

Suppletion Replication in Grammaticalization and Its Triggering Factors

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Abstract

The paper tries to account for several instances of emerging suppletion by establishing a cross-linguistic tendency of suppletion replication in grammaticalization. It can be shown that words which acquire new grammatical functions and therefore enter a different class of lexemes tend to copy suppletion patterns already present in other members of this class. This development can be triggered by factors of different nature, either internal to the language in question or rooted in contact between different languages or dialects of the same language. The suppletion replication tendency is demonstrated on several cases of grammaticalization of demonstrative or relative pronouns into 3rd person pronouns. This typologically common development is known to have led to the creation of new suppletion in several languages of Europe. In the present paper, three particularly telling cases from Slavonic, dialects of Lithuanian and early West Germanic dialects spoken on the continent are discussed in detail.

Keywords

inflectional morphology – suppletion – pronouns – Slavonic – Baltic – Germanic

1 Introduction

In recent years, suppletion in inflectional paradigms has often been the subject of linguistic studies. Many instances of inflectional suppletion, both known and newly discovered, have received high-quality detailed descrip-

tions.¹ On this empirical basis, substantial advances in the synchronic understanding of suppletion and its place in the inflection of natural languages have been made.² The time seems ripe for an attempt to gain deeper insight into the diachronic dimension of suppletion in inflectional paradigms, i.e. into the mechanics of its emergence and further development.³

The present paper deals with the emergence of inflectional suppletion and the factors which may trigger its generation in a particular language at a particular time and may be responsible for the particular shape of a suppletive paradigm. It attempts to find answers for the following questions:⁴

- i. Why do two or more formerly or potentially independent lexical units sometimes build a single inflectional paradigm?⁵
- ii. What are the factors determining the particular distribution of the constituents within the newly established suppletive paradigm?
- iii. Why does a particular suppletion emerge in a particular language or languages but not in others?
- iv. Why does a particular suppletion emerge in a particular language or languages at a particular time (and not earlier or later)?

In several cases, one or more of these questions can be answered easily. These answers are most obvious when suppletion is generated by sound change. In such cases the constituents of the new suppletive paradigm only seemingly reflect independent word stems. Their distribution within the inflectional pat-

1 Cf., for instance, Beckmann (2002) on suppletion in Low German, Bacanlı (2011) on inflectional suppletion in Turkic, Veselinović (2003) and Kölligan (2007) on suppletion in the conjugation systems of Irish and Greek, respectively, or Veselinova's (1999, 2006) typological survey of suppletion in the inflection of verbs.

2 Cf. Mel'čuk (1976, 1994, 2000), Fertig (1998), Hippisley et al. (2004), Corbett (2005, 2007, 2009).

3 Cf. most recently Ronneberger-Sibold (1987a), Juge (1999), Nübling (1999, 2000: 205–208), Hogg (2003), Čumakina et al. (2004), Wodtko (2005) and Maiden (2004).

4 Cf. Maiden (2004: 228), where the first two questions are already formulated as an agenda for any research into diachrony of inflectional suppletion.

5 Since the focus of the present paper is on diachrony, it only deals with this "classical" type of inflectional suppletion. Defectiveness, which, in synchronic terms, might be considered a kind of suppletion (cf. Boyé and Cabredo Hofherr, 2010), does not necessarily emerge in the same way (cf. Baerman and Corbett, 2010: 11–17; Mithun, 2010: 143–147; Baerman, 2011) and therefore remains beyond the scope of the present discussion. Instances of suppletion which might belong to derivation (cf. on suppletion in derivation Mel'čuk, 1994, 2000; on its diachrony Ronneberger-Sibold, 1987b, Bobaljik, 2012) are not treated in the present paper for similar reasons.

tern in question and the presence of this pattern in a particular language at a particular time are determined by the dynamics of the relevant sound change.

It is, furthermore, well known that inflectional suppletion often arises when a morphological pattern crosses the border between derivation and inflection, thus creating a new inflectional category. In this situation the role of the new inflectional form or the new inflectional domain (such as a new tense form in the inflection of verbs) may in some lexemes be adopted by an etymologically unrelated formation with suitable semantics.⁶ Cf., for instance, the well understood grammaticalization of deverbal nouns with *ti*-suffix into infinitives in the Baltic and Slavonic branches of Indo-European. This development is known to have led to suppletion, cf. 1sg. present Lithuanian *es-mi*, Old Russian *jes-mĩ* ~ infinitive Lith *bũ-ti*, ORu *by-ti* ‘to be.’ Here the present stem Lith *es-*, ORu *jes-* descends from Proto-Indo-European **h₁es-* ‘to be,’⁷ whereas the infinitive is based on a different root, PIE **b^huh-* ‘to grow.’⁸ In this case the particular distribution of the stems involved within the inflectional paradigm of Lithuanian and Old Russian can be easily explained. A *ti*-derivative of PIE **h₁es-* ‘to be’ was unavailable because it probably did not exist in the most recent prehistory of Baltic and Slavonic.⁹ Therefore the grammaticalization naturally created a gap in the infinitive, which could be filled by a semantically close derivative of another root. Why the suppletion arose in Baltic and Slavonic and not, for instance, also in Greek, is answered by reference to the grammaticalization process, which in the given form did not occur elsewhere. The particular point in time is obviously also determined by the grammaticalization. The suppletion clearly could not come into being prior to it because the relevant slot in the

6 Cf. especially Strunk (1977) and Panagl (2000).

7 Cf. 3sg.prs. Hittite *es-zi*, Sanskrit *ás-ti*, Latin *es-t*.

8 Cf. 3sg.aorist Skt *á-bhũ-t*, Gk *é-phý* ‘became,’ Gk 1sg.prs. *phýomai* ‘grow, arise, emerge’ and the nominal derivatives such as Gk *phy-tón* ‘plant,’ *phý-tlê* ‘generation, family’ or ORu *by-lĩ*, *by-lje* ‘herbs, grass’ (cf. Frisk, 1954–1972: 2.1052–1054; Trubačëv et al., 1974 ff.: 3.148–151). The exact pronunciation of PIE **h* cannot be determined for this verbal root. All three PIE so-called “laryngeals”—**h₁* (which has no coloring affect on adjacent vowels), **h₂* (which turns adjacent **e* into **a*) and **h₃* (which makes adjacent **e* to **o*)—seem equally possible.

