C Dynamics of Creativity and Routine in Synchrony

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More than Just Formal Deviation

Creativity and Routine in Name-Based Lexical Patterns

Abstract: Being creative with language means doing something in a new way that has some advantage for conveying socio-pragmatic, contextual, or lexical information. The paper discusses two name-based lexical patterns in German that exemplify the interplay between creative language use and routine in word formation. Both patterns are instances of nominal compounding. The first consists of a proper name modifier and a common noun head (PN compounds, e.g. *Merkel-Besuch* 'Merkel visit'), the second of two identical proper names or common nouns forming proper names (Name-ICCs, e.g. *foto-foto* 'photo photo' [company name], *sabinesabine* [online forum user name]). We analyze data from historical and present-day German corpora to investigate the diachronic and synchronic development of the patterns. We argue that creative language does not necessarily have to be particularly artistic or eye-catching, but that the mere copying of form or even changes that only affect semantics or function can also be considered creative.

1 Introduction

One area in which human creativity is readily apparent is language. Especially when speakers are faced with the task of naming new things (or renaming old things), we can see how human creativity uses the language system to make the naming process successful. We show that linguistic creativity need not involve elaborate changes in form–it may also consist in purely semantic changes or even simple repetition.

This paper deals with name-based nominal compound patterns in German. These compounds have at least one proper name as a constituent. For example, the compound *Shetlandpony* ('Shetland pony') consists of the proper name *Shetland* as the first constituent and the common noun *Pony* as the head, referring to horses of a particular breed. Another example is *Kennedybrücke* ('Kennedy

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bridge'), which is the name of a particular bridge named after President Kennedy.[1] There are also compound patterns where both constituents are proper names, e.g. *Anna-Lena* (first name) or *Nordrhein-Westfalen* (name of a federal state of Germany).

As can be seen from these examples, nominal compounds containing proper names might either be proper names themselves (e.g., *Anna-Lena*, *Kennedy-Brücke*) or common nouns (e.g., *Shetlandpony*). Compounds that are proper names may also consist of two identical proper names, e.g. *Baden-Baden* (name of a German city) or *sabinesabine* (online forum user name). Finally, there are also compounds that are proper names although the constituents are common nouns, both with different and identical constituents, e.g. *Feldberg* ('field mountain', a mountain name) and *foto-foto* ('photo photo', a company name). The latter type is thus rather name-related than name-based in the strict sense. Nevertheless, we will include formations with identical common noun constituents in our study, as they are particularly interesting with regard to the topic of the study.

The formation of name-based lexical patterns can provide valuable insights into understanding linguistic creativity. Being creative with language is a balancing act: speakers may want to try something new, but at the same time they want to be understood and achieve a communicative goal. The two case studies show how this can work, and that creative use of these patterns does not necessarily lead to new routines.

We first set out our understanding of creativity and routine (Section 2). We then present two case studies (on proper name compounds and compounds with identical constituents) that illustrate the interplay of creativity and routine in word formation (Section 3) and discuss them against the background of the theoretical assumptions on linguistic creativity (Section 4), followed by a summary of the findings (Section 5).

2 Creativity and Routine

Defining creativity is at least as difficult as defining language. Previous definitions of various linguistic areas have quite diverging conceptions of creativity. Some see creativity as an individual ability, while others regard it as emerging through interaction with interlocutors or as the result of social processes. Creativity is also treated alternatively either as a process or an outcome.

1 In addition, the proper name constituent may also appear as the compound head, e.g., *Helicopter-Cem* 'helicopter + Cem (first name of a German politician)', cf. Belosevic (2022).

When creativity is related to word formation, two conditions are usually assumed: first, something must be new, and second, it must be useful in some way (e.g., Stein 1953: 311; Sternberg and Lubart 1999: 3; Runco and Jeager 2012). This implies the act of foregrounding or defamiliarization: the modification of a pattern causes the newly created to stand out in some way, because something known has been made unknown through language. The defamiliarization realizes Jakobson's poetic function of language, since it leads to "a focus on the message for its own sake" (Jakobson 1960: 356).

In the following, we focus on the approach by Jones (2015). His definition of creativity includes four aspects: (1) The material from which people create things. (2) The cognitive processes that make linguistic creativity possible in the first place. (3) The social processes that are essential to linguistic creativity. (4) The result of the three aspects mentioned above, namely what has been created, such as a text, an action, or words. We will take a brief look at these four parts of this "creativity map" (Jones 2015: 1) and relate each to the domain of word formation.

First of all, there is the material to which creative processes are applied, the elements with which speakers can be creative, and the rules they can deviate from, that is, the routine. The term routine is understood as the set of rules that determine a pattern and is used to refer to the opposite of creativity. In terms of word formation, using a word that has come to life through routine means not being creative.

The second part of Jones' analysis concerns the cognitive processes that determine that speakers do not always follow the routine, but deviate from the rules from time to time. Speakers know the word formation routines and can modify them creatively. Schmid (2014) and Smith and Mackie (2000) suggest that this linguistic knowledge is ultimately based on association and that all linguistic structure is based on this general cognitive process. Linguistic knowledge is a network of more or less routinized associations. The strength of the associations is facilitated by routine, which in turn is facilitated by repeated processing. Speakers can choose whether to use a routinized word formation pattern (a choice for semantic transparency and compositionality) or to modify it (a choice for economy of expression since a new meaning has been added that would otherwise have to be expressed in a different way, see Körtvélyessy, Štekauer and Kačmár 2021: 1018). When a speaker forms new words based on a modified pattern, they are more difficult to interpret. Both the words and the underlying pattern are new and require a transfer effort on the part of the addressee. However, patterns are linked by associations, and deviations from routine are often understandable despite the modifications.

