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Grammatical gaps: definition, typology and theory

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Content

Introduction

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1 Grammatical gaps

Grammars are, metaphorically speaking, instructions for the correct use of languages. They include, for example, instructions on how to pronounce words correctly, how to form complex words, and how to combine them to make syntactically correct and semantically meaningful sentences. These instructions enable speakers to build utterances that other speakers understand. One might think that grammars are complete, i.e., that they provide an appropriate solution for each situation of utterance, and that there is a 1:1 correspondence between function and form (isomorphism, canonicity).

Interestingly, however, grammars seem to show gaps, which are caused by the fact that rules (or forms) for certain areas are missing completely, or that individual rules contradict each other and that the resulting conflict prevents their application. Every language's grammar exhibits systematic gaps and rule conflicts, i.e., grammars do not fully and/or consistently determine all logically possible constellations (or in Sapir's 1921: 39 famous words: "Unfortunately, or luckily, no language is tyrannically consistent. All grammars leak"). This fact must be taken into consideration by 'realistic' grammar theories (Reis 1979, 2017). Grammatical gaps, whose relevance for a realistic theory of grammar was probably first highlighted by Marga Reis (cf. Reis 1979), have come into the focus of research in recent years. An important contribution to this discussion was provided by Haider (2011) with his concept of *grammatical illusions*, that is, constructions that are judged as acceptable by most speakers, even though in fact they are ungrammatical (see, among others, the contributions of Vogel and Meinunger in this volume).

As Sims (2015: 4) rightly points out, (paradigmatic) gaps need not cause any problems for communication, and speakers are often not even aware of their existence (e.g., in the case of English *beware*). Sometimes, on the other hand, gaps do lead to uncertainty among language users regarding the "correct" form,[1] they may try out several *possible* forms before rejecting them all (cf., e.g., the defective past tense of English *for(e)go*: *for(e)went/for(e)goed*?; Sims 2015: 4, 53–54). As Sims (2015: 53) puts it: "avoidance may be preferable to choosing between bad options", and Nikolaev & Bermel (2022: 586) conclude: "a 'gap' is not so much the absence of any possible form, as the absence of consensus in a speech community regarding the most appropriate forms to occupy the cell". They make out

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[1] Strobel (2023) explores both cases of overabundance (more than one available form; Thornton i.a. 2011, 2019a, 2019b) and of gaps (no available solution) as potential causes of grammatical doubts.

different strategies of speakers to overcome inflectional uncertainty related to lexemes with defective paradigms (Nikolaev & Bermel 2022: section 1.3): avoidance of a particular word form (and its substitution by a synonym or a paraphrase), prediction of the word form by analogy with other members of the same paradigm, or borrowing of an inflectional schema/pattern from some other paradigm without any gaps. Vogel (this volume) comes to similar conclusions with respect to language users' reactions when faced with grammatical gaps in a broader understanding, including all combinatorial rules of morphosyntactic composition in a language. He distinguishes between failure (no solution at all), expansion of the domain of use of an existing construction (by analogy), and invention of a new construction (possibly in partial analogy to existing constructions). Nikolaev & Bermel (2022), Bermel, Knittl & Nikolaev (2023) as well as Vogel (this volume) underline the importance of both the individual dimension (at the level of a single speaker) and the collective dimension (for a group of speakers) of uncertainties caused by gaps and potential compensation strategies.

According to Meinunger (this volume), the fact that grammars are defective poses a serious problem for (mostly minimalistic) theories that assume that "language is something like a perfect system" (Chomsky 1995: 1). However, whether the sheer existence of gaps indeed contradicts this assumption certainly requires further discussion. On the other hand, one should definitely have something to say about how grammatical gaps are compatible with the idea of an unlimited generative capacity of the human linguistic faculty because they demonstrate that there are limitations to what can be uttered. Still, we think that a 'realistic' grammar theory is in principle compatible with the perfection claim, specifically if one postulates perfection only for the individual parts and not for the totality of a grammar. Grammars/languages as part of the natural world are the result of evolution, and evolution, as is standard assumption in biology, "is not a theory about increasing perfection" (Dorit et al. 1991: 28), so it would be very surprising if grammars/languages as a whole were perfect. Inadequacies of the language system are manifest already in the frequently observed mismatches between the various linguistic levels (e.g., between prosody and syntax, or semantics and syntax)[2] suggesting that one should understand "perfect" in the sense of "optimal". Language may then provide 'optimal solutions to interface conditions' (to borrow Chomsky's 2008 strong minimalist thesis), but obviously not perfect ones in every case (although that is what is really assumed by the strong minimalist thesis, where optimal is understood as being synonymous with perfect; cf. Chomsky 2007, Freidin 2021). Note that research on repair strategies within the minimalist framework (see, for example, the contributions in Brandt & Fuß 2013) implies that the output of the application of rules can be wrong in some sense and have to be repaired subsequently. Hence, grammar cannot be perfect in every case, otherwise there would be no need for (research on) repair strategies.