9 The PIE *ti*-formation derived from this root might be preserved in Skt *stĩ-* ‘relative,’ Young Avestan *sti-* ‘possessions, property’ (cf. Mayrhofer, 1996: 759). Probably due to its vowelless root morpheme, this formation was lost nearly everywhere in Indo-European. It left no traces in Baltic and Slavonic either. Old Prussian acc. sg. *astin* ‘thing; action, effect’ and dialectal Russian *jest’* ‘possessions’ begin with a full vowel and are therefore recent creations on the basis of the verb OPr 3prs. *ast, est*, Ru 3sg.prs. *jest’* ‘is’ (cf. Toporov, 1975: 134–135, Mažiulis, 1988: 105–106).

inflection of the verb did not yet exist; and it did not emerge significantly later because the inflection of Baltic and Slavonic does not tolerate the infinitive slot to remain unfilled.

However, not all suppletion which is known to have recently arisen in the languages of the world has come into being by sound change or grammaticalization of derivational morphology. Consequently, a considerable number of instances lack an obvious phonological or functional background and remain to be explained. For example, the same lexical material, PIE *h₁es- ‘to be’ and *b^huh- ‘to arise, to grow,’ has also been used in the copula inflection of the so-called West Germanic languages, such as Old English or Old High German. In Old English, either formation (the one based on ‘to be’ and the one ultimately based on ‘to grow’) inflects independently, forming (nearly) all paradigmatic forms of the present tense. Cf. in the singular of the West Saxon dialect of Old English:

- (1) 1sg.prs. *eom* *bēo*
 2sg.prs. *eart* *bist*
 3sg.prs. *is* *bið*

The semantic difference between these stems is that between an actual present (OE *is* ‘it presently is’) and a habitual present (OE *bið* ‘it usually is’).¹⁰ By contrast, in Old High German and the other West Germanic languages on the continent, only one present-tense paradigm of the copula is found. Its inflections are partly counterparts of OE *eom* etc., partly counterparts of OE *bēo* etc. For instance, the 2sg.prs is OHG *bist* (= OE *bist*) while the 3sg.prs is OHG *ist* (= OE *is*). Why the two paradigms, which are kept apart in Old English, have conflated on the continent is entirely unclear,¹¹ and the basic fact of conflation gives no cue

10 Cf. most recently Schumacher (2009: 257–262), Bolze (2013), Petré (2013).

11 It is sometimes claimed that the two distinct paradigms of Old English reflect a recent feature of this language, which was acquired under the influence of Celtic spoken in Britain (cf., for instance, Wischer, 2010: 218–220). This assumption pushes the emergence of suppletion back at least into Proto-West-Germanic times (since Gothic does not participate, the suppletion can hardly be as old as Proto-Germanic). The difference between this scenario and the more plausible traditional picture drawn here does not seem to affect the present argument for the named uncertainties that remain. Several scholars assume that *b*-inflections of ‘to be’ in parts or all of West Germanic are directly borrowed from Celtic (cf. Lutz, 2009; Trudgill, 2011: 297–301; Vennemann, 2013: 294–301). This assumption is unnecessary and directly contradicted by the present participle Proto-Gmc **bijandz-up-*, whose masculine form of the nominative singular is preserved in the adverb *bijandz-up-*

as to why the 2sg of the new suppletive paradigm is filled by the old habitual form, whereas the 3sg originated from the actual present. Since the conflation is not shared by Old English, it is probably more recent than the separation of its speakers from the West Germanic dialect continuum by emigration to Britain in the 5th century. In the oldest continental West Germanic texts such as Isidore's treatise *De fide catholica*, which was translated into Old High German around 800, the suppletion is fully established. Why it did not arise earlier (i.e. before 400) or did not wait until later (i.e. after 800) remains to be answered as well.

The aim of the present paper is to account for several instances of emerging suppletion of this latter type by establishing a cross-linguistic tendency of replicating suppletion in grammaticalization. It can be shown that words which acquire new grammatical functions and therefore enter a different class of lexemes tend to mirror suppletion patterns which may already be present in other members of this class. I will also demonstrate that this development can be triggered by factors of different nature. In some cases the triggering factor seems to be internal to the language in question. In other cases the replication of suppletion seems to result from contact between different languages or dialects of the same language.

The suppletion replication tendency can be demonstrated on several cases of grammaticalization of demonstrative or relative pronouns into 3rd person pronouns. This development, typologically fairly common,¹² is known to have led to the creation of new suppletion in several languages of Europe. In the present paper, three particularly telling cases will be discussed in detail. In Sections 2 to 4 below, I will present the relevant material from the Slavonic languages Russian and Polish, from dialects of Lithuanian and, finally, from older stages of continental West Germanic such as Old High German and Old Saxon. In Section 5 I will contrast this data with the inflection of pronouns exhibiting inherited suppletion and argue for a suppletion replication tendency as a valid typological generalization. Section 6 deals with the questions why the proposed tendency is only sporadically observable and under which conditions it comes to operate in a natural language. In Section 7 I will address the ques-

þan 'besides, at the same time' of the East Germanic language Gothic (univerbated with *þan-uh* 'and then,' cf. Seebold, 1970: 114, with references). On the morphology of Proto-Gmc **bija-* 'to be' and its Celtic counterpart, cf. most recently Hill (2012: 14–19). On the *b*-inflections of 'to be' in Old English and on the continent, see also Laker (2008: 28–29).

12 Cf., for instance, Diessel (1999: 119–120), Heine and Song (2011: 595–596); a particularly interesting case from Australia is discussed by Dench (2007).

tion whether the suppletion replication tendency fully determines the further development of inflection patterns it once created. The results of the investigation are summarized in Section 8. The last part of the paper, Section 9, contains theoretical reflections on the ontology of suppletion replication and its potential usefulness in diachronic typology.

2 Suppletion in the Slavonic 3rd Person Pronoun

The first case to be investigated in the present study is the development of the inherited relative pronoun in the Slavonic branch of the Indo-European language family. Proto-Indo-European (PIE) is known to have had a relative pronoun. The stem of this pronoun is usually reconstructed as **h₁ó-*¹³ on the basis of the following correspondences between the daughter languages preserving it:¹⁴

(2)	nom. sg. masc.	nom. sg. neuter	nom. sg. fem.
Sanskrit	<i>yás</i>	<i>yád</i>	<i>yá</i>
Young Avestan	<i>yō</i>	<i>yač</i>	<i>yā</i>
Greek	<i>hós</i>	<i>hó</i>	Aiolic <i>há</i> , Ionic <i>hé</i>
Phrygian	<i>ios</i>	–	–
Celtiber	<i>ios</i>	–	–
Gaulic	–	<i>io</i>	–

In Slavonic, the PIE relative pronoun **h₁ó-* has been preserved as well. Cf. its inflection in Old Russian and Old Polish:

¹³ The exact pronunciation of PIE **h* cannot be established for this lexeme.