The third part is the social processes that, in addition to individual personality traits such as extroversion and intelligence (Hoffmann 2018; Kandler et al. 2016) give rise to linguistic creativity and the space in which creativity is applied. Social processes are a major reason why speakers deviate from the rules at all since this can

be advantageous. Extravagance and expressivity play an important role here. The term extravagance is linked to originality and creativity (Ishiyama 2014; Ivorra Ordines 2023) since it emphasizes the speaker's conscious attitude to be creative. Extravagance corresponds to Keller's (1994: 139) maxims to "talk in such a way that you are noticed" and to "talk in an amusing and funny way". Forming words in an extravagant way leads to expressivity (e.g. Hopper & Traugott 1993), a term that focuses on the linguistic forms themselves. Expressivity in turn serves sociopragmatic demands (Schmid 2020: 78). Sometimes speakers are successful when they play with the linguistic material (or imitate peers who do so), e.g. for social reasons such as negotiating identities and social relationships within a peer group (Maybin and Swann 2007: 512). Creativity is therefore always interactional, jointly constructed, and subject to historical and cultural references. In addition, according to Maybin and Swann (2007: 513), there is a critical-analytical dimension: creative language is necessarily evaluative and the creative episodes have the potential for deeper critique (developing shared critical standpoints and values, playing with authorities, etc.).

The fourth and final element of linguistic creativity is the outcome of the creative process, that is, what has been created. Here, however, we encounter problems that are not trivial to solve. The crux of Jones' descriptive approach is to define what must be present in order for the outcome of the whole process (a word formation, an interaction) to be considered creative.

Admittedly, regarding word formation, this way of defining linguistic creativity only shifts the problem. On the one hand, one can ask at what point something can be considered new, and on the other hand, one can ask what exactly is new.

Regarding the first question, it can simply be assumed that something is new if its frequency in the respective database is zero up to a certain point and is greater than zero afterward. In other words, something was not there before and is there now. Hohenhaus' (2005) approach goes in this direction. He considers a word formation to be new if it is actively formed by a speaker and not retrieved from the "storage of already existing listemes in the lexicon" (Hohenhaus 2005: 364).

Regarding the second question, either the words themselves or the patterns from which they emerge can be new. Hohenhaus assumes that if the words themselves are new, one can already speak of creativity. According to this view, novel formations are per se creative, even if the new word is based on a very frequent pattern. This is in line with an onomasiological point of view according to which speakers choose one expression out of many to respond to the need to name something and in this way achieve their communicative goals (Körtvélyessy, Štekauer and Kačmár 2021: 1022). Furthermore, Pennycook (2007) sees creativity not so much as a change of linguistic material, i.e. that a new form has been created, but that this form is placed in a different context. Since language is always multimodal, it can be assumed that, for example, a lexeme also contains information

about the contexts in which it is usually used. Here, "new" refers more generally to all aspects belonging to a linguistic unit. In the case of a creatively used word, this also includes aspects such as the situations in which it can be used or the addressees who have to interpret the word. Creativity, then, is simply "a new way of doing something" (Jones 2015: 5), and in terms of word formation, it concerns either the form of a word, its meaning, or its use.

However, we take a different approach in this regard. To us, word formation creativity does not mean that a new word has been created, but that a new pattern, i.e. a conventional pairing of form and meaning, has been created that has an advantage over existing patterns. Thus, we define word formation creativity as referring to the patterns themselves, not to the words. Creativity does not occur when a new word is coined, but when speakers begin to bend the rules or apply them in alternative ways.

So for instance, given the frequency and regularity of noun-noun compounding in German, a newly coined compound such as *Ampelmaut* ('traffic light toll', i.e. toll to be paid when stopping at a traffic light) would not be unusual or surprising, and may not even be perceived as new by the recipient. The underlying pattern is productive but not creative and rather satisfies the recipient's need for comprehensibility. Speakers have linguistic knowledge about the patterns they have encountered before and how often they are used. Therefore, it is not the routine formation of a word that is creative, but the deviation from the routine and the modification of existing patterns. In this way, the pattern itself must be new/unexpected and useful. In other words: speakers do not simply choose one expression among many to respond to the need to name something but they create an entirely new way of responding. If they are successful, i.e. if the new way they have formed a word is useful, other speakers may come up with novel words in a similar way and the innovations may spread.

An example of creative word formation that has led to a new pattern is the *i*-derivation in German. Although *i*-suffixation has existed since Old High German (cf. Henzen 1965: 143), it was long restricted to the function of coining hypocoristic personal names and kinship names, which also formed the bases for the suffixes (e.g., *Robi* as a short form of the first name *Robert*; *Mutti* as a short form for *Mutter* 'mother'). Fleischer (1982: 201) assumed that common noun bases (with a few exceptions such as *Ami* as a short form for *Amerikaner* 'American citizen') do not exist in the written language. Köpcke (2002), on the other hand, points to a more recent development, according to which *i*-suffixes also combine with common nouns as well as adjectival and verbal bases. These formations also have a hypocoristic or joking meaning and the pattern is now very productive (cf. also Fleischer and Barz 2012: 214), e.g. *Ersti* ('freshman', from *Erstsemester* 'first semester'), *Blödi* (friendly scolding for a stupid person; from the adjective *blöd* 'stupid').

Thus, in the case of the *i*-derivation, the original pattern was modified and became much more productive since.

Our definition of word formation creativity follows the approach of Munat (2015: 93), Lieber (2010), and others, who clearly contrast word formation creativity with productivity. Word formation creativity is the ability to intentionally coin a new word on a new/modified pattern. Whereas productivity is a rule-governed routine, creativity is a deviation from the routine. Sometimes creativity is regarded as an extragrammatical process and creative morphology accordingly encompasses phenomena such as blends, acronyms, reduplicatives (Mattiello 2013). For Ronneberger-Sibold (2012: 16), language creativity is "not only the coining of entirely new words not based on any previously existing linguistic elements but includes all operations for the production of new lexemes which are not covered by regular word formation". Similarly, according to Bauer (1983: 63), productivity is the formation of new words by the application of the rules of grammar, while creativity is "the native speaker's ability to extend the language system in a motivated but unpredictable (non-rule-governed or irregular) way".

According to Bauer (2001: 64) this distinction between creativity and productivity in language is gradual because creativity is also rule-related. When speakers use a lexicalized word, they act more routinely and less creatively than when they form new words on the basis of a highly productive word formation pattern, such as noun-noun compounding in German, which in turn is less creative than when they form words on the basis of a less productive pattern such as blending (Ronneberger-Sibold 2012). Language creativity is thus "a graded phenomenon ranging from the more conventional and predictable to the less conventional and unpredictable" (Kecskes 2016: 3).