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2 Weiß (2021) discusses such mismatches and shows that they may trigger structural reanalysis, that is, readjustments that correct the differences between the levels.

2   Research questions

Many (also basic) questions about grammatical gaps (defectivity/defectiveness, ineffability etc.) and rule conflicts (contradictions and configurations where usually applicable rules are relativized) are hitherto unsolved. The topic of structural gaps and competition should be addressed from a definitional, descriptive-typological and explanative-theoretical perspective (see also Strobel & Weiß 2019).

In contrast to semantically and/or pragmatically expected gaps such as the missing plural forms of singularia tantum nouns and the missing singular forms of pluralia tantum nouns, the usual non-gradability of stative or absolute adjectives, the use of monopersonal verbs restricted to the 3rd person etc. (for an overview, cf. Karlsson 2000), only arbitrary or accidental gaps constitute "true" cases of defectivity. The lack here is surprising and can be quite idiosyncratic. The encountered problems or failures (defective inflectional paradigms, structural gaps and rule conflicts etc.), in turn, need to be explained not only grammar-internally (on phonological/phonotactic, morphological, morphosyntactic grounds) but also historically (paradigmatic gaps resulting from the competition of forms during protracted language change, see Nikolaev & Bermel 2022) and/or extra-linguistically (considering social factors). Sims (2015: section 3.9) emphasizes that while there has been a strong focus on structural, purely internal causes of gaps, external explanations are still rare. A cross-linguistic typology of gaps will not only focus on the causes of defectivity/defectiveness (see above all Sims 2015: chapter 3), but also on the affected domains, aiming at generalizations about frequent areas of defectivity and about the parts of grammar (e.g., syntactic categories) that tend to be affected most versus barely or not at all, i.e. areas that seem to be immune instead.

While the concept of lexical gaps seems to be quite straightforward (cf., e.g., the incomplete semantic field of *hungrig* 'hungry' : *satt* 'full' = *durstig* 'thirsty' : *??* in German and other languages, or the missing direct hypernym to *Onkel* 'uncle' and *Tante* 'aunt' in analogy to *Eltern* 'parents' for *Mutter* 'mother' and *Vater* 'father'), gaps in grammar, especially in syntax, are far less easy to define and to identify. In the last twenty to twenty-five years, some attention has been paid to morphological gaps and their definition: Paradigmatic gaps as instances of inflectional defectiveness (Sims 2006/2015) refer to expected (and often predictable) but non-existent forms of certain lexemes (e.g., the unclear preterite form of German *schinden* 'drive hard, maltreat': *schindete/schund/schand*?, Reis 2017, as well as the defective past participle of English *stride*: *stridden/strided*?, Karlsson 2000, Bermel, Knittl & Nikolaev 2023, and of Italian *soccombere* 'succumb': †*soccombuto*?, Thornton 2019a). In her definition of inflectional defectiveness, Sims (2015: section 2.3) stresses the importance of three jointly necessary components: the morphological expression requirement, the syntactic need requirement, and the ineffability requirement. Apart from inflection, however, it is an open question whether gaps in the "derivational paradigms" of words (Karlsson 2000) should also count as instances of defectivity. These too are not only due to

a lack of semantic compatibility or of pragmatic relevance (e.g., the English derivations *unbeat, *unswim, *unwalk; Plank 1981), but also to grammatical constraints (the distribution of the German deadjectival nominal suffixes -heit vs. -keit underlies phonological conditions of word stress, the suffix -bar, which derives adjectives from – mostly – verbs, shows both morphological and syntactic restrictions, and so forth) or to blocking (cf. the ungrammatical or unneeded English deverbal agentive noun *steal-er < steal, excluded by the existence of the noun thief; Wurzel 1988, Karlsson 2000). Furthermore, it is far less obvious what should be understood as a syntactic gap and whether this should be determined contrastively by language comparison (e.g., the absence of relative clauses in some languages) or purely system-internally (cf. problems of verbal agreement with complex or coordinated subject noun phrases).

