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Stability of inflectional variation

The dative of the indefinite article in Zurich German

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Free morphological variation is an understudied phenomenon; however, it is implicitly included in studies on overabundance. In the inflection of the indefinite article in Zurich German, we find overabundance of the dative masculine/neuter cell over a timespan of nearly 200 years. As this study shows, instances of overabundance or (possibly) free variation have to be analysed in great detail. In Zurich German, we see a complex picture of free variation in certain linguistic contexts and conditioned variation in other contexts. This instance of morphological variation in Zurich German is quite stable, which contradicts the hypothesis that morphological variation is always a transitional stage of a changing inflectional system, and it even exists at the intra-individual level.

Keywords: Swiss German, non-standard variety, morphological variation, overabundance, shape conditioning, canonical typology, language variation and change

1. Introduction

The title of the workshop that led to this volume, *Free variation = unexplained variation?*, reflects the broad notion of free variation in linguistics. As Weber & Kopf (this volume) show, formal as well as functional linguists refuse the idea of free variation in grammar. Even sociolinguists, whose work is strongly focused on linguistic variation, are hesitant to accept free variation in language. They rather see examples of free variation as cases in which additional research is needed in order to explain the co-occurrence of varying linguistic units. Ellis (1999: 461) explains this by a strong belief that if you want to study a language as a system, you need to study its rules.

However, language users are variable in their choice of forms when communicating, suggesting that some linguistic elements may not be governed by either external and internal constraints. This constitutes a potential threat to the claim that languages are systems. To counter this threat, sociolinguists like Labov have endeavoured to show, with considerable success, that variability is itself systematic. (Ellis 1999: 461)

The claim that variation is systematic poses the biggest challenge for studies on (possibly) free variation. The list of factors, language-internal or -external, which might condition the variants is long, if not to say infinite. Even if an extensive list of factors is included in an analysis, not all factors can be tested quantitatively. The frequency of certain factors, or maybe only of specific values of a factor, can be so low that there are no corpora of a suitable size available. This issue is even more severe in languages for which no corpora are available, e.g. non-standard varieties or less-studied languages.

When including extra-linguistic factors in an analysis of free variation, we are confronted with yet another problem. Free variation is the variation of two forms, constructions or any other linguistic units with the same semantic and functional features in one language; but how do we define a language? How many generations speak the same language, how many villages, how many speakers at one place or how many speakers within one family share their linguistic system? If we do not want to analyse a series of idiolects but, rather, want to speak of the language of a speech community, we have to expect a certain degree of variation on every linguistic level due to interpersonal variation. These variative patterns can sometimes be explained by sociolinguistic factors, such as age, gender or origin (as expected by sociolinguists), but not always.

Morphology has, so far, gained only minor attention in variationist studies (cf. Schallert & Dammel 2019: 3). In dialectology, for instance, morphological data is captured in dialect atlases on the one hand and grammatical descriptions of single dialects on the other. Atlases usually map only single cells of an inflectional paradigm and only rarely consider variative forms found in the morphological system of a single speaker (intra-individual variation) or across the speakers of a survey site (inter-individual variation). So-called “dialect grammars” vary in their aims (descriptive grammars, such as Hotzenköcherle 1934, vs prescriptive, such as Schobinger 2008, as its title *Säit me soo oder andersch?* ‘Do you say it this way or that way?’ reveals), in their analytic depth and in their empirical base. Schmidt et al. (2019: 39) conclude that “questions about variation within inflectional systems [...] can only be answered in corpus studies” [“Fragen nach Variation in Flexionssystemen [...] lassen sich letztlich nur korpusbasiert klären”, translation AH]. The lack of annotated corpora might be one factor explaining why variation is much less studied in morphology than in phonology. Another reason lies within

morphological theories. In morphology, there are a number of principles which do not allow for varying forms, among them the Law of Differentiation (cf. Bréal 1900: 27–38) and the Principle of Contrast (cf. Clark 1987: 2), which prevents synonymous forms, as well as the Elsewhere Principle or the Pāṇini Principle (cf. Anderson 1992: 132), which predicts the generation of one form only.

In the following, we are dealing with a variative phenomenon found in the inflectional system of Zurich German; more specifically, we are dealing with an instance of overabundance. Overabundance, as described in more detail in Section 2.2, is the co-occurrence of at least two inflectional forms in one cell of a paradigm, such as English *burned* and *burnt* in the past participle cell of the verbal paradigm. In Zurich German, the DAT.MASC/NEUTR cell of the indefinite article is overabundant. There are forms with single and forms with multiple exponence set in the very same cell of the inflectional paradigm. These forms do not differ in any grammatical feature. Examples are *ime Huus* ‘in a house’ with the enclitic indefinite article DAT.NEUTR =*me* attached to the preposition *i*, as opposed to *imene Huus* with the same structure but an additional suffix =*me-ne*. The form with the additional suffix *-ne* is an instance of multiple exponence.

In the following, we do not want to run the risk of analysing unexplained variation as free variation. Therefore, we are analysing two corpora for a number of factors that might explain the distribution of the various forms in synchrony and in diachrony. The aim is to find patterns of variation and to be able to make statements about how free this instance of presumably free variation is. By covering a time span of 200 years, we can additionally test the hypothesis that variation of two semantically and functionally equivalent forms is only found in transition stages and is not expected to be a stable situation for a linguistic system.

Section 2 discusses the theoretical notions. Section 2.1 introduces different notions of morphological variation. There are several phenomena that might be called morphological variation, but not all of them are relevant for the Zurich German case studied here. What we rather focus on is *overabundance*, as defined in Section 2.2. Overabundance is not the same as free morphological variation; therefore, we focus on free morphological variation in Section 2.3. Section 2.4 deals with another variative phenomenon, *shape conditioning*. Here, we do not expect free variation, yet we still need the notion to understand the results presented in Section 4.2. Before turning to the analysis, we describe the phenomenon we are dealing with in more detail. Section 3.1 gives a short overview of the Swiss German indefinite article, and Section 3.2 focuses more specifically on the DAT.MASC/NEUTR of the indefinite article in Zurich German. Section 3.3 deals with how Zurich German is defined in this study. As mentioned before, the aim is to capture morphological variation in one linguistic system – or, to put it differently, one variety. Section 4.1 presents the data used, followed by an analysis with one section each for

the historical data (Section 4.2.1) and the modern data (Section 4.2.2). Section 4.2.3 discusses overabundance at the level of single speakers. Since the form with multiple exponence causing variation is comparatively young and specific for Swiss German, its emergence is presented in Section 5. Section 6, finally, summarises the main findings of the analysis in Section 4.2, and Section 7 concludes with some remarks on how free this instance of variation in Zurich German is.