To sum up, the creativity of a word formation pattern is determined by the properties of that pattern and the degree of awareness with which the corresponding expressions are formed. As in the definitions above, creative use of language is intentional and fulfills an expressive function so that the speaker stages the expression for the audience to recognize it.

Creativity in word formation is worth examining empirically. According to Langlotz (2015), people's creative potential is directly reflected in their language structure and use. There is empirical evidence that the general tendency towards routine correlates negatively with the creative strengths of language participants and that this is particularly true for word formation tasks (Körtvélyessy, Štekauer

and Kačmár 2021).[2] It is therefore interesting to see how speakers overcome the routine, modify familiar patterns and use them in unexpected, creative ways as well as to see which innovations are here to stay and which are transitory. Schmid (2014: 246) compares this spread of linguistic innovation to the spread of a disease or a virus. The question of whether modifications lead to the development of new routines is therefore an inherently diachronic one.

In the following, we discuss the diachronic development of name-based and name-related compound patterns in German. The first study deals with modifications in the period from 1600 to 1900 while the second study examines modifications that are currently underway. We show that modifications are not limited to the formal properties but that they also include semantic-functional properties. In addition to the corpus data that form the basis of our study, we also use metalinguistic information of various kinds, where accessible, to assess the social and expressive impact of the modifications.

3 Case Studies

3.1 Nominal Proper Name Compounds

The first pattern to be discussed is nominal compounding with a proper name as the left constituent and a common noun as the head, here referred to as proper name (henceforth PN) compounding, e.g. *Nilfahrt* ('Nile ride'), *Kosovo-Konflikt* ('Kosovo conflict'). The pattern also includes formations with phrasal names such as *Louis-Armstrong-Lied* ('Louis Armstrong song'). In this case study, we focus on the period from 1600 to 1900. This period shows a clear increase in frequency of PN compounds which can be associated with semantic and functional modifications of the pattern, through which the range of possible uses becomes larger. At the same time, extravagant effects also seem to play a role in this. As mentioned in Section 1, PN compounds are either proper names themselves (onymic type; e.g. *Kennedybrücke* 'Kennedy bridge') or common nouns (appellative type; e.g. *Shetlandpony* 'Shetland pony'). This functional dichotomy is crucial for the question of creativity and the emergence of new routines.

2 The authors use a standardized method to determine a person's creative strength (*Torrance Test of Creative Thinking*) and investigate the extent to which this is related to the word formation behavior of the test subjects. As a result, creative potential, i.e. the ability to develop novel and useful ideas (divergent thinking ability), appears to be related to the way in which individual language users coin new words.

Onymic PN compounds have already been used since Old High German, in particular place names, e.g. *Neckarburg* ('Neckar castle', name of an early medieval castle near the river Neckar), cf. Bach (1953), for instance. Thus, the formal pattern of PN compounding is without doubt a very old and native lexical pattern of German. At the same time, appellative PN compounds are quite rare. A few examples of appellative PN compounds are given in the Middle High German grammar by Klein, Solms, and Wegera (2009), e.g. *kipperwīn* ('Cyprus wine'), *rōmvart* ('Rome trip'). (Note that even though these compounds are not place names, they also have a local meaning.) In contrast, in present-day language, appellative PN compounding is a very productive pattern (cf. Kosmata in prep.) and is not restricted to place reference and location, e.g. *Merkel-Besuch* ('Merkel visit'), *Bunsenbrenner* ('Bunsen burner').

The study by Schlücker (2020) indicates that the period 1600–1900 is crucial both for the increase in frequency of the pattern as well as for its functional expansion. More specifically, it can be argued that these two changes are interrelated. The study is based on data from the DTA (*Deutsches Textarchiv*) corpus. A total of 15,765 tokens (3,783 types) were collected.[3] Of these, 6,162 tokens were annotated and serve as the basis for the study.[4] The period investigated is divided into six time periods of 50 years each. Table 1 shows a continuous increase in type and token frequency, especially a rapid increase in the second half of the 19th century. Even if some reservations are in order because the basic size of the corpus is not totally balanced and because of the sampling procedure (so that it does not make sense, for example, to calculate a type-token ratio; see Schlücker (2020: 244) for more details), these numbers nevertheless show that the pattern of PN compounding is continually being expanded by new formations.

A closer look at the data reveals that both the onymic type and the appellative type occur in each period and that both are increasing in frequency. However, there is a clear shift in the relative frequency of occurrence: while the appellative type accounts for only 26.3% of the types and 37.7% of the tokens in the

3 As in other corpora, compounds cannot be searched for automatically in the DTA corpus. Hundreds of individual queries were carried out to search for strings with a set of proper names at the beginning or appellatives at the end (e.g. *Rhein* 'Rhine' + X, X + *Brücke* 'bridge'). The results were cleaned up manually. The initial list of proper names and appellatives to be searched consisted of items that had been used in previous studies with other corpora (cf. Schlücker 2017). During the search, new proper name modifiers and appellative heads were constantly added to the queries. In total, the data comprises 1,746 proper name modifier and 705 appellative head types.

4 For reasons of time and capacity, the annotation of all tokens was impossible. Therefore, three tokens (if available) were annotated for each type per time period, i.e. a maximum of 18 tokens, amounting to a total of 6,162 tokens.

Table 1: Total development of PN compounds (from Schlücker 2020: 246); corrected numbers of types. The last period covers one more year.

		Types	Tokens
17th c.	1600–1649	76	130
	1650–1699	219	440
18th c.	1700–1749	316	553
	1750–1799	505	763
19th c.	1800–1849	627	912
	1850–1900	2,229	3,364
total		3,972	6,162

first period (1600–1649), it is already 51.5% and 48.0% of the types (51.1% and 48.9% of the tokens) in the last two periods (1800–1849; 1850–1900).

In the following, we discuss the idea that the observed increase in frequency can be explained by modifications of the pattern, through which the range of application expands and the forms are used more frequently. However, this is less about formal than about semantic-functional changes. Specifically, three modification processes can be observed:

- Modifications of the name class of the compound (onymic type)
- Modifications of the name class of the PN constituent (appellative type)
- Modifications of the semantic relations between the compound constituents (appellative type)

The first group of modifications concerns the onymic type and relates to the name class of the entire compound. As mentioned above, the oldest attestations of PN compounds are essentially place names. This is also true for the initial period of this study: in the first period, 93% of the onymic PN compounds are place names, whereas personal names cover 5% and object names 2%. In contrast, in the final period, the proportion of place names decreases to 78% while object names rise to 19% (plus 1% of personal names), cf. Figure 1.

