Creativity in name-based word formation: Evidence from the experimental study of personal name blends

Milena Belosevic
Bielefeld University

1 Introduction

Word formation units with proper names as constituents are often defined as creative, playful (cf. Beliaeva 2019) or extra-grammatical (cf. Mattiello 2013). Given the special formal and semantic properties of names compared to lexical units (cf. Anderson 2007), it remains unclear how name-specific aspects interact with speakers' linguistic experience in the production and processing of name-based word formation and whether this interaction contributes to their creativity.

The present paper aims to account for these issues by looking at the creativity of personal name blends (henceforth PN blends, e. g., *Brangelina* from *Brad* and *Angelina*). PN blends are a rather under-researched phenomenon that has not been systematically investigated on the basis of experimentally elicited data. Whereas recent studies on lexical blends (e.g., *brunch* from breakfast and lunch) provide evidence for their structural predictability regarding, for instance, the blend structure and the order of constituents, and put the creativity of lexical blending into question (cf. e. g., Gries 2012), the creativity of PN blends has not been investigated systematically.

Starting from the hypothesis that PN blends bear formal and semantic similarities with lexical blends and binomials such as *Romeo and Julia* (cf. Filatkina et al. 2019), PN blends are regarded as creative if they deviate from the properties of lexical blends and binomials. In particular, the creativity of PN blends is operationalized in terms of a deviation from the conventional constituent order in lexical blends and binomials. In this regard, the hypotheses about the regularities regarding the order of constituents in lexical blends proposed by Kelly (1998) are tested on experimentally elicited PN blends. As it will be shown, the results indicate that PN blends are rather not creative since language users tend to conform to the order of constituents underlying binomials and lexical blends.

2 Name blending

In this paper, a schema-based approach to blending (cf. Kemmer 2003) is adopted according to which PN blends emerge from cognitively entrenched patterns of experience with the order of constituents in lexical blends, binomials, but also in very frequent PN blends such as *Brangelina* or *Bennifer*. The paper is concerned with ascriptive PN blends in which both names are equally important semantically (cf. *Brangelina*). They do not bear a modifier-head structure and are similar to coordinative compounds (cf. Kotowski et al. 2021).

To test whether name constituents in PN blends deviate from the conventional order of constituents and can be defined as creative, the paper draws on the study of the constituent order in lexical blends provided by Kelly (1998). Kelly's approach is suitable for testing the creativity of PN blends for two reasons: The definition of lexical blends as contractions of conjunctive phrases (cf. Kelly 1998) allows for a comparison between lexical blends and ascriptive PN blends. Furthermore, Kelly's study is explicitly concerned with the interaction between linguistic and non-linguistic factors in ordering the blend constituents and therefore allows it to account for the above-mentioned issues regarding the interaction of name-specific and linguistic factors in the formation of creative name-based units. His study focuses on three

factors: the syllabic length of constituents, the frequency of constituents, and their prototypicality. The following two hypotheses regarding the conventional order of lexemes in lexical blends are proposed: 1) Shorter and more frequent constituents of lexical blends occupy the first position. 2) More prototypical, more frequent, and shorter constituents occupy the first position in lexical blends. In this paper, prototypicality is operationalized using the concept of familiarity with name constituents in that familiarity with names is considered a complex phenomenon comprising both frequency and prototypicality (cf. Zimmer 2018 for a similar operationalization). Apart from the syllabic length of name constituents, the (biological) gender of name bearers as a name-specific factor has been included in the analysis.

3 Production experiment

Since to the author's knowledge, experimental studies on PN blends in German do not exist and corpus data do not allow for controlling single factors, a production experiment was conducted to test the following hypotheses regarding the order of name constituents in PN blends:

- Hypothesis 1: Familiar, male and shorter names are preferred in the first position over unfamiliar female and longer names.
- Hypothesis 2: Familiar male names occupy the first position compared to unfamiliar female first names (given the same syllabic length of both names).
- Hypothesis 3: Familiar and shorter first names occupy the first position compared to unfamiliar and longer name constituents (given the same gender of name constituents).
- Hypothesis 4: Male and shorter names occupy the first position (if both constituents are familiar or unfamiliar).

Note that the “male first”- hypothesis has been derived from the studies on constituent order in binomials (cf. Cooper & Ross 1975: 65). PN blends that correspond to hypotheses 1 to 4 are regarded as conventional/rather not creative in terms of the constituent order. Otherwise, they are regarded as creative.

3.1 Stimuli, participants and procedure

The stimuli comprised 56 name pairs (e.g., *Stefan and Renate*, *Lisa and Salihe*, *Torsten and Gratian*) formed from 16 male and 16 female first names. The names were controlled for the following factors: gender (male and female), syllabic length (bi- and three-syllabic names), and familiarity with name constituents (familiar or unfamiliar). In both groups, eight first names were disyllabic (four male and four female) and eight were three-syllabic (four male and four female). Familiar and unfamiliar names were selected from the list of the 50 most familiar and most unfamiliar first names in Germany. The list is a result of a rating experiment conducted as a part of a longitudinal study “The image of names”[1].