2. Varying forms

2.1 Morphological variation

To capture the existence of variants in phonology, Trubetzkoy (1939: 43) coined the term *allophones*, i.e. two or more variants belonging to the same phoneme. These variants can vary freely or be in complementary distribution. In the case of free variation of allophones, sociolinguists – since Labov (1972: 188–190) – aim to describe the distribution of such allophones in (presumably) free variation using language-external factors. An analogon to this terminological distinction within the realm of morphology is the well-established concept of allomorphs, e.g. two or more variants belonging to the same morpheme. Yet morphological variation in the sense that one concrete morphological unit, very broadly speaking, can appear in different variants (e.g. a lexeme with more than one plural form such as *Pizza*, *Pizzas*, *Pizzen*, *Pizze* ‘pizzas’ in German) is not what is usually understood by the notion of ‘allomorph’. However, we can ask the same question that we would ask if the plural forms of *Pizza* were allophones: are all these plural forms equally frequent? Can they be used in the same linguistic context? Do they occur in one and the same variety? And are they in the repertoire of a single speaker? This is the kind of morphological variation we are dealing with in the following, and these are the kinds of question we are discussing. We are not analysing the distribution of plural forms of *pizza* but, rather, the distribution of the enclitic articles =*me* vs =*mene* in examples such as *ime Huus* vs *imene Huus* ‘in a house’, as already mentioned in Section 1.

Consequently, this chapter focuses on morphological variation of the kind in which a single lexeme, i.e. the indefinite article, shows more than one inflected form in a cell of its inflectional paradigm, i.e. the DAT.MASC/NEUTR cell, such as the two examples just given. This excludes allomorphy in the sense of varying exponents with the same morphosyntactic features, such as varying plural markings in German, e.g. umlaut plus suffix *-er* in *Lämmer* ‘lambs’, zero marking in *Tiger* ‘tigers’, suffix *-en* in *Papageien* ‘parrots’, etc. This also excludes examples such as the German plural forms *Wörter* and *Worte* of the singular *Wort* ‘word’, which vary in their semantics, or the plural forms *Bände* ‘volumes’ and *Bänder* ‘ribbons’ which vary in

their semantics and in their gender, as the singular forms *der Band* ‘the.NOM.MASC volume’ and *das Band* ‘the.NOM.NEUTR ribbon’ show. It also excludes variation of inflected forms between different varieties, such as varying forms of the definite article in various Swiss German dialects (cf. Hasse, Mächler & Bachmann 2020), or [German] Standard German *Parks* vs Swiss [Standard] German *Pärke* ‘parks’ (cf. Mörth & Dressler 2014: 250).¹ Instead, we are interested in cases with two or more inflected forms that share the same morphosyntactic features without differing in their semantics or pragmatics and are all used by speakers of one variety at one stage of a language. This kind of morphological variation has been labelled *sovra-bondanza* in Italian and *overabundance* in English, and the variants are called *cell-mates* (cf. Thornton 2010–2011, 2011).

2.2 Overabundance

“It is among the most ancient of linguistic insights that morphological paradigms do not admit doublets” (Kroch 1994: 184), and yet they exist, as studies on overabundance, and the following chapter, show. The majority of these studies is set in the framework of Canonical Typology (cf. Corbett 2005, 2007a). The most seminal contribution is Thornton (2011), in which Thornton defines the phenomenon and proposes a first list of parameters to evaluate the degree of canonicity of overabundance. Free variation is implicitly included in these parameters, mainly in the criterion that in a canonical case of overabundance, there are no conditions on the distribution of the varying forms (cf. Thornton 2011: 362–370).² The canonical case of overabundance, as the canonical case of any phenomenon, is not expected to be frequent (cf. Corbett 2007b: 9; Corbett & Fedden 2016: 498) or even to be attested at all in any linguistic system (cf. Corbett 2005: 26).

Two completely interchangeable forms of equal frequency, whose use is not subject to any (speaker-related) diaphasic, diastratic, diamesic, diatopic or diachronic conditions, or to any phonological, morphological, syntactico-semantic, or pragmatic conditions, do not exist. (Thornton 2011: 362)

However, the notion of canonical overabundance is more comprehensive than that of free morphological variation. Overabundance as defined in Thornton (2011,

1. Mörth & Dressler (2014: 250) label the plural form *Pärke* as Swiss German. Swiss German, however, does not know such a plural form due to *e*-apocope. The corresponding plural form in Swiss German is *Pärk*; the singular is *Park*.

2. ‘Canonical cell-mates are defined as a set of two or more forms that realise the same cell (i.e. the same set of morpho-syntactic features) in a lexeme’s paradigm and can be used interchangeably, with the choice of one or the other form subject to no conditions.’ (Thornton 2011: 362)

inter alia) or Hasse (in press) includes a list of other features which are independent of factors defining the degree of variation of the cell-mates. Among them are:

- the criterion that cell-mates occurring in unpredictable cells, i.e. neither in a morphomic nor in a morphosyntactic pattern, are more canonical than overabundant cells in a morphomic pattern, and these in turn are more canonical than overabundant cells in a morphosyntactic pattern (cf. Thornton 2011: 370–375),³ or
- the criterion that overabundance attested in the grammatical system of a single speaker is more canonical than in the system of a group of speakers or even of an entire speech community (cf. Hasse in press: Section 3.3.2.5).

This article cannot discuss all the criteria for canonical overabundance but, rather, focuses on the criteria related to free variation.