This is a functional extension of the pattern of onymic PN compounding, as it is increasingly used not only for naming places but also for naming artefacts of all kinds, such as *Rheinarmee* 'Rhine army', *Juliusspital* 'Julius hospital', *Friedrichsuniversität* 'Friedrich University', *Ludwigslied* 'song of Ludwig'. In addition, there is also a functional extension within the group of place names. During the entire period under review, the most frequent subgroup of place names are water names, in

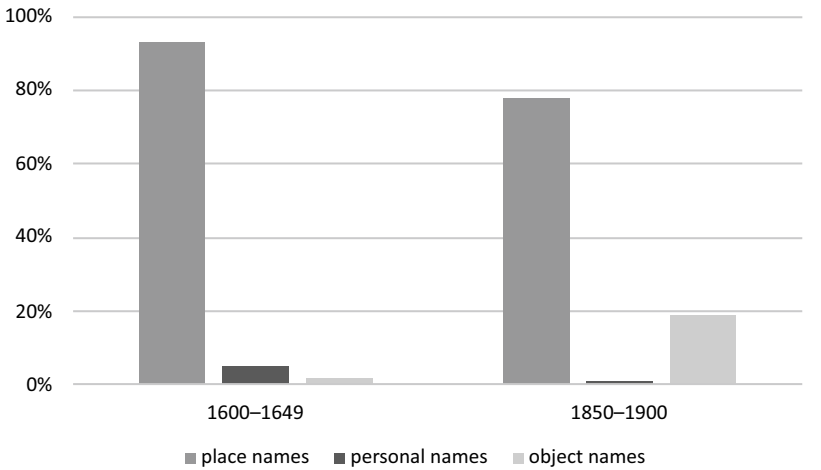

Figure 1: Proportion of name classes of onymic PN compounds.

particular river names such as *Rheinstrom* 'Rhine stream', *Oderfluss* 'river Oder'. However, the proportion of water names decreases from over 50% in the first period to below 30% in the last two periods, while at the same time the proportions of other types of place names such as names of states, countries and landscapes (e.g. *Ruhrgebiet* 'Ruhr area'), mountain names (*Humboldtgletscher* 'Humboldt glacier') and street names (*Beethovenstraße* 'Beethoven street') clearly increase. This demonstrates the functional expansion that the pattern of PN compounding undergoes between 1600 and 1900 and which forms an obvious (partial) explanation for the general increase in frequency (cf. Schlücker 2020: 247–248).

The second group of modifications concerns the name class of the onymic modifier in the appellative type. At first glance, there are no major changes regarding these modifiers. They are essentially personal, object, and place names, with the last group having the largest proportion overall (with some variation) and its proportion increasing diachronically. There is, however, a small but crucial modification within the group of personal names. Overall, personal names in the modifier position in PN compounds between 1600 and 1900 are almost exclusively first names, mostly very old and often biblical names, names of historical personalities or saints' names, e.g. *Sophien-Tempel* 'temple of Sophia', *Jakobsleiter* 'Jacob's ladder', *St. Thomastag* 'St. Thomas' day'. Family names, in contrast, do not occur at all or only in very small numbers (< 1%). However, in the last period (1850–1900)

their proportion rises to 7%; examples are *Goethegedicht* 'Goethe poem' or *Morseapparat* 'Morse telegraph'. This is particularly interesting because in present-day German, family names form the largest part of personal names as modifiers in PN compounds. Schlücker (2017: 71) compares the proportion of first names in different present-day language corpora and finds that it accounts for 77% to 89% of all personal name modifiers, depending on the corpus, whereas the proportion of first names is only 2% to 9%. In view of the high productivity of the pattern in the 20th century and the large proportion of family name modifiers (18% of all appellative PN compounds, cf. Kosmata in prep.), it can be concluded that the novel inclusion of family names as modifiers from 1850 onwards results in a considerable functional expansion of the pattern and thus leads to an increase in productivity. Furthermore, this development is presumably closely related to the third group of modifications and probably made them possible in the first place.

The third group of modifications concerns the semantic relations in appellative PN compounds. These changes are particularly interesting since they modify the pattern in such a way that it becomes a potential competitor construction to syntactic constructions. It is generally assumed that the constituents of noun-noun compounds are related by implicit semantic relations. They are part of the compound meaning and have either to be learned or inferred from the use of the compound in context. Even if the number of relations is not limited in principle, there seem to be about ten to twelve core relations, such as LOCAL (*garden bench*), HAVE (*associations assets*), PART-OF (*string instrument*), MAKE (*honey bee*), ABOUT (*animal book*) (cf. e.g., Levi 1978, Fanselow 1981, among many others).

Semantic relations are also found in PN compounds. However, the semantic relations that are most frequent in PN compounds are not identical to the most frequent relations in noun-noun compounds (i.e. those with an appellative modifier) and there are relations that occur exclusively in PN compounds (cf. Schlücker 2017), such as the commemorative relation (cf. Warren 1978; Koptjevskaja-Tamm 2009), where something is named after a founder, inventor, discoverer or in honor of a person (*Kennedybrücke* 'Kennedy bridge'). The commemorative relation is still rather rare in the DTA data, though (examples include *Röntgenstrahlen* 'X-rays', lit. Röntgen rays, *Morseapparat* 'Morse telegraph', *Bunsenbrenner* 'Bunsen burner'), and apparently is more characteristic of the pattern in the 20th century. However, this relation co-occurs almost exclusively with family name modifiers. Thus, the two are interrelated and the modifications of name class and semantic relation lead to a functional expansion and – especially in the 20th century – to a clear increase in frequency.

