from a list of PN blends.

In the rating task, the participants were asked the following questions: "Imagine that two people you know are called PN BLEND together. This name is created from the combination of their individual first names. Evaluate the PN blend with regard to the properties listed below: 1) I think the PN blend is: not original at all, not very original, neutral, rather original, very original. 2) I can recognize the two names from which the PN blend is formed: not at all recognizable, not that recognizable, neutral, partly recognizable, and fully recognizable. 3) In case you recognize the name constituents of a PN BLEND, what do you think the two names are?". We calculated both the number of predicted name constituents and the number of correctly predicted name constituents.

3. Main results

The results can be summarized as follows: The majority of originality ratings were 3 (neutral) and 4 (rather original), followed by 2 (not very original). For the rating of the recognizability of the name constituents, the rating value 1 (not at all recognizable) predominated. The mean value for the originality ratings was 2.88 and 2.31 for the recognizability of the name constituents. The differences in median values for originality and recognizability were statistically significant ($p < 0.05$, Shapiro-Wilk test for normality). There was only one statistically significant correlation ($p < 0.05$) between the ratings for the recognizability of name constituents and the total number of names that were correctly recovered, namely a moderately positive correlation ($rs = 0.67$). The results confirm the hypothesis regarding the distribution of originality ratings, because the mean value for the originality ratings of noncanonical name combinations with unfamiliar name constituents was 3.5, while in the other group (the canonical combination of familiar name constituents) the mean value of originality ratings was lower (2.92). The hypothesis that PN blends with a canonical combination of familiar names would have higher recognizability ratings and lower originality ratings compared to the PN blends with an uncanonical combination of unfamiliar names was also confirmed using the one-sided Wilcoxon signed-rank test for dependent samples ($p < 0.05$). Finally, to examine which factors influence the ratings of the originality and recognizability of name constituents, two linear mixed-effects regression models were fitted with the ratings for the originality and recognizability of name constituents as dependent variables. The regression model with recognizability as a dependent variable showed that PN blends with two familiar names have higher recognizability ratings than PN blends consisting of unfamiliar name constituents. Further factors that influence the recognizability ratings are the total number of correctly predicted name constituents (the higher the number of correctly predicted names, the higher the recognizability ratings) and the total number of predicted names (the higher the number, the higher the rating). For originality as a dependent variable, the regression analysis showed that only the familiarity of the name constituents has a significant effect on the originality ratings (unfamiliar name constituents lead to higher originality ratings than familiar names).

In sum, the statistically significant differences in originality and recognizability ratings between canonical and noncanonical name structures with different degrees of familiarity indicate that language users are aware of formal and extralinguistic differences in creativity ratings. The results also shed light on the question as to whether name-based word formation in German can be regarded as a creative reuse of the formal and extralinguistic properties of the name constituents (so-called fixed (f) creativity) or as innovation in the sense of enlarging (e) creativity (Sampson 2016). Formal deviations from the canonical properties of first names account for e-creativity, while the alignment with formal properties of name constituents can be assigned to f-creativity.

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