2.3 Free morphological variation

As mentioned in Section 2.2, free variation is implicitly included in the notion of canonical overabundance. In Thornton (2012: 188), we find a further criterion aiming more specifically at free variation. Overabundance is more canonical if the cell-mates are equally frequent than if they differ in their frequencies. This idea of completely interchangeable forms can also be found elsewhere. Fehringer (2004, 2011) analyses the variation of the genitive suffixes *-es* ~ *-s* in German and states:

The words containing these suffixes are considered to be doublets under this account, as the allomorphs are not systematically conditioned by phonological, morphological, or semantic factors. That is to say, each word has two variant forms, and both can be used interchangeably. (Fehringer 2004: 286–287)

A question arising from this is which relative frequency of two or more forms we define as a threshold. Do we require a fifty-fifty distribution of two varying forms in order to refer to these forms as being truly interchangeable? Fehringer (2004), in her study on genitive variation in German, finds ratios between 1:1 (*Staub-es* ~ *Staub-s* ‘dust-GEN.SG’) and 131.5:1 (*Gott-es* ~ *Gott-s* ‘god-GEN.SG’). Thornton

3. The example in Thornton (2011: 371–374) for overabundance in a morphomic pattern, i.e. a pattern which is not shaped by any non-morphological factors, such as morphosyntax, are Italian *aprire* ‘to open’, *offrire* ‘to offer’ and *dare* ‘to give’ with overabundant 1.SG.PRF.IND, 3.SG.PRF.IND and 3.PL.PRF.IND cells. This pattern is the very same we find in the Italian tense *passato remoto* of verbs with stem changes, e.g. *passato remoto* of *avere* ‘to have’ 1.SG *ebbi*, 3.SG *ebbe*, 3.PL *ebbero* vs 2.SG *avesti*, 1.PL *avemmo*, 2.PL *aveste*. Thornton’s (2011: 374) example for overabundance in an unpredictable cell is the 2.SG.IMP cell of Italian *stare* ‘to stay’: *stai* vs *sta*.

(2012:189) sees an instance of disappearing overabundance in the suppletive inflection of the lexeme ‘eye’ (disappearing *oko* vs *glaz*) in Russian, where she finds a ratio of over 70:1 based on Chumakina et al. (2004:286). Her conclusion on the ratio of cell-mates is:

More generally, it can be speculated that in a given synchronic corpus ratios in the range of units indicate existence of overabundance, ratios in the range of tens indicate that overabundance is on the verge of extinction or has recently ceased to exist, and higher ratios indicate complete extinction of overabundance in the synchronic stage represented by the corpus. (Thornton 2012: 189)

The question of which ratio still counts as free variation is, as far as I know, still unanswered. Yet any threshold, apart from a fifty-fifty distribution, seems to be arbitrary. A true fifty-fifty distribution, however, is to be expected very rarely – if ever – in morphological variation. The canonical approach to overabundance does not bridge this gap, but it allows for comparison of attested cases of overabundance with regard to a number of features, among them the degree of interchangeability of the forms. Once there is a reasonable number of studies of overabundance, we might get a clearer picture of which ratios are most common when two or more forms realise one and the same cell of an inflectional paradigm and correlate them with the notion of free variation.

2.4 Excursus – phonological variation: Shape conditioning

In Section 4.2, we will encounter another variative phenomenon: shape conditioning. In cases of shape conditioning, there is more than one phonological form of a word. The choice of one form over the other is fully conditioned by the linguistic context in which this word appears, e.g. the shapes of the indefinite article in English, as in *a zebra*, but *an elephant*.⁴ Thus, shape conditioning and overabundance share the property that there are variants which do not differ in any grammatical or semantic feature. In the case of overabundance, these variants are called *cell-mates*; in the case of shape conditioning, *shapes*; cf. rows 2 and 3 in Table 1.⁵ Still, overabundance and shape conditioning differ fundamentally from one another (cf. Hasse in press: Section 3.5). Overabundance can only occur with

4. Shape conditioning can be much more complex with regards to the phonological processes involved and with regards to the linguistic factors triggering the use of a certain shape, as for example in the case of initial consonant mutation in Welsh (cf. Ball & Müller 1992) or Scottish Gaelic (cf. Stewart 2016: 90–150).

5. For the discussion of the position of shapes within an inflectional paradigm, cf. Green (2006); Bonami et al. (2014).

inflected forms because it is an inflectional phenomenon. Shape conditioning, on the other hand, can affect any part of speech and, consequently, inflected as well as uninflected words or word forms; cf. row 4. Cell-mates differ in their morphological structure and, thus, in their exponents or in their means of exponence. Shapes differ in their phonological structure; cf. row 5. Canonical cell-mates are in free variation. Shapes are in complementary distribution; cf. row 6. Shape conditioning is triggered by language-internal factors, i.e. the linguistic context. The distribution of non-canonical cell-mates, i.e. cell-mates which do not vary freely, can be conditioned by language-internal or external factors; cf. row 7. Language-internal are any phonological, morphological, syntactic, semantic or pragmatic factors; language-external are factors such as any sociolinguistic feature of speakers with an overabundant paradigm (cf. row 8).

Table 1. Overabundance and shape conditioning.*

	Cell-mates	Shapes
grammatical features	shared by the variants	
semantic features	shared by the variants	
affected	inflectional forms only	any part of speech
difference between variants	different exponents	phonological alternation
distribution of variants	free variation	complementary distribution
degree of conditioning	conditioning is lacking	fully conditioned
kind of possible conditioning*	language-internal and -external	language-internal

* The last row only affects non-canonical overabundance – in this case, conditioned variation of the cell-mates.

Since this volume deals with free variation, we will not go into any details of shape conditioning because we do not expect any examples of free variation in shape conditioning. In Hasse (2019), I analyse the interaction of shape conditioning and overabundance in the dative cell of the indefinite article in contemporary Zurich German in detail.

3. Phenomenon

3.1 The Swiss German indefinite article

Swiss German determiners inflect for case (DIRECT CASE, DATIVE), gender (MASCULINE, NEUTER, FEMININE) and – some of them – for number (SINGULAR, PLURAL).

The indefinite article only exists in the singular resulting in a paradigm with six possible cells; cf. Table 2. Swiss German dialects reveal varying syncretisms of gender in the direct case, and in some dialects, there are distinct nominative and post-prepositional accusative forms (cf. Hasse, Mächler & Bachmann 2020: 261; Hasse in press: Section 2.3.1). What all dialects share is the syncretism of DAT.MASC and DAT.NEUTR of the indefinite on the one hand and the definite article on the other (cf. Hasse, Mächler & Bachmann 2020; Hasse in press: Sections 2.1.1, 2.3.2).