In addition, there is also a clear increase in synthetic PN compounds during the period under investigation (cf. Schlücker 2020). Synthetic compounds have deverbal heads and the first constituent is an internal or external argument of the underlying verb.[5] The proportion of synthetic PN compounds increases clearly in the data, from about 5% in the first period to over 10% in the last. Also frequent are PN compounds with relational heads, such as *Schwedenkönig* 'king of Sweden'. This is important because these argumental relations belong to the semantic relations that can also be realized by genitive constructions. For this reason, these compounds can function as substitutes for genitive constructions (provided that the name is used referentially), e.g. *Homerkritiker – Kritiker Homers* 'Homer's critic', *Schillerverehrer – Schillers Verehrer* 'Schiller's admirer', *Nilüberschwemmung – Überschwemmung des Nils* 'flooding of the Nile', *Schwedenkönig – Schwedens König* 'Sweden's king', *Nettelbeck-Bild – Bild Nettelbecks* 'Nettelbeck portrait', *Rösel-Freund – Rösels Freund* 'Rösel friend' (cf. Schlücker 2018). These (as well as other kinds of) PN compounds have therefore been regarded as competitor constructions to the genitive. They often have family name modifiers, so it can be assumed that the increase of family name modifiers is also related to the increase of compounds with argumental relations, in addition to the commemorative relation.

All of the modifications and innovations of the 1600–1900 period discussed here are regularly found in present-day language PN compounds, so creativity has become routine. For instance, recent examples such as *Gorman-Gedicht* 'Gorman poem', *Merkel-Besuch* 'Merkel visit' (where Merkel can be interpreted as either the internal or external argument) or *Selenskyj-Rede* 'Selenskyj speech', whether lexicalized or not, not only point to the continuing productivity of the pattern but also illustrate its potential use as a substitute construction.

Finally, the novelty of the changes can be demonstrated not only on the basis of the corpus data but also on the basis of reactions to this language use which reflect their salience and extravagant nature (cf. Neels, Hartmann & Ungerer 2023). Two grammarians of that time, Wustmann (1891) and Briegleb (1928, 1932), have commented extensively on these constructions. First of all, both note the increase of PN compounds in language use. Whereas Briegleb refers to PN compounds in general, Wustmann explicitly mentions PN compounds with personal names. PN compounds and their increasing use are clearly evaluated negatively: "die jetzt immer massenhafter auftretenden Zusammensetzungen mit Personennamen" ['the compounds with personal names that are now appearing more and more en masse'] (Wustmann

5 So strictly speaking, they do not have semantic relations in the narrow sense, since the relation between the constituents is not freely inferred, but rather determined by the argument structure of the deverbal head.

1891: 204) and "(. . .) die heutige Wucherung von Zusammensetzungen mit Eigennamen. Ein Kleist-Denkmal, das Kant-Grab, Shaw-Worte, der Matteotti-Mörder [. . .]. Alles verfallene Sprache" ['(. . .) today's proliferation of compounds with proper names. A Kleist monument, the Kant tomb, Shaw words, the Matteotti murderer [. . .]. All decayed language.'] (Briegleb 1928: 20).

In all cases, the criticism refers to the fact that compounds are used instead of genitives, or, in some cases, instead of constructions with prepositional phrases (e.g. *Italienreise – Reise nach Italien* 'journey to Italy'). In the case of place names, also the use of PN compounds instead of constructions with name-based adjectives is criticized (e.g. *Italienreise – italienische Reise* 'Italian journey') (cf. Wustmann 1891: 202; Briegleb 1932: 27–29). PN compounds are labeled as "falsche Zusammensetzung" ['wrong compounding'] (cf. Briegleb 1932: 29), among other things, and their use is explained by laziness and slackness of the speakers, since, according to Briegleb (1932: 28), the genitive requires effort of linguistic formation, but compounding does almost not. Finally, Wustmann (1891: 206) also explicitly discusses synthetic PN compounds. While he assumes that other kinds of PN compounds might be possible in some cases, he categorically rules this out for synthetic compounds and calls them the "Gipfel der Sinnlosigkeit" ['pinnacle of futility'].

Thus, the second and third modification processes described above can be regarded as creative, since they modify the original pattern and have extravagant effects: the comments on the increase of PN compounding in general and on the 'competitor construction' in particular point to the novelty and salience of the appellative pattern at that time. With regard to the various characteristics of extravagance that have been proposed in the literature (cf. Ungerer & Hartmann 2020), it can therefore be stated that the pattern discussed here deviates from linguistic norms and expectations and that this deviation creates attention. Using this pattern thus obeys the maxim of extravagance as formulated by Haspelmath (1999: 1055): "Talk in such a way that you are noticed". However, nothing can be said about other possible characteristics of extravagance, such as the emotional involvement of the speaker (cf. Petré 2016, 2017).

Obviously, this language use has been socially successful, since in the 20th century until now we find a consolidation of the changes and the development of a routine (cf. Schmid 2020 on feedback-loop processes in conventionalization and entrenchment). This transition from creativity to routine in the course of diachronic development is also reflected in a further, albeit weak, increase in productivity in the 20th century (cf. Kosmata in prep).

The first group, the modifications regarding the name class of the onymic PN compounds, is a bit different. So far, there is no explicit evidence that these changes were perceived as particularly extravagant and/or expressive. Neverthe-

less, these changes can also be classified as creative, because they offer a new way of referring to extra-linguistic entities, and we also find here the development of a routine.

3.2 Name-ICCs

The second case study concerns compounds with identical constituents (identical constituent compounds, henceforth: ICCs, Finkbeiner 2014; Hohenhaus 2004). For a long time, ICCs were only mentioned in linguistic texts to proclaim their impossibility, i.e., to define constraints on compounding in German. For example, Kürschner (1974) states: "The following conditions apply [to nominal compounds]: (i.) A≠B; i.e., different lexicon entries must be chosen as A and B in order to exclude forms such as *garden-garden, *pencil-pencil" (Kürschner 1974: 148, our translation). Erben also states that "for compounds in German, the rule of combining d i s s i m i l a r morphemes or lexemes normally applies" (Erben 1981: 39, our translation, emphasis in original). The assumption that there are no compounds with identical constituents in German may be the reason why German linguistics has paid so little attention to ICCs for so long.