Taking, among other phenomena, free relative clauses in Russian as an example, Sims (2015: section 2.4) discusses some delimitation problems. In her opinion, the syntactic requirement of a word form alone is not sufficient to constitute an instance of inflectional defectiveness, only if the lack is due to morphological failure. Free relative constructions require the relative pronoun (target lexeme) to simultaneously express two potentially different case values (assigned by the matrix clause verb and the relative clause verb). While in Russian, the relativizer čto 'what' can fulfill conflicting case requirements thanks to its nominative-accusative syncretism, kto 'who' cannot because it is lacking a corresponding morphological form. According to Sims, however, this does not mean that kto has a gap in its paradigm: We are not dealing with true defectiveness here, since although the syntactic need and the ineffability requirements are met, the morphological expression requirement is not. Instead, "the morphological system is simply not structured in a way that can fulfill the syntactic need" (Sims 2015: 30) because it does not have relativizers that simultaneously express two different case values, except for the special case of syncretic forms (Reis 2017: 265 calls similar cases of syncretism "morphologische[s] Glück [morphological luck]" and the outcome grammatical illusions). For further investigations on case competition in free (or headless) relatives in German and other languages, however, see Bergsma (this volume).

Although Sims has shown that (paradigmatic) gaps can be passed on from generation to generation and persist "indefinitely" (Sims 2015: 6 and, for a detailed discussion of learnability, chapter 7), an important issue for research concerns the repair strategies used to (potentially) fill synchronic gaps or to eliminate defectiveness (suppletion, periphrases, borrowing etc.) as well as the mechanisms operating on system-immanent and thus irremediable conflicts (e.g., syncretisms leading to grammatical illusions).

3 Contributions to the present volume

The present volume contains nine papers that approach grammar-theoretical questions concerning gaps within different morphological and syntactic frameworks, considering empirical evidence mostly from Germanic varieties. Furthermore, they touch upon related topics such as *ineffability* or cases of absolute ungrammaticality without any alternatives (Hetzron 1975; Fanselow & Féry 2002a, 2002b), and *grammatical illusions* (Haider 2011).

Ralf Vogel's paper *Grammatical gaps, grammatical invention and grammatical theory* is concerned with (what he calls) *ad hoc* constructions, that is, solutions that speakers find when they encounter a grammatical gap. These *ad hoc* constructions are in some way optimal or best solutions for the problem that grammatical gaps impose on speakers. However, since these *ad hoc* constructions are very rarely necessary, they do not grammaticalize and therefore do not trigger language change. They must thus be seen as newly invented each time they are being used. Nonetheless, they are examples of grammatical creativity of speakers – an interesting and, so far, little or not at all investigated aspect of linguistic behavior.

A famous example is the 'scandal construction' in (1) which was first introduced by Reis (1979): The participle *entfernt* 'removed' is the wrong form since the verb *lassen* 'let' selects an infinitive as its complement verb. *Participle-pro-infinitivo* (PPI) is not part of the German grammar – in contrast to *infinitivus-pro-participio* (IPP), where certain verbs such as the causative verb *lassen* appear as an infinitive instead of a participle.

(1) Eine Pariserin   namens Dimanche soll   sich   ein
      a   Parisian:FEM named D.   shall   REFL.DAT a
      gewaltiges Stirnhorn   operativ   entfernt   haben   lassen
      huge   forehead horn operatively remove:PTCP have:INF let:INF
      'Of a Parisian named Dimanche, it is said that she had a huge forehead
      horn removed operatively on her'
                              (*Der Spiegel* 4/1975, p. 96, cited after Reis 1979)

Vogel argues especially against Haider's (2011) concept of *grammatical illusion*, where the impression of grammaticality is triggered by the local well-formedness of the respective sequences. In his conception, these constructions are not even locally well-formed.

André Meinunger's contribution *Unexpected finite verb forms in German – cases of grammatical illusion?* deals with similar constructions. Interestingly, Meinunger argues in favor of Haider's *grammatical illusions*. In addition to the scandal constructions, Meinunger introduces a new set of data into the discussion where a finite verb occurs as part of a prenominal attribute in form of an extended participle (in (2) *hätte* 'should'):

(2)   der   von   Alessandro hätte   ausgehen müssende Wolfsburger
            the   from   Alessandro should   outgo   needing   Wolfsburger
            Kombinationsfußball
            combinatory soccer
            'the Wolfsburger combinatory soccer play that should have come from
            Alessandro'

Meinunger proposes two empirical tests to identify constructions that fall under
the category of *grammatical illusions* and to distinguish them from speech errors:
(i) significant detectability in corpora, and (ii) reliable elicitability in acceptabil-
ity-judgment studies. His dataset passes both tests. Note that the data that pass the
two tests do not show the rarity that characterizes Vogel's *ad hoc* constructions,
so it may well be that Meinunger's and Vogel's data sets constitute different types.