Table 2. Indefinite article in Zurich German (cf. Schobinger 2008: 29)

	MASC	NEUTR	FEM
DIRECT CASE	<i>en</i>	<i>es</i>	<i>e</i>
DATIVE		<i>eme</i>	<i>ere</i>
		<i>emene</i>	<i>enere</i>

Dative forms of the indefinite (and definite) article appear much more often in post-prepositional than in free position (e.g. as dative objects). Nübling (1992: 221) finds a ratio of 9:1. Section 4.2, therefore, focuses on post-prepositional forms.⁶

3.2 DAT.MASC/NEUTR of the indefinite article in Zurich German

In Zurich German, there are three types of DAT.FEM (cf. (1)) and six types of DAT.MASC/NEUTR forms of the indefinite article (cf. (2)).⁷

- (1) a. *i=nere Hööli*
 in=a.DAT.FEM cave
 ‘in a cave’
 b. *mit=ere Schpänd*
 with=a.DAT.FEM donation
 ‘with a donation’
 c. *enere Chaz*
 a.DAT.FEM cat
 ‘(to) a cat’

6. In the analysis of the historical data (cf. Section 4.2.1), forms in NPs and PPs are included in the statistical model; in the analysis of the modern data (cf. Section 4.2.2), only forms in PPs are included because of the low number of tokens in NPs.

7. The transcription of spoken Zurich German broadly follows the guidelines of Dieth (1938).

- (2) a. *i=me* *Huus*
 in=a.DAT.NEUTR house
 ‘in a house’
- b. *i=mene* *Huus*
 in=a.DAT.NEUTR house
 ‘in a house’
- c. *mit=eme* *Schlüssel*
 with=a.DAT.MASC key
 ‘with a key’
- d. *mit=emene* *Schlüssel*
 with=a.DAT.MASC key
 ‘with a key’
- e. *eme* *Hund*
 a.DAT.MASC dog
 ‘(to) a dog’
- f. *emene* *Hund*
 a.DAT.MASC dog
 ‘(to) a dog’

The distribution of the DAT.FEM forms is straightforward: clitic forms in post-prepositional position are *=nere* if the preposition has a word-final vowel such as *i* ‘in’ (cf. (1a)) and *=ere* if the preposition has a word-final consonant such as *mit* ‘with’ (cf. (1b)). This poses a clear case of shape conditioning. In free position, the form is *enere*; cf. (1c). In the DAT.MASC/NEUTR cell, we see forms varying in their morphological structure, i.e. forms with single exponence, clitic *=me* and clitic or free (=)*eme* in (2a, c, e), and forms with multiple exponence, clitic *=mene* and clitic or free (=)*emene* in (2b, d, f). The form *eme* is already fully inflected for case and gender; the form *emene* does not differ with regards to any morphological, morphosyntactic or semantic features but has an additional suffix *-ne*. This is an instance of reinforcement multiple exponence (cf. Harris 2017: 61–64).⁸ The forms of the DAT.MASC/NEUTR also differ in their phonological structure, i.e. forms with word-initial vowel, *eme(ne)*, and forms with word-initial consonant, *me(ne)*. There is a tendency towards forms with a word-initial vowel after a preceding consonant (e.g. *mit=eme(ne)*; cf. (2c)–(2d)), and forms with a word-initial consonant after a preceding vowel (e.g. *i=me(ne)*; cf. (2a)–(2b)). This phonologically conditioned distribution is an instance of shape conditioning.

8. The emergence of *emene*, the form with multiple exponence, is discussed in Section 5.

3.3 Zurich German

In Section 1, we touched on the question of how to define a language. If we want to state that varying forms co-occur in one linguistic system, we need to define this system. Unlike more traditional approaches in dialectology, the current study does not analyse data that were elicited explicitly to study a specific dialect. The authors and speakers were chosen based on the linguistic system used at the time they wrote their texts (in the case of the historical corpus) or were recorded (in the case of the modern data). This linguistic system is characterised by features which can be attributed by linguists to the High Alemannic dialect spoken broadly in the Swiss canton of Zurich; but more importantly, all these texts and recordings are recognised as Zurich German by speakers of this very dialect. Any variation which is accepted by speakers of Zurich German is supposed to be a feature of it.

4. Corpus study

4.1 Data and data collection

The current study is based on two corpora which were both specifically compiled for the study of morphological variation of the indefinite article in Zurich German. One of them represents modern spoken Zurich German and the other previous stages of (written) Zurich German, so that variation of the dative of the indefinite article can be traced back in time.

The historical corpus consists of written Zurich German texts published between 1831 and 1953, thus covering 120 years. There are six authors represented with varying numbers of tokens per author, which is considered in the statistical analysis; cf. Section 4.2.1. The texts are either prose or drama; they were all scanned and searched manually for dative forms of the indefinite article. The corpus contains approximately 350,000–400,000 words and nearly 1,200 tokens of the dative of the indefinite article of any gender.

The modern corpus consists of transcriptions of two types of recordings. On the one hand, there are recordings made for the project *Archimob*.⁹ The aim of this oral history project (1999–2001) was to interview 555 people in all parts of Switzerland about their life during World War II. Ten of these interviews, which are 1 h 44 m long on average, were conducted with speakers of Zurich German. These were transcribed by various student assistants at the University of Zurich. On the other hand, there are 27 episodes of *Schawinski*, a Swiss German talk

9. <http://www.archimob.ch/> [10.12.2021].

show hosted by a speaker of Zurich German and aired on the TV channel SRF 1. All interviews with Zurich-German-speaking guests broadcast between February 2012 and November 2014 were included. They are half an hour long each, and they were transcribed by the author of this article.

Both subcorpora (*Archimob* and *Schawinski*) are neither annotated nor tagged and were searched manually for dative forms of the indefinite article. There are 252 tokens in the *Archimob* corpus (hereafter, *Archimob*) and 259 tokens in the *Schawinski* corpus (hereafter, *Schawinski*) for a total of 511 tokens.

In *Archimob*, there are 7 male and 3 female speakers born in the first third of the 20th century. In *Schawinski*, there are 18 male and 6 female speakers of varying age. The age of some speakers is unknown and can only be estimated. The oldest speaker is in his late 80s, the youngest in his late 20s. As in the historical corpus, the tokens of speakers vary in both subcorpora.