Contrary to this widespread assumption, however, there are ICCs in German. First, there are determinative ICCs, which are ultimately just 'normal' noun-noun compounds with identical constituents, but which otherwise have no special properties (Donalies 2011: 72; Fleischer & Barz 2012: 96). Examples of this ICC type are *Kindeskind* 'grandchild' or *Helfershelfer* 'accomplice'. Both compounds have the linking element *-(e)s-*, which is common in German noun-noun compounds, and the semantic relation OF between the constituents ('a child **of** a child', 'the helper **of** a helper'). Second, there are ICCs that are not determinative and have no modifier-head relation such as *Film-Film* 'blockbuster, no documentation' or *Mannmann* 'prototypical man'. Like determinative ICCs, they denote sub-concepts, but they do so by restricting the given concept to its prototypical core. A *Film-Film* is a 'real movie', i.e. the first thing that comes to mind when thinking about movies; a *Mannmann* is a 'real man' who has all the stereotypical characteristics of a man, i.e. is physically strong, dominant etc. (Bross and Fraser 2020; Finkbeiner 2014; Freywald 2015; Frankowsky 2022, 2024; Günther 1979; Kentner 2017).

However, these two ICC types are not the subject of this paper. Rather, the focus here is on a third ICC type for which there is hardly any literature to date, namely ICCs that are proper names (henceforth: Name-ICCs), e.g. *Dior-Dior* (referring to a perfume of the Parisian luxury goods manufacturer Dior). Similar to compounds like *Anna-Lena*, they are name-based compounds, except that the constituents are identical.

So far, Name-ICCs have only been mentioned in completely different contexts: in business linguistics,[6] Name-ICCs have been discussed in connection with word formation patterns of brand naming. Platen (2013), a compilation of brand naming techniques, refers to noun-noun compounds with identical constituents as "Echowörter" ['echo words'] with a monoreferential meaning (Platen 2013: 53). He considers the function of Name-ICCs like *Dior-Dior* to lie primarily in the expressivity that arises in such words. He classifies them under the category "proper name formations" and sees such formations as a variant of emphatic repetition and affective reduplication that is used specifically in product naming (Platen 2013: 54). In addition, Kauffman (2015: 4), in a linguistic typological review paper, discusses Name-ICCs that consist of spatial proper names and are, in turn, place names, e.g. *Baden-Baden* (German city name). Kauffman also mentions "name doubling" and recognizes a social function in such formations, which is certainly also due to the fact that nicknames, especially in English, are often doubled, e.g. *Jon-Jon*, *Lou-Lou* (Kauffman 2015: 3).

Kentner (2017) investigates a similar phenomenon in German: speakers create pseudonyms in the form of ICCs with a personal name as a base constituent, e.g., *Sabinesabine* (Kentner 2017: 244). The base is doubled for formal extension in the course of name formation (cf. also Dürscheid 2005: 48). With the help of acceptability tests, Kentner's study provides evidence that rhyme reduplication (*Sabinepabine*) is preferred in the formation of proper names that are themselves based on proper names. Total reduplication, i.e., the use of Name-ICCs (*Sabinesabine*) is rather disfavored (Kentner 2017: 252–253).

Name-ICCs such as *Sabinesabine* belong to a certain subgroup of Name-ICCs, which we refer to here as Name-ICC type 1, namely Name-ICCs with proper name constituents. However, there are other patterns that can also be regarded as Name-ICCs that have been completely overlooked in previous research: Name-ICCs with common noun instead of proper name constituents, e.g. *AutoAuto* 'car car' or *Katze Katze* 'cat cat'. Neither the formal nor the semantic-functional properties of this type have been described so far. In particular, it is unclear whether these formations still have descriptive meaning parts or are purely referential, as is generally assumed for proper names.

In order to answer these questions and to provide a comprehensive description of the name-related lexical pattern "Name-ICC", a large-scale corpus study was conducted. We used the DECOW16 corpus (Schäfer and Bildhauer 2012),

6 The discipline of business linguistics, which developed at the beginning of the 20th century (partly in the context of the Prague School), analyzes business language as a means of communication. However, business linguistics did not survive as a separate discipline.

which consists of about 20 billion tokens and contains written texts from the Internet. This corpus contains unedited texts from computer-mediated communication and interaction-oriented writing, among other things, such as blog posts, chats, and forum discussions, which straddle the line between orality and literalness. For this reason, this corpus, despite the written nature of the media, also contains uncontrolled communication, which is less inhibiting to innovative linguistic techniques than, for example, the corpora of printed newspapers (Albert 2013: 163). A lexeme-based approach was used to search for Name-ICCs. 1,034 lexemes were selected based on the World Loanword Database (WOLD), a database that provides basic concepts and vocabularies (Haspelmath and Tadmor 2009). Out of WOLD's 1,814 basic concepts, 1,034 are expressed by nouns in German. These lexemes were chosen for the query.[7]

The data analysis has three main results. First, Name-ICCs are not uncommon. The corpus query yielded 2,566 tokens of Name-ICCs. Considering that the search was based on a limited set of base nouns, this is a remarkable result. Name-ICCs were found for 277 of the 1,034 base nouns, i.e. for more than a quarter of the nominal concepts from the WOLD. By comparison, appellative ICCs are found for only 96 of the 1,034 base lexemes and only 838 tokens in total (Frankowsky 2024). Name ICCs are therefore the most common ICC type. Second, there are three types of Name-ICCs. Third, Name-ICCs generally differ from noun-noun compounds in terms of word structure, formal features, and semantics. These last two results need to be looked at in detail.

The three Name-ICC types can be distinguished with recourse to the word class as well as the semantics of the constituents and the ICC. Besides Name-ICC type 1 which has proper names as constituents (e.g. *DiorDior* or *Sabinesabine*), there is Name-ICC type 2 which has common noun constituents. Examples of this would be *AutoAuto* 'car car', referring to a German entertainment show, and *fotofoto* 'photo photo', referring to a company. These Name-ICCs can be regarded as a special type of onymization. In contrast to Name-ICCs like *Sabinesabine* and just like the name *Feldberg* 'field mountain' (name of a mountain in southern Germany) in these Name-ICCs neither the first nor the second constituent is a proper name, but the formation still results in a proper name. Unlike proper names such as *Feldberg*, however, the constituents are identical. Moreover, only one constituent of a Name-ICC provides descriptive meaning. This descriptive meaning is used to indicate what the referents are dealing with. The names are thus partially motivated: *AutoAuto* 'car car', refers to an entertainment show that has to do with a

7 The different word forms for each lexeme were searched for by using wildcards ([x*x*] / [x*_x*]) so that separately written ICCs are included in the data.

car (which is destroyed during the show), *foto-foto* 'photo photo' refers to a company that produces photo products. Another difference to compounds such as *Feldberg* is that there is no semantic relation between the two constituents.