¹⁴ Here and in the following, the dash (-) means “not attested by written record.” This may be due to the lack of the form in the morphology of the given language. In the case of scarcely attested languages such as Phrygian, Celtiber or Gaulic, the absence of the form from the texts which have been discovered thus far may be a matter of chance. On Celtiber *ios* and its attested case forms and on Gaulic *io* (which, synchronically, seems to be a relative particle attached to verbs), cf. most recently Wodtko (2000: 133f., 136–139). Their counterparts in Insular Celtic are discussed in Schrijver (1997: 91–129).

When used as 3rd person pronoun, ORu *i, je, ja* was less often accompanied by the particle *že*. This seems to indicate that the nearly complete univerbation of this particle with the inherited relative pronoun might have been a reaction to the development of a new 3rd person pronoun. It seems possible that this univerbation basically served the purpose of disambiguating true relative clauses (usually beginning with ORu *i-že* etc.) from independent sentences (which could begin with ORu *i* etc.).

However, this use of the inherited relative pronoun was not the only means of creating a 3rd person pronoun in Slavonic. Often this function was taken over by the demonstrative pronoun ORu *onŭ, ono, ona*, OPo *on, ono, ona* ‘that one,’ which could also be used anaphorically. This pronoun, like the relative pronoun, seems to be of Proto-Indo-European provenance as well. It is probably also preserved in the Greek compound Aiolic *kēnos*, Ionic *keīnos* ‘that one, over there’ (< Proto-Gk *ke-énos) and, lexicalized, in Ionic *énē* ‘the day after tomorrow.’¹⁶ The pronoun might be reconstructed as PIE *(h₁)éno-. Cf. the inflection of this pronoun in the Slavonic languages under discussion:

(5)	Old Russian			Old Polish		
	masc.	neuter	fem.	masc.	neuter	fem.
nom. sg.	<i>onŭ</i>	<i>ono</i>	<i>ona</i>	<i>on</i>	<i>ono</i>	<i>ona</i>
gen. sg.	<i>onogo</i>	<i>onogo</i>	<i>onojě</i>	<i>onego</i>	<i>onego</i>	<i>one</i>
dat. sg.	<i>onomu</i>	<i>onomu</i>	<i>onoi</i>	<i>onemu</i>	<i>onemu</i>	<i>onej</i>
acc. sg.	<i>onŭ</i>	<i>ono</i>	<i>onu</i>	<i>on</i>	<i>ono</i>	<i>onę</i>
instr. sg.	<i>oněmŭ</i>	<i>oněmŭ</i>	<i>onoju</i>	<i>onym</i>	<i>onym</i>	<i>oną</i>
loc. sg.	<i>onomŭ</i>	<i>onomŭ</i>	<i>onoi</i>	<i>onem</i>	<i>onem</i>	<i>one</i>

In present-day Russian and Polish, both the old relative pronoun and the old demonstrative pronoun only survive in their secondary function. Their case forms now belong to one and the same suppletive paradigm of the 3rd person pronoun. The distribution of these etymologically distinct case forms follows

16 The first element of the compound seems to be etymologically related to Lat *-ce* in *ec-ce* ‘look here.’ The noun *énē* most probably emerged by ellipsis in the noun phrase **énē emérē* ‘that day’ with Ionic *emérē* ‘day,’ cf. Attic *hemérā*. See Frisk, 1954–1972: 1.476, 515, 2.894.

the same pattern in both languages. All paradigmatic slots in the oblique cases are filled with case forms of the old relative pronoun. The nominative case of all genders descends from the former demonstrative:¹⁷

(6)	Russian			Polish		
	masc.	neuter	fem.	masc.	neuter	fem.
nom. sg.	<i>on</i>	<i>onó</i>	<i>oná</i>	<i>on</i>	<i>ono</i>	<i>ona</i>
gen. sg.	<i>egó</i>	<i>egó</i>	<i>eë</i>	<i>jego</i>	<i>jego</i>	<i>jej</i>
dat. sg.	<i>emú</i>	<i>emú</i>	<i>ej</i>	<i>jemu</i>	<i>jemu</i>	<i>jej</i>
acc. sg.	<i>egó</i>	<i>egó</i>	<i>eë</i>	<i>jego</i>	<i>je</i>	<i>ja</i>
instr. sg.	<i>im</i>	<i>im</i>	<i>ej</i>	<i>nim</i>	<i>nim</i>	<i>niq</i>

In the case of Old Russian, this syncretism seems already attested in a birch bark document from Novgorod written in the late 12th or early 13th century (cf. Zaliznjak, 2004: 125–130). The text contains a masculine nominative singular *onŭ* alongside several instances of the masculine dative singular *jemu* referring to the same person. Though *onŭ* ends in *-ŭ* (not the expected Novgorodian *-e*) and therefore must be a borrowing from the contemporary Church Slavonic or manuscript Old Russian, the use of two different pronominal stems side by side as members of the same paradigm is highly significant.¹⁸

17 The Russian and Polish descendants of the Old Russian and Old Polish locative singular are not included in the above paradigms for practical reasons. In contemporary varieties of these languages, the locative forms of the pronouns in question only occur in prepositional phrases, where the pronoun is always enlarged by a nasal; cf. Ru *v něm*, Po *w nim* ‘in it.’ Historically, this nasal is a part of the preposition. The nasal has been secondarily generalized in the Polish instrumental. The starting point must have been *z nim* ‘with him,’ *z niq* ‘with her,’ cf. Ru *s nim*, *s nej*.

18 The text is reproduced and extensively commented upon in Zaliznjak (2004: 416–420). Its morphology is clearly Novgorodian except for the masculine nominative singular in the said pronoun and several perfect participles. Apparently the author of the letter, who probably wrote it herself rather than dictating it, was automatically replacing one of the most salient features of her Novgorodian vernacular by an equivalent, which she conceived to be more appropriate in writing.

3 Suppletion in the 3rd Person Pronoun in Dialects of Lithuanian

A development very similar to that observed in Slavonic has been described for dialects of Lithuanian, which belongs to the Baltic branch of Indo-European. The inflection of Lithuanian personal pronouns is therefore the second issue which has to be discussed in this paper.