    Patrick Mächler and Anja Hasse's contribution treats *Gaps of definiteness.*
Marking of (in)definiteness in Swiss German, Norwegian, Faroese, and Elfdalian.
They study gaps of definiteness, that is, cases where definite noun phrases are not
formally distinguished from nouns or noun phrases which are not specified for
definiteness. In most cases, this kind of syncretism is the result of independent
phonological changes. Mächler and Hasse show that such gaps are often diachron-
ically stable, but sometimes they are eliminated (e.g., by analogical extension of
another form), and in one case (in Elfdalian) the gaps of definiteness have even
spread. An important factor is the rareness of contexts where definite and non-
definite nouns could not be kept apart. Most contexts where non-definite noun
phrases with bare nouns are licit are so specific that the formal identity of definite
and indefinite nouns poses no problem for communication.

    Elisabeth Scherr's contribution *Attraction of the void. The lack of aspect in*
German and its effect on language change is concerned with the lack of the cate-
gory of aspect in German grammar and its consequences for the system of definite
articles. Based on an idea put forward by Leiss (2000) that verbal aspect and the
article system are two realizations of the same functional domain and that in Ger-
manic the loss of aspect caused the grammaticalization of definite articles, Scherr
argues that especially the reduced definite article expresses an aspectual meaning
as a side-effect. This means that a gap in one grammatical domain can be com-
pensated by the presence of a different grammatical feature in another domain as
long as there is a functional overlap to some extent. Scherr mainly works with
data from two corpora of spoken German in Austria which show that the reduced
article very often occurs in indefinite contexts.

    Oliver Schallert's contribution *Morphological gaps in verbal diminutive for-*
mation: some observations on Alemannic investigates gaps in the verbal inflection
of Vorarlberg Alemannic that are caused by prosodic constraints. In a class of
verbs that contain the diminutive suffix (e.g., *möölala* 'to draw (casually)' or
sünala 'to sunbath'), the form of the 1st person singular (*möölal 'I draw (casu-
ally)', *sünal 'I sunbath') seems to be hardly acceptable for speakers, as Schallert
shows in an experiment. The ungrammaticality of these 1SG forms is probably
due to the fact that their trochee form is in conflict with the prosodic requirement

that verbs of this class and their inflected forms should have the shape of a dactyl. Schallert also briefly discusses the question of whether markedness is an important precondition for defectiveness to arise.

The last four contributions are devoted to relative clauses. **Julia Bacskai-Atkari**'s contribution *Syntactic paradigms, markedness and similative markers in comparative and relative clauses* investigates the historic development of complementizers that occur in relative clauses and similar clause types (that is, similatives, equatives, comparatives). Bacskai-Atkari proposes that all these constructions form a syntactic paradigm whose members are systematically ordered in the lexicon. An advantage of such an approach is that it can explain changes that seem to be motivated by analogy (as it is otherwise only known from morphology): for example, the change from the *d*-series to the *w*-series that affected the whole complementizer paradigm in South German with *wo* 'where' in the relative clause and *wie* 'how' in all other constructions. In addition, the lack of complementizers in Standard German relative clauses can be seen as a paradigmatic gap.

Fenna Bergsma is concerned with a typological gap in her contribution *A typology of case competition in headless relatives*. She investigates the factors that are responsible for case assignment to the relative pronouns of headless relative clauses. Bergsma identifies two factors: 1) the case hierarchy (NOM < ACC < DAT), and 2) whether the case comes from the matrix clause or the relative clause (external vs. internal). Logically, this results in four possible patterns: (i) the relative pronoun surfaces in the winning case when it is the internal case; (ii) both the internal case and the external case are allowed to win the case competition; (iii) neither the internal case nor the external case are allowed to win the case competition; (iv) the external case is allowed to win the case competition. Interestingly, whereas there are languages that follow the first three patterns (for example, German, Gothic, Polish), languages that exhibit pattern (iv) seem to be lacking altogether. Bergsma proposes a model that generates the three attested patterns, but not the unattested one.