The Name-ICC type 3 works slightly differently. Examples are *Löwelöwe* 'lion lion', the name of an Austrian rock band, and *Katze Katze* 'cat cat', the name of a cocktail bar in Graz. During word formation, the semantic features of the common noun constituents get lost; Name-ICCs retain only referential meaning. The semantic features of the base noun are completely irrelevant for the reference of the formation: *Löwelöwe* does not refer to a lion but to a rock band, *Katze Katze* does not refer to a cat but to a bar. The referents of these Name-ICCs have nothing to do with lions or cats. Thus, type 3 Name-ICCs are arbitrarily related to the objects to which they refer. The partial motivation of type 2 Name-ICCs and the fact that this functional aspect is not present in type 3 Name-ICCs such as *Katze Katze* justifies the assumption of two different Name-ICC types. Figure 2 shows the basic properties and examples of all three types of Name-ICCs.

Figure 2: Properties and examples of the three Name-ICC types.

All three Name-ICC types deviate from noun-noun compounds in general in that they violate the alleged dissimilarity constraint of German compounding (Erben 1981; Kürschner 1974). As immediate repetitions of form, they are extremely unusual formations for German, a language that is particularly averse to reduplication from a linguistic typological perspective ("reduplication avoider", Freywald 2015: 905; Lohde 2006: 43; Stolz 2006: 115; Stolz, Stroh and Urdze 2011: 565). In lay linguistic publications on German, repetition is generally viewed very negatively since it is equated with redundancy (Sick 2009: 26). It can therefore be assumed that reduplicative structures generally attract attention, if not rejection. Stolz, Stroh, and Urdze (2011: 5) call this an "anti-T[otal] R[eduplication] attitude". The fact that Name-ICCs nevertheless exist suggests that it is precisely this extravagant, eye-catching structure through which speakers achieve their communicative goal. The use of a Name-ICC leads to expressivity and can be a very effective way of naming. With Name-ICCs, the speakers achieve what Bauer (2000) assumes for all playful and innovative word formation products: "[P]layful formations [. . .] and some literary creations [. . .] may go beyond the bounds of normal rules specifically to gain effect" (Bauer 2000: 838). If speakers use this conspicuous, extravagant expression, it may be because of the extravagant effects it conveys. In other words: speakers of German cannot repeat the first constituent of a compound without attracting attention. The message itself, i.e. the name of the product or user, is the focus.

Name-ICCs deviate from canonical compounds not only regarding their overall structure but also regarding other formal features. They almost invariably show zero inflection – a property characteristic of names in general (Nowak and Nübling 2017; Nübling 2012). Furthermore, linking elements that are otherwise obligatory in noun-noun compounds, such as *-n-* after schwa, are missing in most Name-ICCs (*Löwenfell* 'lion skin' – *LöweØlöwe*, *Katzenhaar* 'car hair' – *KatzeØKatze*). Although they are not completely excluded in Name-ICCs, they are much less frequent. So while according to Nübling and Szczepaniak (2009) about 35% of canonical N+N compounds have linking elements, they are only found in 17% of Name-ICCs, e.g. *Mausemaus* [online forum user name]. In addition, Name-ICCs differ in spelling. Name-ICCs have a higher proportion of internal capitalization, hyphenation, and space. They are spelled regularly in less than a third of the cases. Another feature of Name-ICCs is the frequent use of quotation marks. In DECOW16, only 0.7% of all nouns are enclosed in double quotation marks, but almost 11% of the Name-ICCs. In many cases, this is due to the fact that they are proper names or actual quotations. However, the use of double quotes may also reflect that the writers are aware of the status of Name-ICCs as deviant formations ("distancing quotation marks", e.g. Klockow 1980, Meibauer 2007). Another indication of this is that speakers

sometimes use metalinguistic comments to distance themselves from the use of a Name-ICC. These comments cannot be easily quantified, but some of them are given here:

(1) *ich bezweifel es stark.* ***Biber Biber*** *hört sich komisch an*
'I strongly doubt it. **Beaver Beaver** sounds strange'

(2) *Sie hatten halt so tolle Namen wie: Mipsmops,* ***Melone Melone*** *. . . naja Kinderkacke halt*
'They had just so great names like: **Melon Melon** . . . well, it's just child poop [=nonsense]'

(3) *oder über den charmanten Humor von "****Mädchen Mädchen****". Blöder Titel – aber kein blöder Film.* 'or about the charming humour of "**girl girl**". Stupid title – but not a stupid film'

The fact that *Biber Biber* is called strange here, the use of *Melone Melone* discredited as nonsense and *Mädchen Mädchen* as stupid shows that Name-ICCs deviate greatly from the routine and can therefore not go uncommented. In summary, although Name-ICCs are structurally and formally divergent, they are regularly used by speakers.

4 Discussion

We have presented two case studies of word formation patterns associated with nominal compounds, namely Name-ICCs and PN compounds. Both word formation patterns are used creatively in the sense that speakers modify existing patterns to achieve their communicative goals. Furthermore, the two case studies show that the criteria for defining word formation creativity must be extended.

Previous definitions from the literature apply well to the phenomenon discussed in the second case study. The modifications of the noun-noun compound pattern that speakers make to form Name-ICCs are formal in nature. Name-ICCs have an unusual reduplicative structure and are characterized by an underuse of linking elements which are mandatory otherwise, by zero inflection, and a spelling that deviates from the norm. Name-ICCs thus exemplify extensive modifications of a pattern, and one might ask whether such an extreme word formation pattern can be successful at all. In fact, the formation of Name-ICCs is generally not a very common word formation process in German. However, it is quite successful in some

domains. On the one hand, Name-ICCs often occur in marketing contexts (Platen 2013). By using the Name-ICC pattern, names for shows, perfumes, music bands, and other products are easy to create, and the repetition of a proper name or a common noun which has descriptive semantics helps to remember them easily. This mnemonic effect may be the reason why Name-ICCs are used as brand naming devices. The second domain where Name-ICCs can be found is self-naming in social media (Kauffmann 2015; Kersten and Lotze 2022). Here, speakers follow the motto: 'Take your name or a word that describes the topic you are interested in, double it, and you have a good nickname.'