The Lithuanian counterpart of ORu *i(-že)*, *je(-že)*, *ja(-že)* or OPo *ji(-že)*, *je(-že)*, *ja(-že)* is *jis* in the masculine gender and *ji* in the feminine (Lithuanian pronouns do not exhibit a morphologically distinct neuter). In contemporary Standard Lithuanian (which is based on southwestern High Lithuanian dialects), the pronoun *jis, ji* is used exclusively as 3rd person pronoun. However, its original function as a relative pronoun can still be detected from the fact that fossilized case forms of Lith *jis, ji* may be used as subordinating conjunctions in 16th century texts. Cf. *juo-g* and *jo-g* 'that, hence,' which are based on the instrumental singular *juõ* and genitive singular *jõ*, respectively, secondarily univerbated with the sentence particle *gi* 'indeed' (cf. without this particle *juõ* 'hence' in closely related Latvian). Moreover, in texts from the 16th century and in several Lithuanian varieties of more recent times, the pronoun *jis, ji* is capable of univerbating with the locative or genitive case of nouns, creating adjectives with locatival and genitival semantics.¹⁹ Cf. the following cases:

(7) Lithuanian

<i>viršùs</i> 'top'	→ loc. sg. <i>viršujè</i>	→ <i>viršujè-jis</i> 'being on the top'
<i>dienà</i> 'day'	→ loc. sg. <i>dienojè</i>	→ <i>dienojè-jis</i> 'at daytime'
<i>dangùs</i> 'heaven'	→ loc. sg. <i>dangujè</i>	→ <i>dangujè-jis</i> 'being in heaven'
	→ gen. pl. <i>dangũ</i>	→ <i>dangũ-jis</i> 'belonging to heavens'

A further trace of the former use of Lith *jis, ji* as a relative pronoun is the determinate inflection forms of Lithuanian adjectives. These inflection forms are constructed from the corresponding indeterminate case forms enlarged by an enclitic variant of *jis, ji*, which is also inflected for case, gender and number. Cf. the following three case forms of Lith *gėras* 'good':

19 Cf. most recently Stang (1966: 274), Petit (2009: 318–320). On attestations in more recent sources and contemporary dialects, cf. especially Zinkevičius (1957: 12, 1966: 281), Rosinas (1988: 165).

(8)	indeterminate	determinate	pronoun
gen. sg. masc.	<i>gẽro</i>	<i>gẽro-jo</i>	<i>jõ</i>
acc. sg. masc.	<i>gẽrq</i>	<i>gẽrq-jì</i>	<i>jĩ</i>
gen. pl. masc.	<i>gerũ</i>	<i>gerũ-jũ</i>	<i>jũ</i>

Noun phrases with case forms of Lithuanian determinate adjectives most probably descend from copulaless relative clauses.²⁰ The original function of Lith *jìs, jì* as a relative pronoun, therefore, seems to be firmly established.

The Lithuanian counterpart of ORu *onũ, ono, ona*, OPo *on, ono, ona* is masc. *anàs* (in dialects *ãnas*), fem. *anà* ‘that one.’ In a large dialect area, i.e. the largest part of the so-called Low Lithuanian dialects spoken in the western part of Lithuania, this pronoun functions as a 3rd person pronoun. Both pronouns are inflected as follows in the western and southern High Lithuanian dialects:

(9)	Lith <i>jìs, jì</i>		Lith <i>anàs, anà</i>	
	masc.	fem.	masc.	fem.
nom. sg.	<i>jìs</i>	<i>jì</i>	<i>anàs</i>	<i>anà</i>
gen. sg.	<i>jõ</i>	<i>jõs</i>	<i>anõ</i>	<i>anõs</i>
dat. sg.	<i>jám</i>	<i>jaĩ</i>	<i>anáam</i>	<i>anáai</i>
acc. sg.	<i>jĩ</i>	<i>jĩ</i>	<i>anã</i>	<i>anã</i>
instr. sg.	<i>juõ</i>	<i>jà</i>	<i>anuõ</i>	<i>anà</i>
loc. sg.	<i>jamè</i>	<i>jojè</i>	<i>anamè</i>	<i>anojè</i>

Of special interest for the purposes of the present investigation is the situation in the eastern part of the so-called High Lithuanian dialect area. Here the paradigms of *jìs, jì* and *ãnas, anà* merged into one, which shows a suppletion pattern analogous to the one in Slavonic:²¹

20 The synchronic facts about Lithuanian dialects have most recently been discussed by Stolz (2010). On the origin of the construction cf. Koch (1992) and Petit (2009).

21 Cf. the full paradigm from the dialects of Tverečius and Zietela in Otrębski (1934: 265–267) and Vidugiris (2004: 218–219) respectively. Numerous instances of this suppletion were recorded for Lithuanian dialect islands in Byelorussia by Arumaa (1930). For more recent times cf. Bacevičiūtė et al. (2004), where texts from eastern Lithuania and Byelorussia are

(10)	masc.	fem.
nom. sg.	<i>ānas</i>	<i>anà</i>
gen. sg.	<i>jō</i>	<i>jōs</i>
dat. sg.	<i>jám</i>	<i>jaĩ</i>
acc. sg.	<i>jĩ</i>	<i>jã</i>
instr. sg.	<i>juō</i>	<i>jà</i>
loc. sg.	<i>jamè</i>	<i>jojè</i>

4 Suppletion in the 3rd Person Pronoun in West Germanic Dialects

Finally, demonstrative pronouns have also been grammaticalized as 3rd person pronouns in the Germanic branch of Indo-European. The first of these demonstratives was the Germanic descendant of PIE $*(h_1)i-$ ‘this.’ This pronoun can be reconstructed for Proto-Indo-European on the basis of the following evidence:²²

(11)	nom. sg. masc.	nom. sg. neuter
Latin	<i>is</i>	<i>id</i>
Sanskrit	–	<i>id</i>
Young Avestan	–	<i>iṭ</i>

PIE $*(h_1)i-$ > Proto-Gmc $*i-$ ‘this’ can be identified as the source of the 3rd person pronoun in two early Germanic languages or dialect areas. The first is Gothic, which is the oldest Germanic language substantially attested. The second is the southern part of Old High German, which belongs to the West Germanic

collected. The geography of the *ānas* ~ *jō*-suppletion is also discussed in Zinkevičius (1966: 307–308).