The tokens of the two corpora (historical and modern) were each included in a database, and they were all categorised according to the following variables:

- I. morphological and phonological form
 - a. atheoretical classification, e.g. DAT.MASC/NEUTR *emene, mene, eme*, etc.
 - b. length of the form accounted for by the number of consonants, e.g. DAT.MASC/NEUTR *eme, me* vs *emene, mene*, etc.
 - c. phonetic reductions of assumed full forms: e.g. DAT.MASC/NEUTR *emene* vs aphoretic *mene*, or DAT.MASC/NEUTR *eme* vs apocopated *em*
- II. grammatical gender: MASC VS NEUTR VS FEM
- III. syntactic variables
 - a. phrase: NP vs PP¹⁰
 - b. preposition in PPs¹¹
 - c. syntactic function
 - d. complexity of the phrase with a number of subtypes of complex phrases
- IV. phonological variables
 - a. preceding sound¹²
 - b. following sound¹³
 - c. epenthetic nasal after the indefinite article¹⁴

10. For the asymmetry in number of tokens of dative forms of articles in NPs and PPs, cf. Section 3.1 and Nübling (1992: 221).

11. Hotzenköcherle & Trüb (1975: maps 137–138) map varying forms of the definite article ACC.SG.MASC in PPs with the preposition *uf* 'on' vs PPs with *i* 'in' or *a* 'to'. We assume that something similar is possible for DAT.MASC/NEUTR of the indefinite article.

12. For an extensive list of references concerning the distribution of dative forms of the indefinite article following prepositions ending on a consonant vs prepositions ending on a vowel in various Swiss German dialects, cf. Hasse (in press: Section 2.2.2).

V. animacy¹⁵

Not all values of all variables are attested frequently enough to include them in statistical analyses. Sections 4.2.1 and 4.2.2 list the independent variables used in the analyses of the historical and of the modern corpus. Because morphological variation only concerns the DAT.MASC/NEUTR forms, all DAT.FEM forms were excluded from the statistical model.

4.2 Data analysis and results

The data of the historical and the modern corpus were gathered in two databases and analysed separately. Both subcorpora were analysed quantitatively as well as qualitatively. In the following, I will restrict myself to the quantitative results of the corpus study to give a broader picture of the degree of variation between forms with single and multiple exponence. The response variable, i.e. single or multiple exponence, is categorical. Therefore, general linear mixed models (GLMM) were conducted in R (version 3.4.3, RStudio version 1.1.383). Non-significant variables were excluded from an initial full model based on AIC (Akaike information criterion). All the variables that proved to be statistically significant after this stepwise backwards procedure were included in an optimised model that is presented for each corpus in the following subsections.

4.2.1 Findings in the historical corpus

The effects of several linguistic factors on the occurrence of single or multiple exponence were tested in a generalised linear mixed model (GLMM). As fixed factors, the following were included: gender (2 levels: MASC, NEUTR), preceding sound (2 levels: C, V),¹⁶ following sound (2 levels: C, V), the word-initial sound (2 levels: C, V), occurrence of an epenthetic nasal after the article (2 levels: yes, no), phrase (2 levels: NP, PP), phrase complexity (2 levels: simple, complex), occurrence of an adjective (2 levels: yes, no), syntactic function (4 levels: indirect

13. Dal Negro (2004) finds different forms of the definite article NOM.MASC and ACC.MASC in Highest-Alemannic linguistic islands in Italy depending on the following sound. Hotzenköcherle & Trüb (1975: maps 132–135) map varying forms of the definite article NOM/ACC.PL and NOM.SG.MASC of the definite article in various Swiss German dialects.

14. Cf. Section 5 for references of the epenthetic nasal in Swiss German.

15. Cf. dal Negro & Musso (2003) for the effect of animacy on varying NOM.MASC forms of the definite article in the dialect of Issime, or Alber & Rabanus (2011) for the interaction of animacy and syncretism in various Germanic varieties.

16. C: consonant, V: vowel.

object, adjunct, adnominal modifier, object-like PP)¹⁷ and animacy (3 levels: animate, inanimate, abstract). Because of the differences in numbers of tokens per author, a random intercept for author was included. The minimal model contained the factors that proved to be significant after a stepwise backwards procedure based on AIC. The inclusion of the random intercept was justified as shown by likelihood ratio tests. The factors preceding sound ($\chi^2(1)=5.9$, $p=0.01501$), word-initial sound of the article ($\chi^2(1)=129.0$, $p<0.001$) and epenthetic nasal ($\chi^2(1)=37.4$, $p<0.001$) proved to have a significant effect of the distribution of single and multiple exponence; cf. Table 3. The various contexts in which the article forms appear are named in column 1.¹⁸

Table 3. Factors with a significant effect on the occurrence of multiple exponence in the historical corpus.*

Context	Preceding sound	Word-initial sound of the article	Epenthesis	Observations		Relative frequency of ME
				Total	Thereof with ME*	
CV+	consonant	vowel	yes	27	5	19%
CV-			no	256	39	15%
VC+	vowel	consonant	yes	55	12	22%
VC-			no	412	229	56%
VV+		vowel	yes	3	0	0%
VV-			no	31	12	39%

* ME: Multiple exponence

After a preceding consonant, only forms with a word-initial vowel are attested (context CV+ and CV-). These forms conform with shape conditioning as described in Section 3.2. The majority of these forms have single exponence (corresponding to *uf=eme* 'on=a.DAT.MASC/NEUTR' or *mit=eme* 'with=a.DAT.MASC/NEUTR', respectively). Forms with multiple exponence are relatively rare (19% in context CV+ with an epenthetic nasal (cf. (3)); 15% in context CV- without an epenthetic nasal (cf. (4))).

17. Corresponding to *Dativobjekt, Adverbial, Attribut, Präpositionalobjekt* in German grammar-writing.

18. The labels are to be read as CV+ 'preceding consonant, word-initial vowel, plus epenthetic nasal', CV- 'preceding consonant, word-initial vowel, no epenthetic nasal', VC+ 'preceding vowel, word-initial consonant, plus epenthetic nasal', etc.

- (3) *uf=emenen einsame Berghoof*
 on=a.DAT.MASC lonely.DAT.MASC.SG mountain farm
 ‘on a lonely mountain farm’ (Biedermann 1889: 20)
- (4) *mit=emene ganz kuriöse Lächle*
 with=a.DAT.NEUTR very strange.DAT.NEUTR.SG smirk
 ‘with a very strange smirk’ (Biedermann 1889: 66)

After a vowel (context $VC\pm$ and $VV\pm$), we find much higher rates of morphological variation, i.e. more canonical overabundance, but also higher rates of phonological variation, i.e. less strict shape conditioning. A preceding vowel can either be followed by an article form with a word-initial consonant (context $VC\pm$) or – much less frequently – by an article form with a word-initial vowel (context $VV\pm$). In context $VV\pm$, shape conditioning is violated. In both contexts, $VC\pm$ and $VV\pm$, we find variation of single and multiple exponence to various degrees. The variation is particularly high in context $VC-$, which is also the most frequent context. Here, 56% of the article forms have multiple (cf. (5)) and 44% have single exponence (cf. (6)).