Ewa Trutkowski's contribution *How sex and gender shape agreement in German relative clauses* investigates feature mismatches in relative clauses headed by a 1st/2nd person pronoun, cf. (3):

(3) Du,   der   lange schläft, …
     you.SG, RP-MASC long   sleep.3SG
     'You who sleeps long, …'

Due to gaps in the system of relative pronouns (the lack of 1st/2nd person forms), there is necessarily a difference in the person feature between head (1st/2nd person) and relative pronoun (3rd person). Trutkowski distinguishes two mechanisms to 'heal' such mismatches: feature translation (what is traditionally called semantic agreement) and feature replacement (where another feature 'acts as stand-in'). In the present case, it is the sex feature – a covert and, unlike gender, optional feature at animate entities. Though not spelled out inflectionally (unlike person, number, gender), the sex feature is part of the structural layer of (pro-)nouns referring to

animate entities (including $1^{st}/2^{nd}$ person pronouns) and it is parasitic on the gender feature, that is, only (pro-)nouns specified for gender can be covertly specified for sex. Since in German, only nouns in the singular are specified for sex, this 'healing' mechanism is not available in the plural. This explains why the verb in the relative clause only agrees with the relative pronoun in the singular, whereas it agrees with the head pronoun in the plural.

Tabea Reiner's contribution *What counts as a gap? The case of typological hierarchies* discusses the question whether the notion of gaps as conceived in 'realistic' grammar might include any non-accessibility of positions on the Noun Phrase Accessibility Hierarchy and on typological hierarchies more generally. Reiner discusses how linguists may identify gaps that are due to the non-applicability of rules: They may identify that rules are not defined for a certain kind of input, or that there are conflicting rules which are mutually exclusive. The Noun Phrase Accessibility Hierarchy is a generalization about which noun phrases can be relativized and which cannot. In German, it is not possible to relativize the object of comparison. If non-accessibility could be understood as non-applicability of a rule, then the non-accessibility of objects of comparison may be a gap in the sense of realistic grammar. However, as Reiner argues, there are obvious differences between the two types: In particular, whereas gaps in the latter sense receive inconsistent judgments, speakers react very consistently when confronted with sentences where an object of comparison is relativized – they judge them ungrammatical. For Reiner, this is evidence that the non-accessibility of objects of comparison is not a gap in the sense of realistic grammar.

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Grammatical gaps, grammatical invention and grammatical theory

Ralf Vogel

Abstract

This paper focuses on the solutions that speakers find when they are faced with a grammatical gap, i.e. a complication that occurs within the production of an utterance for which no conventionalised solution is available to the speaker. I introduce the term *ad hoc construction* for these solutions and analyse them as instances of linguistic (more specifically, grammatical) creativity. Section 1 introduces the topic of this paper, section 2 discusses and rejects a psycholinguistic account of ad hoc constructions in terms of grammatical illusions (Haider 2011) for a kind of infinitival verbal complexes in German that have been subject to a controversy (Reis 1979, Vogel 2009, Haider 2011, a.o.). An alternative in terms of grammatical creativity is proposed. Section 3 sketches the concept of linguistic creativity in a more general way, based on a *neo-Saussurean* conception of language. Section 4 highlights a number of insights for the study of grammatical gaps.

1 Introduction

In an attempt to formulate a realistic perspective on grammar, Reis (1979, 2017) discussed the idea that there may be gaps in the grammar of a natural language: it is incomplete in the sense that speakers may encounter, just by applying standard means of morphosyntactic composition, a complication that cannot be resolved by relying on the grammar's existing rules.

This is possible because of the particular ways in which grammatical rules become and are part of social reality. Rules of grammar emerge step by step through the history of a community's language use. In particular, as Reis (1979) argues, rules of (morpho)syntactic composition are learned by the speakers from their linguistic input by example of simple cases which are usually also the most frequent instantiations of these rules. But linguistic composition as such is quite unrestricted, and so it may happen, though rather rarely, that speakers construe a complex expression and encounter rule conflicts or simply a gap in inflectional paradigms or the inventory of combinatorial rules.

From a realistic perspective, this imperfection of language is expected. It was then and still is a challenging field of grammar research. This paper is an attempt to address the issue from the perspective of linguistic creativity, following up on suggestions formulated by Reis (1979).

She discussed several examples in question from German. Based on the observation that speakers' judgements and solutions may vary a lot in such cases, Reis concluded with Morgan (1972) that speakers may develop their own solutions in such situations in an ad hoc fashion, using what Morgan (1972) called a "patch-up grammar". I am using the term *ad hoc construction* for phenomena of this kind.

How do our views of language, grammar and linguistic competence have to change, if we consider ad hoc constructions as instances of linguistic creativity? This paper attempts to answer this question. These constructions are seen as rule-based in themselves, though the rules are of a more general kind, the rules of grammatical creativity. An alternative that is rejected is a psycholinguistic account according to which speakers only overlook the examples' ungrammaticality for psycholinguistic reasons.