22 In Sanskrit and Young Avestan, the neuter nominative singular of this pronoun functions synchronically as an emphatic particle. Lith *id* (today morphologically enlarged to *idánt*, *idañt*) is a conjunction ‘that, so that.’ The descent of these forms from the Proto-Indo-European demonstrative pronoun directly preserved in Latin (and Germanic, see below in the present section) is obvious.

branch of Germanic. The relevant area within Old High German includes the so-called Upper German dialects Bavarian and Alemannic as well as parts of the territory occupied by Rhenish Franconian dialects.²³ The new 3rd person pronoun was inflected as follows (cf. the masculine and neuter in the singular):

(12)	Goth		OHG	
	masc.	neuter	masc.	neuter
nom. sg.	<i>is</i>	<i>ita</i>	<i>ir, er</i>	<i>iz</i>
gen. sg.	<i>is</i>	<i>is</i>	–	<i>es</i>
dat. sg.	<i>imma</i>	<i>imma</i>	<i>imu</i>	<i>imu</i>
acc. sg.	<i>ina</i>	<i>ita</i>	<i>inan</i>	<i>iz</i>

Note that the correspondences Goth *s* (where it descends from historically voiced *z* /*z*/) ~ OHG *r* at the end of the masculine nominative as well as Goth *t* ~ OHG *z* /*s*/ in the nominative and accusative neuter follow the established sound laws of Germanic. Cf.:

(13)	Goth	OHG	
	<i>aiz</i>	<i>ēr</i>	‘copper’
	<i>kas</i>	<i>kar</i>	‘pot’
	<i>ausō</i>	<i>ōra</i>	‘ear’
	<i>hwata</i>	<i>hwaz</i>	‘what’
	<i>lētan</i>	<i>lāzan</i>	‘to allow’
	<i>ētun</i>	<i>āzun</i>	‘(they) ate’

The second demonstrative pronoun which turned into a new 3rd person pronoun in parts of Germanic was PIE **kí*- ‘this here’ > Proto-Gmc **hi*-. This pronoun is traditionally reconstructed on the basis of the following evidence:

23 Cf. for Bavarian the Old High German translation of the *Exhortatio ad plebem christianam* (early 9th c.), for Alemannic the translation of the *Rule of Saint Benedict* (late 8th or early 9th c.), for Rhenish Franconian the *Isidore* translation (late 8th c.), the *Strasbourg Oaths* (mid-9th c.) and Otfrid’s *Gospel harmony* (second half of the 9th c.).

(14)	nom. sg. masc.	nom. sg. neuter	nom. sg. fem.
Latin	<i>cis</i> ²⁴	–	–
Hittite	–	<i>ki</i>	–
Lithuanian	<i>šis</i>	–	<i>ši</i>
Old Russian	<i>śī</i>	<i>se</i>	<i>si</i>

Note that the development of the palatalized velar PIE **k* (which yields a simple *k* in such daughter languages as, for instance, Greek, Latin and Hittite) into Lith *š*, Slav *s* and Gmc *h* is perfectly regular in terms of historical phonology and can be extensively corroborated. Cf. the following set of correspondent lexemes in the relevant languages:

(15) PIE	Latin	Lith	ORu	Gmc
* <i>klóy̯nis</i> ‘thigh’	<i>clūnis</i>	<i>šlaunis</i>	–	Old Norse <i>hlaunn</i>
* <i>pórk̑os</i> ‘furrow’	<i>porcus</i>	<i>pařšas</i>	<i>porosja</i> ²⁵	OHG <i>farh</i>
* <i>dék̑m̑</i> ‘ten’	<i>decem</i>	<i>dėšim̑t</i> ²⁵	<i>desjati</i> ²⁵	Goth <i>taihun</i>

PIE **kí-* > Proto-Gmc **hi-* ‘this here’ has been abandoned in Gothic, but case forms of this pronoun can still be observed in adverbialized noun and prepositional phrases such as *himma daga* ‘today,’ and *hina dag* ‘until today’ (with dative and accusative singular of the masculine noun Goth *dags* ‘day’ respectively) and *und hita* ‘until now’ (with neuter accusative singular of the pronoun used independently). Note that the endings of the pronoun in these fossilized phrases are the same as in the corresponding case forms of Goth *is* ‘he, it’:

24 In synchronic terms, Lat *cis* is a preposition meaning ‘on this side of.’ The pronominal root is also preserved in the adjective Lat *ci-ter* ‘lying on this side,’ which has the same structure as, for instance, *ex-ter* ‘being outside, external’ or *in-ter* ‘between’ from *ex* ‘out of, from’ and *in* ‘into, in,’ respectively.

25 This item does not directly reflect the PIE lexeme, but rather was derived from it after the breakup of Proto-Indo-European. This difference is immaterial for the issue in question.

(16)		'he, it'	'this here'
	dat. sg. masc.	<i>imma</i>	<i>himma</i>
	acc. sg. masc.	<i>ina</i>	<i>hina</i>
	acc. sg. neuter	<i>ita</i>	<i>hita</i>

In early West Germanic spoken at the North Sea coast, the Proto-Germanic descendant of PIE **kí-* 'this here' was preserved better than in Gothic. In Old English, Old Frisian and Middle Dutch, this pronoun is attested in all case forms in the masculine as well as in the neuter gender. It has been secondarily grammaticalized in these languages as 3rd person pronoun.²⁶

(17)	Old English		Old Frisian		Middle Dutch ²⁷		
	masc.	neuter	masc.	neuter	masc.	neuter	
	nom. sg.	<i>hē</i>	<i>hit</i>	<i>hī</i>	<i>hit</i>	<i>hi</i>	<i>het, hit</i>
	gen. sg.	<i>his</i>	<i>his</i>	–	–	–	–
	dat. sg.	<i>him</i>	<i>him</i>	<i>him</i>	<i>him</i>	<i>heme, him</i>	<i>heme, him</i>
	acc. sg.	<i>hine</i>	<i>hit</i>	<i>hine</i>	<i>hit</i>	<i>heme, him</i>	<i>het, hit</i>

Descendants of PIE *(*h*₁)*i-* > Proto-Gmc **i-* 'this' and PIE **kí-* > Proto-Gmc **hi-* 'this here' were hence both grammaticalized as 3rd person pronoun in different parts of Germanic: the former in Gothic and in the southern part of the West Germanic territory, the latter in the northern part of West Germanic. Of special interest for the present discussion is the situation in the remaining part of West Germanic. In dialects spoken between the two areas mentioned, said

26 Why Klingenschmitt (1987: 173) considers this development to be functionally impossible remains unclear to me.

27 Cf. for Old English Campbell (1959: 288–289), Brunner (1965: 259–260), for Old Frisian van Helten (1890: 188–189), Boutkan (1996: 87), Bremmer (2009: 56), for Middle Dutch Franck (1910: 177–179). On the inflection of the 3rd person pronoun in Old Dutch adaptations of Old High German texts and conclusions one may draw from these materials, cf. Sanders (1968: 98–99, 1974: 212–215), Cowan (1969: 126–128), Klein (1979: 444–447) and Quak (1992: 101).

pronouns are attested side by side as 3rd person pronouns. The defectiveness of their inflection in the most ancient texts suggests that the pronouns formed a suppletive paradigm in these varieties. As for the distribution of Proto-Gmc *i- and Proto-Gmc *hi- within the new paradigm, the written record attests two different patterns.