This domain specificity shows once again that information from the situational context must be taken into account when processing ICCs (Frankowsky 2022, 2024). Whether a Name-ICC is used or not depends to some extent on the contextual contingency of an utterance and on "pragmatic associations" (Schmid 2020). Pragmatic associations contain contextual information and transfer information from the current perceptual input to higher levels of processing that mediate between perception and the processing of contextual and functional aspects of meaning. Conversely, the interpretation and evaluation of Name-ICCs can also be viewed as being accessed through pragmatic associations.

As mentioned before, Kentner (2017) provides experimental evidence that Name-ICCs are used reluctantly when it comes to naming persons. He collected acceptability data on pseudonym/nickname formation, showing that Name-ICCs are strongly disfavored over rhyming and ablaut reduplication. Thus, speakers are much more likely to accept names like *Sabinepabine* (rhyme reduplication) or *Mipsmops* (ablaut reduplication) as nicknames/pseudonyms than total reduplication as in Name-ICCs (*Sabinesabine*, *Mopsmops* 'pug pug'). Importantly, however, Kentner's study did not ask about grammaticality or correctness, but rather "participants were asked to judge the items in a playful context" (Kentner 2017: 252). According to Kentner, it can be assumed that Name-ICCs are rejected by speakers. However, the study investigates the acceptability of reduplicative names in an experimental setting. Speakers may reject the formations when explicitly asked, but they still use them actively, as shown by our data. The extensive formal deviations observed in Name-ICCs attest the balancing act between violation and comprehensibility: Name-ICCs are clearly a tool to attract attention. When the deviation from the norm is extensive, speakers are aware of the deviation. The pattern can still be successful, but the number of domains in which it can be applied may be reduced and the need for legitimation strategies increases. Speakers recognize the deviation of the pattern from the routine, which can be seen from the metalinguistic comments in the data. This highlights the extravagance of the construction, signalling that the speaker is aware of the deviation, which in turn protects the speaker's face and allows them to use the construction. This illustrates that

linguistic creativity is not limited to the speaker alone, but depends on social processes and interaction with interlocutors.

The question of whether Name-ICCs will be used for proper name formation in the long run cannot be answered at this time. On a formal level, Name-ICCs are related to determinative ICCs such as *Kindeskind* 'grandchild' as well as ICCs with a prototypical meaning such as *Mannmann* 'prototypical man', which might increase the risk of misunderstanding. However, the formal properties of Name-ICCs may distinguish them at least from the determinative ICC pattern: Name-ICCs do not inflect, often lack obligatory linking elements and are sometimes written with a space.

Moreover, due to the extravagant effect created by the identity of the constituents, Name-ICCs help speakers to succeed in the field of product marketing and self-naming on the Internet. Thus, Name-ICCs can be considered useful in situations where it is important to stand out. All this makes Name-ICCs a prime example of creative word formation. However, the aforementioned extravagant effect may wear off over time, partly because this effect is used by another pattern currently on the rise, namely ICCs with a prototypical meaning (Frankowsky 2022: 171), but also because using Name-ICCs in naming processes might become boring and outdated in the long run if more things are named this way.

In contrast to Name-ICCs, the modifications to the PN compound pattern have long been consolidated and become routine. The pattern modifications discussed for PN compounds are not form-related, but rather semantic-functional. We have discussed modifications regarding two semantic-functional properties, name class, and semantic relation. PN compounding was originally a pattern used for proper names only, in particular place names, and its use as a common noun developed only later. Within the onymic type, the proportion of object names has increased diachronically, at the expense of place names. This is an important modification, since this shift means that a wider range of entities can be named by using this pattern. This is an obvious explanation why the pattern is increasingly used. However, while the onymic pattern undergoes a functional expansion, there is no evidence that the modification of the pattern realizes an expressive function or that the speakers are particularly aware of the change. Within the appellative type, a completely new name class has been observed, i.e. family names, which had not been used in the modifier position of this pattern before. Again, this means extending the scope of possible uses, especially since they were presumably closely related to the emergence of (among others) two types of semantic relations, i.e. commemorative and argumental relations.

As the comments of the grammarians of the time show, the modifications of the appellative type have been noticed and evaluated negatively, which hints at a deliberate use of the pattern. At the same time, the extravagant effect obviously outweighs the norm violations caused by the modifications. Gradually, the modi-

fications become permanent, the extravagance diminishes and finally disappears, and a new routine emerges which exists undoubtedly in present-day German ("habitualization"/ "routinization", Schmid 2020).

Regarding the answer to the question of what determines the creativity of a pattern, we argue that not only formal modifications can lead to the emergence of new routines, but also semantic-functional ones, such as changing the status of compounds from common nouns to proper nouns and using novel name classes and semantic relations. Thus, the criteria discussed in the literature on creativity in word formation need to be extended. In addition to (a) the formal properties of a pattern, (b) the degree of consciousness with which an expression is formed, and (c) the expressive function of a pattern, (d) the functional-semantic modifications of a pattern must be considered if one wants to describe creative word formation processes comprehensively. Speakers thus can be creative not only in the way they formally realize a naming process but also in what they refer to.

5 Conclusion

The phenomena discussed here do not seem to be particularly creative at first glance: in Name-ICCs, linguistic material is simply copied. In PN compounds, speakers do not even change the form of the expression at all. In fact, however, these changes can be seen as sophisticated examples of linguistic creativity. With PN compounds, the pattern is extended by various semantic-functional properties, so that its area of use becomes larger, which in turn is presumably the reason for the observed increase in frequency. These changes are creative because they modify the original pattern, which is also noticed by the interlocutors. Name-ICCs, on the other hand, violate original constraints on compounding in German and have distinctive formal properties. They are particularly favored in product marketing and Internet pseudonyms.

We propose that creativity in word formation should consider not only formal aspects, but also functional-semantic modifications of patterns, such as changes in name classes and semantic relations. Both types of phenomena, those that change a pattern in terms of its form and those that change it in terms of semantics and function, must be considered creative. What matters is that speakers do something in a new way, that doing something in a new way is advantageous, and that others recognize this. Creativity in language is not limited to formal aspects but extends to how meanings are conveyed and interpreted in different contexts. This perspective broadens our understanding of linguistic creativity.

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