1.1   The incompleteness of the grammar

A grammatical gap, as understood in this paper, is a problem that speakers encounter during regular morphosyntactic composition in a language: the tools provided by the language's grammar do not offer a standard solution for a particular case.[1] The combinatorial rules of a language, regularly applied, occasionally lead speakers into a deadlock. For speakers' reactions when confronted with grammatical gaps, we can in general distinguish three logical possibilities:

1. failure, no solution is being found
2. expansion, speakers expand the domain of use of an existing construction to cover the gap (by analogy)
3. invention, speakers make up a new construction (possibly building on one or more existing constructions which they modify or blend, and thus create a new construction)

Instances of each of these categories may occur both at the level of the individual speaker (leading to inter-speaker variance) and at the group level (representing inter-speaker homogeneity in dealing with a gap). They can presumably be found in every language. The language of choice for my discussion here is German, for which several such phenomena have been collected and studied.

Why are grammatical gaps possible? The main reason is an imperfection that results from the very nature of grammars. It has been clear at least since de Saussure ([1916] 1983) that grammars must be seen not as systematically developed structured wholes, but as huge collections of details. These stand in a certain division of labour synchronically, but this division of labour is neither perfect, nor is it fully systematic. Its development results from the complex and unsupervised

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[1]   The scope of the current paper thus does not include gaps in morphological paradigms (see Sims 2015 and Reis 2017 for discussion).

social dynamics of the never-ending network of communicative activities within a community.

Each detail within a grammar thus results from typical and frequent patterns of use and has its own particular history. Language change is by necessity change in those details only, and may affect their division of labour only indirectly, if at all. It is, on the other hand, the division of labour that turns a rich collection of linguistic details into a language *system*.

With the background of these insights on the nature of real grammars, the occurrence of complications is expected. Default solutions may develop only for those complications that occur often enough to trigger the grammaticalisation of a standard solution. Those complications, however, that occur more rarely will remain without a solution. In addition, some complications may arise, again in rare situations, from the interplay of independent grammatical domains, for instance phrase structure rules and inflection rules, as in the following example.

The empirical domain of finite verb agreement in German provides paradigm cases for grammatical gaps, because, just like in English, choice of agreement inflection on the finite verb is governed by a mixture of syntactic, semantic and pragmatic criteria. This may lead to a situation where semantic properties of a grammatical subject require non-existing inflectional features of the finite verb. Well-known cases are the peculiar properties of coordinated noun phrases in subject position. Semantic plurality leads to plural inflection in German for coordinated subjects under true coordination (1a), but not in a synonymous, though pragmatically different clause where a comitative phrase is used (1b).[2] A subject noun that is semantically plural, but morphologically singular requires singular on the finite verb in German (1c).

(1)   a. Maria und Paula spielen   zusammen Fußball
          M.   and P.   play:3PL together   football
          "Maria and Paula are playing football together"[3]
    b. Maria spielt   mit Paula zusammen Fußball
          M.   play:3SG with P.   together   football
          "Maria is playing football together with Paula"
    c. Die   Gruppe   spielt   zusammen Fußball
          the:FEM.SG.NOM group:SG play:3SG together   football
          "The group is playing football together"

Note that in parallel English cases both singular and plural are possible, depending perhaps on whether the uniqueness (singular) or the inherent plurality (plural) of the group is more relevant in the given context (Huddleston & Pullum 2002: 499–510):

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[2] The pragmatic difference can be phrased in terms of topicality: topic status is determined separately for Maria and Paula in (1b), whereas it is usually determined for the pair Maria and Paula together in (1a).
[3] The provided glosses are in accordance with the Leipzig glossing rules (https://www.eva.mpg.de/lingua/resources/glossing-rules.php).

(2)   a. The committee has not yet come to a decision.
        b. The committee have not yet come to a decision.

                                    (Huddleston & Pullum 2002: 501)

An instance of a failure is not easy to find. The case illustrated in (3) might come close to it: here, the subject is construed by an exclusive disjunction such that exactly one of the two coordinated pronouns may be the logical subject, but the pronouns trigger different finite verb forms (see also Reis 2017 for a detailed discussion of such cases):

(3)   … weil   entweder ich oder du   das Auto fahren
              because   either   I   or   you the car   drive:INF
            ??sollte/??solltest
            should:1SG/2SG
            " … because either me or you should drive the car"

If both finite verb forms are impossible, (3) exemplifies failure. That is, unless a repair form is found to be acceptable. A candidate would be 1st person plural. At least without *entweder* ('either'), such an (inclusive) disjunction may justify plural agreement, so that (4) might become possible,[4] exemplifying a case of expansion because two of the possible readings of the disjunctively construed subject are singular readings, despite the plural agreement on the finite verb, and a plural reading is ruled out independently by world knowledge (there can only be one driver).[5]