In the East Franconian dialect of Old High German and in the northern part of the Rhenish Franconian dialect, Proto-Gmc *hi- ‘this here’ only contributed the masculine form of the nominative singular. The remaining paradigmatic cells in the masculine and neuter gender were filled with case forms of Proto-Gmc *i- ‘this.’²⁸ This distribution of the stems in the suppletive paradigm is clearly demonstrated by text passages such as the following two sentences taken from the Rhenish Franconian *Ludwigslied* (late 9th c.):

- (18) *kind* *warth* *her* *faterlos*
 child:NOM.SG become:PRET.3SG he:NOM.SG fatherless:NOM.SG.MASC
thes *warth* *imo* *sar*
 this:GEN.SG.NEUT become:PRET.3.SG he:DAT.SG soon
buoz *holoda* *inan* *truhtin*
 consolation:NOM.SG take:PRET.3SG he:ACC.SG lord:NOM.SG
magaczogo *warth* *her* *sin*
 tutor:NOM.SG become:PRET.3SG he:NOM.SG his:NOM.SG.MASC
 ‘(While still) a child he became fatherless (but) from that he soon received
 a consolation. The Lord (himself) took him, he became his tutor.’

The same distribution of Proto-Gmc *hi- ‘this here’ and Proto-Gmc *i- ‘this’ in the paradigm of the new 3rd person pronoun probably has to be assumed also for the local variety of the Middle Franconian dialect of Old High German, which was spoken in Cologne.²⁹ Finally, a very similar inflection is also found in Old Saxon, whose area bordered on the northern dialects of Old High German.

28 Cf. for East Franconian the Old High German translation of *Tatian* (early 9th c.) and the fragment of the *Lex Salica* (early 9th c.; on this particular text cf. most recently Lühr, 2013), for Rhenish Franconian the *Ludwigslied* (late 9th c.).

29 Cf. most recently Klein (1999, 2000: 27). Traditionally, the mixed paradigm of this type is also assumed for the prehistory of West Germanic dialects on the North Sea coast, where the allomorphy is believed to be secondarily eliminated by leveling (cf. most recently Lloyd et al., 1998: 1098–1099; Krogh, 1996: 320–322, 2013: 153; Stiles, 2013: 19). This unnecessarily complex scenario, however, does not seem to be indicated by any observable facts.

This inflection of the 3rd person pronoun is clearly established for the longest Old Saxon text, the *Heliand* (first half of the 9th c.), and for most of the minor sources.³⁰

(19)	OHG (East Franconian)		OS	
	masc.	neuter	masc.	neuter
nom. sg.	<i>her</i>	<i>iz</i>	<i>hē</i>	<i>it, et</i>
gen. sg.	–	<i>es</i>	<i>is, es</i>	<i>is, es</i>
dat. sg.	<i>imu</i>	<i>imu</i>	<i>im, imu</i>	<i>im, imu</i>
acc. sg.	<i>inan, ini</i>	<i>iz</i>	<i>ina</i>	<i>it, et</i>

The second pattern of distributing Proto-Gmc *hi- ‘this here’ and Proto-Gmc *i- ‘this’ within the new suppletive paradigm is attested only in the Old High German dialect of Trier, which was situated at the southern boundary of Middle Franconian. The so-called *Trierer Capitulare* (10th c. copy of a 9th c. text)³¹ displays the following case forms of the 3rd person pronoun: nominative sg. masc. *er* (5 attestations) beside dative sg. masc. *himo* (4 attestations), dative pl. masc. *hin* (1 attestation). This implies that the suppletive paradigm of Middle Franconian spoken in Trier was a mirror image of what is found in the abovementioned northern dialects of Old High German and in Old Saxon. Cf. the inflection in the masculine gender of the Middle Franconian dialect of Old High German in the 9th century according to the available text sources:

30 Cf. Gallée and Tiefenbach (1993: 238). A pattern virtually identical to that of Old English, Old Frisian and Middle Dutch might have left traces in the Old Saxon *Genesis* fragment (9th c.), where such case forms as the masculine and neuter genitive sg. *his* and dative sg. *him* are attested several times beside more frequent *is* and *im*. All case forms of the Old Saxon 3rd person pronoun attested in the sources are collected in Sehart (1925: 223–233) for *Heliand* and *Genesis* and in Wadstein (1899: 190) for the minor texts.

31 Cf. on this text most recently Tiefenbach (1975).

	Cologne	Trier
nom. sg. masc.	<i>her</i>	<i>er</i>
dat. sg. masc.	<i>imu</i>	<i>himu</i>
acc. sg. masc.	<i>inan</i>	<i>hinan</i>
dat. pl. masc.	<i>im</i>	<i>him</i>

5 Suppletion Replication Tendency

It is hardly a coincidence that the suppletive paradigms of the new 3rd person pronouns in Slavonic, Lithuanian and West Germanic are structured in the same way as the inflection of personal pronouns, which have been inherited in these languages from their common ancestor, Proto-Indo-European.

In the inflection of the 1st singular pronoun of Slavonic, Baltic and Germanic, the case form of the nominative reflects something like PIE $*(h_1)éǵ-$ 'I' while the oblique cases are formed on the basis of a pronominal stem beginning with PIE $*m$. Cf. for the Slavonic branch of Indo-European the inflection of this pronoun in Old Church Slavonic and Old Russian. For Baltic, evidence from all three daughter languages, i.e. Lithuanian, Latvian and the only attested West Baltic idiom, Old Prussian, can be used.

(21)	Slavonic			Baltic	
	OCS	ORu	Lith	Latv	OPr
nom. sg.	<i>azŭ</i>	<i>jazŭ, ja</i>	<i>àš</i>	<i>es</i>	<i>as, es</i>
gen. sg.	<i>mene</i>	<i>mene</i>	<i>manėš</i>	<i>manis</i>	–
dat. sg.	<i>mŭně, mi</i>	<i>mŭně, mi</i>	<i>mán, mi</i>	<i>man</i>	<i>mennei</i>
acc. sg.	<i>mene, mę</i>	<i>mene, mja</i>	<i>manė</i>	<i>mani</i>	<i>mien</i>

A very similar pattern is found in Germanic. Cf. the only substantially attested East Germanic language Gothic, contrasted with Old English and Old High German from the West Germanic and Old Norse from the North Germanic subbranch:³²

³² For a more detailed survey of the attested case forms and their numerous variants in the Germanic daughter languages, see most recently Seebold (1984: 16–57).