- (5) *vo=mene ehrehafte, tugedliche*
 from=a.DAT.NEUTR honourable.DAT.NEUTR.SG virtuous.DAT.NEUTR.SG
Puuremailli
 farm girl
 ‘from a honourable, virtuous farm girl’ (Biedermann 1888: 33)
- (6) *vo=me arme Schriiner*
 from=a.DAT.MASC poor.DAT.MASC.SG carpenter
 ‘from a poor carpenter’ (Biedermann 1932: 80)

A high rate of both forms with multiple (cf. (7)) and single exponence (cf. (8)) is further attested in context $VV-$, but with much lower absolute numbers.

- (7) *na emene richtige Plan*
 towards a.DAT.MASC real.DAT.MASC.SG plan
 ‘towards a real plan’ (Biedermann 1888: 64)
- (8) *na eme Öpfel*
 towards a.DAT.MASC apple
 ‘towards an apple’ (Biedermann 1889: 13)

The rate of forms with multiple exponence is generally low in article forms with an epenthetic nasal (not attested in context $VV+$; in context $VC+$, 22% of multiple exponence (cf. (9)) vs 78% of single exponence (cf. (10))).

- (9) *a=menen* *Egge*
 at=a.DAT.MASC corner
 ‘at a corner’ (Eschmann 1912: 62)
- (10) *a=men* *andere* *Ort*
 at=a.DAT.MASC different.DAT.MASC.SG place
 ‘at a different place’ (Biedermann 1888: 43)

If dative forms with single and with multiple exponence of the indefinite article varied freely, we would expect to find the same proportion of each form in every context. This, however, is not the case. Instead, we find conditioned variation next to free variation in conditioned contexts. Examples like (3) and (4) are rather rare: forms with multiple exponence do not even reach 20% in contexts with a preceding consonant (CV±). In contexts with a preceding vowel, the situation is much more complex. In the most frequent context, VC–, we find a distribution that is very close to random: 56% of forms with multiple and 44% of forms with single exponence. In the second most frequent context, VV–, we find comparably high ratios of both types of forms: 39% with multiple and 61% with single exponence. Only an epenthetic nasal can diminish the rate of forms with multiple exponence drastically. Otherwise, there is sound evidence that forms with single and with multiple exponence vary rather freely – but only under certain conditions.

4.2.2 Findings in the modern corpus

The GLMM of the modern spoken data for analysing the effect of various factors on the occurrence of single vs multiple exponence included the following as fixed factors: gender (2 levels: MASC, NEUTR), word-initial sound (2 levels: C, V), preceding sound (2 levels: C, V), following sound (2 levels: C, V), epenthetic nasal following the article (2 levels: yes, no), syntactic function (3 levels: adjunct, adnominal modifier, object-like PP), phrase complexity (2 levels: simple, complex), occurrence of an adjective (2 levels: yes, no) and animacy of the noun (3 levels: animate, inanimate, abstract). Because of the differences in numbers of tokens per speaker, a random intercept for speaker was included. The inclusion of the random intercept was justified as shown by likelihood ratio tests. After the stepwise backwards procedure based on AIC, the minimal model included preceding sound ($\chi^2(1) = 97.7, p < 0.001$) and epenthetic nasal ($\chi^2(1) = 12.5, p = 0.0004$) as fixed factors. Unlike in the analysis of the historical data, the word-initial sound

is not significant, yet there is a trend ($\chi^2(1) = 3.8, p = 0.05$); cf. Table 4.¹⁹ Again, the relevant contexts are named in column 1.²⁰

Table 4. Factors with a significant effect on the occurrence of multiple exponence in the modern corpus

Context	Preceding sound	Epenthesis	Observations		Relative frequency of ME
			Total	Thereof with ME	
C+	consonant	yes	7	0	0%
C-		no	84	13	15.5%
V+	vowel	yes	22	11	50%
V-		no	179	133	74.3%

The results resemble the ones of the historical data in some regards. If the article is preceded by a consonant, we find relatively few forms with multiple exponence (15.5% of multiple exponence in context C- without a subsequent epenthetic nasal (cf. (11)) and no forms with multiple exponence in context C+ (cf. (12))).

(11) *mit=emene andere Schwiizer*
 with=a.DAT.MASC different.DAT.MASC.SG Swiss person
 ‘with a different Swiss person’ (A320)²¹

(12) *nach=emen Uuftritt*
 after=a.DAT.MASC performance
 ‘after a performance’ (S67)

In context V±, the majority of the article forms have multiple exponence. In context V+, we see 50% of forms with single (cf. (13)) and 50% of forms with multiple exponence (cf. (14)).

(13) *a=men andere Ort*
 at=a.DAT.MASC different.DAT.MASC.SG place
 ‘at a different place’ (S207)

19. For shape conditioning of these forms in the modern corpus, cf. Hasse (2019).

20. The labels are to be read as C+ ‘preceding consonant, plus epenthetic nasal’, C- ‘preceding consonant, no epenthetic nasal’, etc.

21. The tokens from the modern corpus are numbered: A is for tokens from Archimob, S for tokens from Schawinski.

- (14) *i=menen* *aatrunkne* *Zueschtand*
 in=a.DAT.MASC tipsy.DAT.MASC.SG state
 ‘in a tipsy state’ (S40)

The context V– is much more frequently attested than the others (V+ and C±). Out of these forms, three quarters have multiple exponence (cf. (15)) and only one quarter have single exponence (cf. (16)).