Since female and male first names bear different formal properties in German, the stress position, length (in terms of the number of syllables, distribution of vowels and consonants, and final position were controlled using the gender index for first names in German (cf. Nübling 2017). Note that, in German, only first names indicate biological gender. The syllabic length of names (bi- and three-syllabic) is based on the fact that the average length of prototypical German male first names is 1.92 compared to the average length of female names (2.54 syllables, cf. Nübling 2017: 107). The items were grouped into four conditions so that in each condition the interaction between two variables was investigated and one variable was controlled: 1) familiar

[1] Cf.: https://www.onomastik.com/Vornamen-Lexikon/feature_ranking.php?feature=1&gender=

male disyllabic name + unfamiliar female three-syllabic name, 2) familiar male name + unfamiliar female name (same length), 3) disyllabic familiar name + three-syllabic unfamiliar name (same gender), 4) disyllabic male name + three-syllabic female name (same familiarity).

45 students (73 % native speakers of German and 27 % bilinguals, 80 % female and 20 % male) enrolled in the Linguistic programme (average age 24.1 years, SD = 3.6) participated in the experiment. As reported in a post-questionnaire, the majority of participants (80 %) had experience with lexical and name blends. Each participant was exposed to all 56 items in all four conditions. To minimize the effect of the order of presentation, the participants were divided into five groups of nine. In each group, the order of conditions and items varied. The participants were asked to build a new name from name pairs presented in the context assumed to be typical of PN blends, namely a romantic relationship, by shortening both names or only one of them without adding new letters. Although the definition of blends provided in section 2 was a part of the instructions given to participants, the term *blend* was not explicitly mentioned in the task description. The task was performed as a web experiment without time pressure.

3.2 Results

The production study yielded 2752 tokens (31 % hapaxes). Blends that did not comprise the beginning of the first and the ending of the second name (cf. Gries 2012: 146 for lexical blends), such as *Nihanna* from *Nina* and *Johannes*, or so-called clipping compounds (*Chrisle* from *Christofer* and *Lena*) were excluded from the analysis so that 2193 tokens (38 % hapaxes) were investigated. The blends were manually annotated for the order of constituents, the gender of names (male or female), their length (di- or three-syllabic names), and familiarity (familiar or unfamiliar). Afterwards, each condition was analysed using Pearson's chi-square test for goodness of fit to measure whether the difference between the observed distribution of name order and a random distribution is statistically significant.

First names that are familiar, male and disyllabic (e.g., *Martin*) are placed in the first position in 60 % over unfamiliar, female and three-syllabic names (e.g., *Salihe*) that occupy the second position (cf. hypothesis 1). The distribution of conventional and nonconventional variants is statistically significant ($\chi^2 = 9.8$, $p = 0.001$, $df = 1$).

Regarding the second hypothesis, PN blends with a familiar and male name in the first position (e.g., *Christide* < *Christofer and Hamide*) occur in 50 % compared to the unconventional variants with an unfamiliar female name of the same length in the first position, e. g., *Hamofer*). However, this distribution is not statistically significant ($\chi^2 = 0.01$, $p = 0.89$, $df = 1$) and the preference for the conventional form does not account for cases where both names are disyllabic.

The preference for the more familiar and shorter constituent has been confirmed for the combinations of two names of the same gender but different familiarity and length (e.g., *Torstian* vs. *Grasten* from *Torsten* and *Gratian*, hypothesis 3). The conventional order of name constituents occurs in 57 %, a familiar and disyllabic name occupies the first position more frequently than an unfamiliar three-syllabic name. Although the distribution of a conventional and nonconventional constituent order is statistically significant ($\chi^2 = 10.5$, $p = 0.001$, $df = 1$), it is only true if both names are male.

When familiarity is controlled, a male shorter name occupies the first position in 60 % compared to a female longer name constituent (e.g., *Stenate* wins over *Refan* < *Stefan* and *Renate*), confirming the fourth hypothesis. This distribution is statistically significant ($\chi^2 = 7.08$, $p = 0.007$, $df = 1$).

To sum up, the production study yielded that participants rarely deviate from the conventional constituent order in binomials and lexical blends so that PN blends cannot be regarded as creative in the sense of the definition provided in section 1.

4 Conclusions and outlook

This paper presented the results of a production study investigating the creativity of name-based word formation in terms of speakers' preference for a conventional or nonconventional order of name constituents in PN blends. The study of the interaction between linguistic factors (syllabic length of names) and non-linguistic (name-specific) factors (familiarity with names and the gender of name bearers) based on hypotheses about the conventional order of lexemes in lexical blends proposed by Kelly (1998) did not yield evidence for the status of PN blends as creative word-formation units from the perspective of the preferred constituent order. Furthermore, it can be concluded that not only the constituent order but also the blend structure are similar to the formal properties of lexical blends (ca. 80 % bearing the structure typical of lexical blends, i. e., the beginning of the first and the end of the second constituent). Finally, evidence for the interaction between name-specific aspects and speakers' linguistic knowledge is evident from the fact that the conventional order is constrained by name-specific properties, such as the gender of name bearers (cf. hypothesis 3). Future studies should address the role of extralinguistic factors related to the properties of language users, such as age and linguistic experience with blending. Given that Kelly's study included a limited number of variables, the interaction between further linguistic factors (e.g., the preference for particular switch points and transparency grades in combination with contextual factors) and extralinguistic aspects should be investigated to gain a more complete insight into the mechanisms underlying the formation of PN blends.

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