(4)   Das Auto sollten   du oder ich fahren
            The car   should:1PL you or   I   drive:INF
            "Me or you should drive the car"

Another clear case of a grammatical gap can be exemplified with German relative clauses. Although the German relative pronoun is inflected for 3rd person only, appositive relative clauses are not banned from being attached to 1st or 2nd person pronouns. Speakers can be found to repair this by the addition of a resumptive pronoun – a strategy that would be awkward otherwise (see also Ito & Mester 2000).[6]

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[4] Note my careful wording here. Again, it is part of the nature of grammatical gaps that judgements on such sentences are not clear and presumably quite diverse among speakers.
[5] Himmelreich & Hartmann (2021) present acceptability rating studies that confirm the (somewhat degraded) acceptability of patterns like those in (4).
[6] Two empirical aspects are important for the classification of this phenomenon as a grammatical gap: first, syntactic contexts as exemplified in (5) are extremely rarely attested in corpora; and second, a resumptive pronoun is not found in all attested instances. Patterns like (i) are also used:
(i)   Ich, die   Geburtstag hat
        I   who:FEM.3SG.NOM birthday   has:3SG
    Trutkowski & Weiß (2016) also show that acceptability ratings for patterns like (i) and (5a) are similar. If (5a) were the result of a special rule in the grammar, then the occurrence of (i), as well as its acceptability, would be unexpected. On the other hand, the fact that both solutions are used when

(5)   a. Ich die   *(ich) Geburtstag   habe
            I   who:FEM.3SG.NOM I   birthday   have:1SG
            "I who have my birthday"
        b. Sie die   (??sie) Geburtstag hat
            she who:FEM.3SG.NOM   she birthday   have:3SG
            "She who has her birthday"

This, then, is an example of an invention, the use of a construction, created in this special situation in an ad hoc manner, whose occurrence in other contexts would be unacceptable or at least significantly less acceptable.[7] For this reason, it cannot straightforwardly be understood as grammatical, i.e. following the rules of the grammar in its current historical state.

This does not imply, however, that the choice of this particular construction must be erroneous or arbitrary. First of all, the diagnosis of an error implies the possibility to indicate the correct form. In these cases, this criterion cannot be met – as long as we exclude the choice of a totally different morphosyntactic structure as a "solution".

An invented solution might still be rule-governed in a different sense. The one in (5a) builds on the existing pattern for relativisation. The doubling of the relative pronoun with a personal pronoun repairs the deficiency of the relative pronoun, its restriction to 3rd person, ensuring a chain of agreement features from the head nominal of the relative clause, via the relative pronoun (+ resumptive pronoun) to the finite verb of the relative clause. It would not do justice to the repair nature of these phenomena if they were treated as performance errors on a par with ordinary ungrammaticality.[8]

Please note the challenge that speakers' creative solutions for grammatical gaps pose for generative linguistics. As originally conceived by Chomsky, a generative grammar is a model of an idealised single speaker's idiolect that represents both her individual linguistic competence and the system of the speaker's common language at a particular historical state. Grammatical inventions, as conceived here, are based on invented rules. To attribute these new rules to the

speakers face this overall very rare constellation fits in well with the idea that speakers have no established rule at hand, and must therefore improvise.

[7]   An anonymous reviewer points out that examples like (5b) with the resumptive pronoun can be found occasionally (see also Trutkowski & Weiß 2016). The use of the pattern might have a stylistic motivation in such a case, in which it differs from the case exemplified in (5a) where a grammatical gap needs to be filled. Still, the fact that such patterns are found may provide further evidence that the repair strategy with a resumptive pronoun appears quite natural to ordinary speakers.

[8]   This paper also replies to Haider (2011) who, in turn, critically referred to Vogel (2009). In Haider's conception of grammatical illusions, no difference is made between ordinary ungrammaticality and speakers' choices when confronted with a grammatical gap. From the perspective of grammatical analysis, these cases should be distinguished. Otherwise, our understanding of well-formedness is limited to the accidental options provided by a language system in its current historical state, without considering the possibility that speakers may sometimes be guided by their general linguistic competence when they utter something that is not covered by the current rules of their language.

speaker's idiolect is straightforward. But at the same time, the model ceases to be representative of the common language.

More generally, the question arises which other deviations from the common language system the idiolect may contain: shouldn't a model of an ideal speaker's linguistic competence predict all inventions to the common language a speaker could potentially make? Shouldn't it, thus, account for all sentences the speaker could potentially produce, including all possible inventions, and therefore account for much more than the sentences that conform to the common language system in its current state?