- (15) *zu=mene* *ächte* *Desaschter*
 to=a.DAT.NEUTR real.DAT.NEUTR.SG disaster
 ‘to a real disaster’ (S23)

- (16) *i=me* *andere* *Schpitaal*
 in=a.DAT.NEUTR different.DAT.NEUTR.SG hospital
 ‘in a different hospital’ (S273)

Similar to the historical data, we find conditioned variation next to (rather) free variation. In contexts where the article is preceded by a consonant (C±), the majority of forms has single exponence as in (12). A much higher rate of interchangeability is found in contexts with a preceding vowel (V±); yet the rate is lower than in the comparable contexts in the historical data (contexts VC± and VV±). This means that one form is more frequent than the other but, again, only in certain contexts. In context V–, we see forms with single exponence in one quarter of the article forms. In the same context but with an epenthetic nasal (V+), we find a fifty-fifty distribution. Even though the total numbers of V+ are much lower than those of V–, we find free variation in this linguistic context.

4.2.3 Intrapersonal variation

In Section 2.2, we encountered the parameter that overabundance is more canonical if it is attested in the inflectional system of a single speaker than if it only appears on the more abstract level of the speech community. So far, we have analysed the data across all speakers, even if speaker/author was included as a random effect in the statistical model. The question of how overabundance appears in an idiolectal inflectional system, however, is still open. In the following, we focus on the modern data only. The vast majority of the tokens were recorded in one interview situation, which means that they were realised in the very same interactional situation. If we zoom in at the individual level, we find only one speaker without an overabundant DAT.MASC/NEUTR cell of the indefinite article.

RB, a male speaker born in the 1910s, uses only forms with single exponence even in context V–, the context where we find predominantly multiple exponence in the corpus study; cf. (17).

- (17) *i=me* *Tresor*
 in=a.DAT.MASC safe
 ‘in a safe’ (A453)

However, there is sound evidence for intraindividual morphological variation in the DAT.MASC/NEUTR cell of the indefinite article in both contexts defined in Section 4.2.2. In context C–, only 15.5% of the article forms in the corpus have multiple exponence. That this variation is not due to interpersonal variation with one speaker using only forms with single exponence and one speaker using only forms with multiple exponence can be illustrated with PPF, a male speaker born in the 1910s. He uses forms with single exponence, as expected (cf. (18)) next to forms with multiple exponence (cf. (19)), even after the same preposition.

- (18) *under=eme* *främde* *Name*
 under=a.DAT.MASC foreign.DAT.MASC.SG name
 ‘under a foreign name’ (A399)

- (19) *under=emne* *Vorwand*
 under=a.DAT.MASC excuse
 ‘with an excuse’ (A386)

In context V±, where we expect a majority of forms with multiple exponence (50% in V+, 74.3% in V–), CM, a male speaker born in the 1960s, uses forms with single (cf. (20)) and multiple exponence (cf. (21)) in post-vocalic position in the very same interview with comparable semantics.

- (20) *vo=men* *Aarzt*
 from=a.DAT.MASC doctor
 ‘from a doctor’ (S230)

- (21) *vo=mene* *tailändische* *Aarzt*
 from=a.DAT.MASC Thai.DAT.MASC.SG doctor
 ‘from a Thai doctor’ (S222)

In the same context, TK, a female speaker born at around the same time, shows an overabundant DAT.MASC/NEUTR cell, but with a different pattern. Even though we expect ca. 75% of forms to have multiple exponence in this context, she uses forms with multiple exponence only in two out of eleven cases; cf. (22) for a form with multiple exponence and (23) for a form with single exponence. This time, however, both forms are used in the very same utterance, and both forms are used in exactly the same PP.

- (22) *i=mene* *Tanzlokaal*
 in=a.DAT.NEUTR dance hall
 ‘in a dance hall’ (A376)

free variation of these forms is found in Middle High German. The forms differ in their geographical distribution as well as in their frequency over time.

For Early New High German (ca. 1350–1650 AD), Ebert et al. (1993) list the forms *einem*, *eineme*, *eime*, i.e. the same forms as attested in Middle High German. The first, *einem*, is the youngest form found in Middle High German; the second, *eineme*, is the oldest form; and, finally, *eime* is less frequent than *eineme*, according to Paul (2007: 227), or a form that is particularly common in Alemannic, according to Klein et al. (2018: 467). While the variative pattern in Middle High German is discussed in the literature, Ebert et al. (1993) do not provide comparable information on the distribution of the various forms in Early New High German. Still, we find variation of forms such as *einem*, *eineme* and *eime* over a time span of 600 years, even if, as stated above, the forms do not appear to vary freely.

The Swiss German forms of the DAT.MASC/NEUTR with the nasal sequence /n/ – /m/ (such as *enem*)²² or – much more common – forms without /n/, such as *eme*, descend directly from Middle and Early New High German, with the only difference of a monophthongised word-initial vowel (*eime* > *eme*) being attributable to the high frequency of the article (cf. the retention of the Germanic diphthong in the numeral ONE). The tendency found in Middle High German that *eime* is particularly frequent in Alemannic (see above) is still reflected in modern Swiss German dialects. The majority of the Swiss German dialects has such a form (*eme*) at least as a variant, if not even as the only DAT.MASC/NEUTR form.

Whether *emene*, the most frequent form in Swiss German next to *eme*, could be inherited from earlier stages of German is a matter of discussion. There are two possibilities: (a) *emene* is inherited but underwent metathesis or (b) *emene* is a morphologically innovative form. Explanation (a) is much more common. Remarkably, its proponents do not assume that a form *eneme*, a form which can be directly linked to *einem* in Middle and in Early New High German, is subject to metathesis (*eineme* > *eneme* > *emene*). Rather, they assume that metathesis operated on a form *eme* in contexts with prepositional dative marking (such as *i-n-eme* or *a-n-eme*) (for Zurich German, cf. Weber 1923: 168; Weber 1948: 105; Schobinger 2008: 30),²³ or on a form *eme* preceded by an epenthetic nasal, such as *bi-n-eme* (cf. Baumgartner 1922: 137; Marti 1985: 79 for Bernese German). Prepositional dative marking exists in a number of Swiss German dialects. In these dialects, NPs with a bare dative are extended by a preposition turning them into PPs, e.g. *Ich gib s dier* ‘I give it to you’ > *Ich gib s a/i dier* (cf. Seiler 2003). Yet Zurich German is precisely one of the dialects lacking prepositional dative

22. Forms with the sequence /n/ – /m/ are only found in parts of the canton of Valais and the Eastern Bernese Oberland (cf. Hasse in press, Section 2.3.2.1.1).