(22)	East Germanic	West Germanic		North Germanic
	Goth	OE	OHG	ON
nom. sg.	<i>ik</i>	<i>ic</i>	<i>ih</i>	<i>ek</i>
gen. sg.	<i>meina</i>	<i>mīn</i>	<i>mīn</i>	<i>mīn</i>
dat. sg.	<i>mis</i>	<i>me</i>	<i>mir</i>	<i>mér</i>
acc. sg.	<i>mik</i>	<i>me, mic</i>	<i>mih</i>	<i>mik</i>

The data shows that the 1st singular pronoun was inflected in the same way in all of Germanic. This implies that the suppletion must have existed in the given form at least since Proto-Germanic times.

The described suppletion in the paradigms of the 1st singular personal pronoun of Slavonic, Baltic and Germanic hardly emerged in each of these branches individually. It is virtually certain that this suppletion was already inherited in the relevant protolanguages. Further evidence comes from the fact that a very similar situation is also found in all remaining branches of the Indo-European family. Cf., for instance, the evidence of Indo-Iranian with such early attested daughter languages as Sanskrit and Avestan, compared to Greek:

(23)	Skt	YAv	Gk
nom. sg.	<i>ahám</i>	<i>azəm</i>	<i>egó</i>
gen. sg.	<i>máma, me</i>	<i>mana, mē</i>	<i>emō̃, mō̃</i>
dat. sg.	<i>máhyam, me</i>	<i>māuuōiia, mē</i>	<i>emoi, moi</i>
acc. sg.	<i>mám, mā</i>	<i>məm, mā</i>	<i>emé, me</i>

As the data shows, the particular case forms of the 1st singular personal pronoun may vary considerably in different branches of Indo-European. However, the differences are not unsurmountable and do not preclude the reconstruction of an original paradigm that must be the source of the inflection patterns of all branches. For instance, the stressed variant of the accusative may be securely reconstructed as PIE *mém according to Skt *mám*, YAv *məm* and OCS *mę*.³³

33 The OCS form secondarily lost its stress and functions as unstressed allomorph of the innovative *mene* (which is etymologically the genitive case form).

The corresponding unstressed (enclitic) allomorph must have been PIE **me*, which is directly reflected as Gk *me*, cf. also Skt, YAv *mā*.³⁴ Finally, Proto-Gmc **me-ki* (in Goth, ON *mik*, OE *mic*, OHG *mih*) is a regular descendant of the same unstressed PIE **me*, which must have been secondarily univerted with an enclitic particle. The particle Proto-Gmc **-ki* reflects PIE **ge* or **ǵe*, which is also preserved in Gk *gé* 'at least'.³⁵ The differences in the remaining case forms of the 1st singular pronoun can be accounted for in a similar way.³⁶

The overview in (23) shows that the suppletion with PIE **(h₁)éǵ-* in the nominative only and a pronominal stem beginning with PIE **m* in all oblique cases is not an innovation of Slavonic, Baltic and Germanic, but a pattern inherited from Proto-Indo-European. The striking structural similarity between this inherited inflection pattern and the newly established suppletive paradigms of 3rd person pronouns in such Slavonic languages as Russian and Polish, in the eastern dialects of High Lithuanian and in dialects of Old High German and Old Saxon can hardly be conceived as accidental. But if this structural similarity is systematic, it can be explained only by assuming that inherited suppletion was copied from the ancient personal pronouns, such as the 1st singular pronoun, into the inflection of units which only recently acquired the status of personal pronouns, such as the 3rd person pronouns. Since this replication of inherited suppletion is clearly documented in at least three cases, we may speak of a cross-linguistically valid diachronic tendency to replicate suppletion in grammaticalization.

6 Factors Triggering Suppletion in 3rd Person Pronouns of Slavonic, Lithuanian and West Germanic

The diachronic tendency of suppletion replication in personal pronouns, as uncovered in the previous section, explains why two originally independent pronominal stems sometimes conflate into a single suppletive inflection pattern. It also explains the structural properties of this pattern, which basically

34 The vowel of Skt, YAv *mā* is probably secondarily lengthened. The lengthening of inherited *a* at the end of a prosodic word is not unusual in Sanskrit (cf. such instances as 2pl.prs. *bháratha ~ bhárathā* 'you carry' etc.) and may be as ancient as Proto-Indo-Iranian (cf. Wackernagel, 1896: 310–314).

35 The Greek particle is common with pronouns, cf. acc. *emé-ge* 'me,' *sé-ge* 'you' (from *egó* 'I' and *sý* 'you' respectively). On this explanation of the Germanic accusative, see e.g. Seebold (1984: 34–35).

36 Cf., for instance, Sihler (1995: 369–379).

copies the pre-existing suppletion in inherited personal pronouns. The time of suppletion emergence in the new 3rd person pronouns is probably determined by the grammaticalization process. However, one question still remains to be answered.

As already mentioned above, the grammaticalization of demonstratives into 3rd person pronouns is a typologically common development that has been observed in many languages. In most cases, this development did not lead to new suppletion. Cf., for instance, the dialects of Lithuanian, most of which either grammaticalized *anàs, anà* or *jìs, jì* without suppletion (cf. Section 3 above). Similarly, in Germanic, neither Goth *is*, OHG *er* (in the Upper German dialects) on the one hand nor OE *hē*, OFr *hī*, MDu *hi* on the other exhibit suppletion in their inflectional paradigms (cf. Section 4 above). Why did the hypothetical suppletion replication tendency only generate suppletion in a limited number of languages or dialects participating in the grammaticalization process, but not also in others or in all of them?

It is theoretically possible that all languages which replicate suppletion while creating a 3rd person pronoun by grammaticalization exhibit a common feature or a combination of features absent from the grammars of other languages. It would be natural to assume that this feature or feature combination triggers the replication of suppletion in the relevant languages. It is, however, also possible that suppletion replication can be triggered by different factors, which might vary from language to language. The latter possibility seems to be directly supported by the three particular cases investigated in the present paper.