Speakers of the same language may often agree in their choices for particular solutions, and they may choose different solutions in different languages. For example, the pattern parallel to (5a), but without a resumptive pronoun, is preferred in English, as also discussed by Reis (1979: 9, referring to Morgan 1972):

(6)   I who am/*is an anarchist, will be here

The same argumentation that leads to the suspicion that (5a) is not based on an established rule of the German grammar can and should be applied with respect to (6) for English. But where, then, does the structural difference between the two different inventions come from, if it is *not the direct result of two different rules* in the two grammars?

The answer that I will argue for in this paper is as follows: grammatical inventions need to be distinguished from mere performance errors. In carrying them out, speakers rely on two resources, their knowledge of the common language of the community to which they belong (their knowledge of the language system, KLS), and their general linguistic and communicative competence (general principles of language and communication, GPLC) which guides them in finding a suitable repair outside of the conventions of the language system. It appears, thus, as if grammatical creativity imposed its own measure of well-formedness, with differing results for different languages, as (5a) and (6) illustrate.[9]

The resulting *ad hoc construction*, as I will call those grammatical inventions, occurs to the speaker as the *best solution* to the grammatical problem posed by a grammatical gap. It qualifies as an *optimal extension* to the established grammar in its current historical state. Such a language change might never materialise, however, because its context of use occurs too rarely.

Example (6), together with the finding reported in (2), suggests that the choice for finite verb inflection is sensitive to semantic and referential properties of the subject NP to a larger degree in English than in German. This permits the structurally simpler solution in (6): the choice of the finite verb form *am* may simply

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[9]   The connection between a speaker's linguistic creativity in a particular situation and processes of language change has long been recognised in diachronic linguistics. Also from that perspective, an explanatory account requires a conception of linguistic well-formedness that distinguishes between potentially successful and potentially failing original language use by the individual speaker, the sources of which can only be sought in linguistic competence.

be licensed by the referential semantics of *who,* which is 1st person singular by covert agreement with the head of the relative clause.

In German, the stronger dependency on overt inflectional distinctions leads to the different preferences reported above. The overarching general principle that brings about the different solutions in the two languages, in this view, is that speakers choose a solution that is in line, as much as possible, with independently established grammatical characteristics of the language at hand, in particular, here, with respect to finite verb inflection.[10]

Solutions for other grammatical gaps may be based on other general principles. I attempt to show in this paper that grammatical inventions have their own characteristic empirical profiles that help us to distinguish them from ordinary grammaticality, in particular instances of grammar-internal markedness, and ungrammaticality.

We will also see that the perspective from grammatical invention has a high potential to settle ongoing disputes that surround some of the phenomena at issue. Before going into the details in the subsequent sections, I will first briefly provide a more general consideration of grammatical gaps and grammatical invention in grammar theoretical terms.

1.2   Gaps and inventions in grammar

A grammar is a collection of rules and constraints that regulate especially the combinatorial dimension of a language. They do so, on this view, in a binary fashion such that expressions are grammatical if they are licensed by the grammar, and ungrammatical otherwise: tertium non datur.[11] Consider, as a very simple case, the invented form *Brumbel* that someone may use as a word in German sentences: any such sentence is ungrammatical simply for the very fact that *Brumbel*

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[10]   Note that this is also the rationale of the analyses presented by Haider (2011). But while Haider concludes from this that speakers are governed by an "illusion" of well-formedness triggered by particular features of the chosen expressions, the position taken here is more positive in that such phenomena are taken to open a window both into general linguistic competence and into the initial moment of language change.

The general line of reasoning is even older, as it may be reminiscent of the framework of naturalist linguistics, in particular the idea that congruity to the system-defining properties of a language at a given point of time is a particular case of unmarkedness, as introduced by Wurzel (1984), whose research programme is concerned with the identification of general linguistic principles in speakers' language faculty, the application of which predicts the direction of language change.

The idea behind the principle of system congruity can also be found articulated in Saussure's claim that a language is "not a nomenclature", i.e. its units and their division of labour need to be explored and discovered by linguistic analysis from within a language, and are not based on pre-fabricated universal concepts. See Otheguy (2002) for more detailed discussion.

[11]   This binarity is independent from the issue of constraint violability. Even in an optimality-theoretic model, making extensive use of constraint violation, expressions are classified as either grammatical (= optimal) or ungrammatical. It is also independent from gradience, as long as the qualitative distinction between grammatical and ungrammatical as such is not given up in favour of a single gradient cline of grammaticalness.