23. The same assumption has been made for other dialects (cf. Hasse in press: footnote 89).

marking. Furthermore, metathesis is a rather rare phonological process in Swiss German, and nasal metathesis is not attested at all. The DAT.MASC/NEUTR of the possessive pronoun 1SG, with the same sequence of nasals (*minem*, next to *mim*), for instance, does not exhibit any metathetic forms (**mimen*). Therefore, explanations invoking metathesis do not seem very plausible to me, and I rather want to analyse *emene* as a morphologically innovative form. It is an extension of *eme*, a form that is already fully inflected for case and gender, by an additional suffix *-ne*. This approach is not new and was already suggested by Stalder (1819: 89); yet the following nearly 200 years of research on Swiss German have not considered it. But where does this suffix *-ne* come from?

There are two sources for *-ne* as a suffix of the DAT.MASC/NEUTR of the indefinite article. For the first source, we need to keep in mind that the majority of dative forms of the indefinite article occur post-prepositionally. A further characteristic of these forms, not only in Zurich German but in most Swiss German dialects, is an unstressed word-final vowel. This word-final vowel prevents the forms of the indefinite article (cf. (24)) becoming syncretic with the definite article (cf. (25)); for the DAT.MASC/NEUTR forms of the definite article, cf. Hasse, Mächler & Bachmann (2020).²⁴

(24) *uf eme Ross* ‘on a horse’

(25) *uf em Ross* ‘on the horse’

This word-final vowel also poses a systematic difference between the indefinite article (cf. (26)) and the numeral ONE (cf. (27)) with which the indefinite article shares its ancestors.

(26) *mit eme Hund* ‘with a dog’

(27) *mit aim Hund* ‘with one dog’

A well-known phonological process of Swiss German is the insertion of a nasal /n/ in hiatus positions; for the oldest accounts, cf. e.g. Stalder (1819: 65–66), Weinhold (1863: 171); for younger accounts, cf. e.g. Nübling & Schrambke (2004: 285, 293–294), Fleischer & Schmid (2006: 249). Nübling & Schrambke (2004: 294) note explicitly that the epenthetic nasal is particularly frequent with articles. If the noun in a phrase, as in (26), has a word-initial vowel, the article is subject to the insertion

24. In most Swiss German dialects, the definite and indefinite article do not share the same stem in the DAT.FEM cell. The most widespread definite article forms are those with a word-initial plosive, i.e. *de* or *dr* (cf. Hasse, Mächler & Bachmann 2020), leading to definite *uf de/dr chue* ‘on the cow’ next to indefinite *uf ere chue* ‘on a cow’. This might be one of the reasons why an equivalent form to indefinite DAT.MASC/NEUTR *emene* (DAT.FEM **erene*) has not emerged.

of an epenthetic nasal; cf. (28). In such a phrase, the pattern of a characteristic word-final vowel of the indefinite article is blurred. If this vowel is reinserted, in order to preserve this feature, *eme* is ultimately extended by *-ne* (*eme-n* > *eme-n-e* > *emene*).

(28) *mit eme-n aff* ‘with a monkey’

The suffix *-ne*, however, is already attested in dative forms of pronouns, the second source for this suffix. On the one hand, it appears in forms such as *kene* ‘no’ or *öiserne* ‘our’, all DAT.PL forms without any gender distinctions. It also exists in the DAT forms of numerals such as *zweene* ‘two’, *dreine* ‘three’ or indefinite pronouns such as *baidne* ‘both’, lexemes with inherent plural semantics. The question that remains open is how this plural suffix can be transferred to a singular paradigm, like the paradigm of the indefinite article. The indefinite article shares an important feature with these numerals and indefinite pronouns: they do not inflect for number, meaning that there is only one paradigm with regard to number and, subsequently, only one dative cell for each gender as opposed to, for instance, the definite article, where there are DAT.SG and DAT.PL forms.

6. Results

Even though there are some differences between the results from the historical (cf. Section 4.2.1) and the modern corpus (cf. Section 4.2.2), both types of variation – conditioned variation and free variation in conditioned contexts – have been attested for about 200 years in Zurich German, and they are still present in contemporary spoken Zurich German, even at an individual level. Some of the forms, along with a certain degree of variation, in the DAT.MASC/NEUTR cell can even be traced back further to Middle High German times.

In the modern as well as in the historical corpus, we find predominantly single exponence after a preceding consonant (context CV± in the historic, context C± in the modern corpus), while after a preceding vowel (contexts VC± and VV± or V±, respectively), there is a much higher degree of interchangeability of forms with single and with multiple exponence. In the most common context in the historical corpus (VC–), 56% of the forms have multiple exponence; in the most common context in the modern corpus (V–), nearly 75% have multiple exponence. This increase does not necessarily mean that overabundance is dissolving. Fehringer (2004: 313–314) shows that a cell-mate which is more frequent in one stage of a language can become the less frequent variant in another stage, and *vice versa*. Anyhow, the ratios of the cell-mates in what has been labelled conditioned variation and free variation in conditioned context, respectively, both lie within


the range of units, a range defined by Thornton (2012: 189) as an indicator of overabundance. This indicates that this instance of variation is quite stable.

7. Summary: How free is free variation?

If variation is free, the variants – or in the case of overabundance, the cell-mates – are used equally often in every linguistic context in the language use of a single speaker. If variation is conditioned, there is at least one language-internal or -external factor favouring one of the variants. The DAT.MASC/NEUTR of the indefinite article of Zurich German is an instance of conditioned free variation. In certain contexts, namely, after a preceding vowel, we find comparable numbers of forms with single and multiple exponence. In the historical corpus, we encounter a distribution close to fifty-fifty. In the modern corpus, the ratio is somewhat less balanced if we leave aside the epenthetic nasal as a factor for the moment, forms with multiple exponence make up about two thirds and forms with single exponence about a third.

As mentioned in Section 2.3, linguists seem to be hesitant to define a threshold of free variation, and so am I. I rather want to concentrate on the notion of overabundance. The kind of approach taken here to define overabundance does not aim at defining something like a threshold. Rather, it defines the phenomenon in a way which allows for the comparison of instances of overabundance in the languages of the world. How free *free morphological variation* can be, i.e. if there are any instances of completely interchangeable forms, still has to be shown. The same is true for all the other criteria differentiating canonical from non-canonical overabundance which are not dealt with in this article. We need enough empirical evidence to make statements about which types of overabundance occur frequently, which ones are rare and which ones do not exist at all.

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