In Slavonic, replacing the inherited masculine nominative singular form of the new 3rd person pronoun ORu *i*, OPo *ji* (< Proto-Slav *jī) might have helped to eliminate homophony from its inflectional paradigm. Due to phonological properties of this short word, three originally clearly differentiated case forms of the inherited relative pronoun had become virtually undistinguishable by regular sound changes which are known to have operated in Proto-Slavonic or later.³⁷

- (24) nom. sg. masc. ORu *i*, OPo *ji* < Proto-Slav *jī < PIE *h₁ós (cf. Skt *yás*, Gk *hós*)
 acc. sg. masc. ORu *i*, OPo *ji* < Proto-Slav *jī < PIE *h₁óm (cf. Skt *yám*, Gk *hón*)
 nom. pl. masc. ORu *i*, OPo *ji* < Proto-Slav *ji < PIE *h₁ói (cf. Skt *yé*, Gk *hói*)

37 Cf. on the relevant sound laws e.g. Bräuer (1961) or Shevelov (1964).

Moreover, the masculine nominative singular ORu *i* was also homophonous with the conjunction ORu *i* ‘and, as well,’ which probably reflects an ancient sentence particle PIE $*(h_1)e\bar{i}$ (cf. Gk *ei* ‘if, whether,’ Goth *ei* ‘so, so that, therefore’).³⁸

It is not implausible that replacement of ORu *i*, OPo *ji* ‘he’ by ORu *onŭ*, OPo *on*, originally ‘that one,’ was ultimately caused by a tendency to avoid these homophonies in the masculine gender. Note, however, that the particular path of development taken by the Slavonic 3rd person pronoun cannot be explained without reference to the suppletion replication tendency, i.e. solely in terms of eliminating a phonologically suboptimal case form from the grammar. First, phonologically inconvenient forms of the masculine nominative singular were frequent in Slavonic pronominal paradigms. Such forms were often modified in different ways, but it is only the newly grammaticalized 3rd person pronoun where genuine suppletion took place to avoid the inconvenience. Cf., for instance, the inflection of Old Church Slavonic *tŭ* ‘that’ and *sŭ* ‘this here’ (where the Proto-Slavonic situation must have been directly preserved) with their Old Russian counterparts:

(25)	Old Church Slavonic		Old Russian	
	masc.		masc.	
nom. sg.	<i>tŭ</i>	<i>sŭ</i>	<i>tŭ-tŭ, tŭ-i</i>	<i>sŭ-sŭ, sŭ-i</i>
gen. sg.	<i>togo</i>	<i>sego</i>	<i>togo</i>	<i>sego</i>
dat. sg.	<i>tomu</i>	<i>semu</i>	<i>tomu</i>	<i>semu</i>
acc. sg.	<i>tŭ</i>	<i>sŭ</i>	<i>tŭ, tŭtŭ</i>	<i>sŭ, sŭjŭ</i>
instr. sg.	<i>těmŭ</i>	<i>semŭ</i>	<i>těmŭ</i>	<i>semŭ</i>
loc. sg.	<i>tomŭ</i>	<i>semŭ</i>	<i>tomŭ</i>	<i>semŭ</i>

In Old Russian the inherited masculine nominative singular (preserved in OCS *tŭ, sŭ*) was either replaced by the reduplicated structures *tŭ-tŭ, sŭ-sŭ* or enlarged by the corresponding case form of the relative pronoun *i* to *tŭ-i, sŭ-i*.³⁹ The latter development seems to have followed the model of determinate adjectives, cf.

38 Cf. Trubačëv et al., 1974ff.: 8.167. For Greek and Germanic evidence see Frisk, 1954–1972: 1.450 and Lehmann (1986: 99).

39 Cf. on this, for instance, Kiparsky (1967: 146, 159).

(26) **Old Russian**
masculine nominative singular

indeterminate	~	determinate
<i>dobrŭ (šelomŭ)</i> 'a good (helmet)'		<i>dobrŭ-i (šelomŭ)</i> 'the good (helmet)'
<i>gorjačŭ (kŭtilŭ)</i> 'a hot (pot)'		<i>gorjačŭ-i (kŭtilŭ)</i> 'the hot (pot)'

It is obvious that in both cases—ORu *tŭ-tŭ, sŭ-sŭ* and *tŭ-i, sŭ-i* for original *tŭ, sŭ*—strategies were applied which differed from the complete replacement of the inherited nominative by an etymologically unrelated element in the inflection of the 3rd person pronoun.

Second, only replication of pre-existing suppletion is capable of explaining why it was the nominative singular (such as ORu *i*) and not, or not also, the accusative singular (again ORu *i*) which was replaced in the 3rd person pronoun by the corresponding case form of a different pronominal stem.

The situation in the eastern High Lithuanian dialects seems to have been different from the one just described for Slavonic: the inflection paradigm of the former relative pronoun Lith *jŭs, jŭ*, which has been grammaticalized into a 3rd person pronoun in all of High Lithuanian, never contained any phonologically inconvenient case forms or homophony. The observed replacement of *jŭs, jŭ* by *ãnas, anã* 'that one' in the nominative case cannot be plausibly motivated within the language system in question.

However, Lithuanian dialects situated in the east of the High Lithuanian dialect area are geographically close to the Slavonic language Byelorussian, and they are known to have experienced a particularly strong influence from this language. Cf., in phonology, the characteristic development of *t* and *d* into affricates *c* and *dz* before *i, y* and *ie* in many eastern High Lithuanian dialects.⁴⁰ This sound change can only be explained by influence of Byelorussian or, less likely, Polish.

Like all East Slavonic languages, Byelorussian exhibits suppletion in the 3rd person pronoun:

40 Cf. Zinkevičius (1966: 139–140) and Grinaveckienė et al. (1982: 97).

(27)	Russian			Byelorussian			Ukrainian		
	masc.	neuter	fem.	masc.	neuter	fem.	masc.	neuter	fem.
nom. sg.	<i>on</i>	<i>onó</i>	<i>oná</i>	<i>ən</i>	<i>janó</i>	<i>janá</i>	<i>vin</i>	<i>vonó</i>	<i>voná</i>
gen. sg.	<i>egó</i>	<i>egó</i>	<i>eë</i>	<i>jahó</i>	<i>jahó</i>	<i>jaé</i>	<i>johó</i>	<i>johó</i>	<i>jíjí</i>
dat. sg.	<i>emú</i>	<i>emú</i>	<i>ej</i>	<i>jamú</i>	<i>jamú</i>	<i>ěj</i>	<i>jomú</i>	<i>jomú</i>	<i>jíj</i>
acc. sg.	<i>egó</i>	<i>egó</i>	<i>eë</i>	<i>jahó</i>	<i>jahó</i>	<i>jaé</i>	<i>johó</i>	<i>johó</i>	<i>jíjí</i>
instr. sg.	<i>im</i>	<i>im</i>	<i>ej</i>	<i>im</i>	<i>im</i>	<i>ěj</i>	<i>jim</i>	<i>jim</i>	<i>néju</i> ⁴¹

It seems obvious that the Byelorussian suppletion pattern was simply transferred into eastern High Lithuanian.⁴² The nominative singular Lith *ãnas, anà* ‘that one’ was obviously identified with its etymological counterpart in Byelorussian, i.e. the suppletive nominative singular of the Byelorussian 3rd person pronoun, and thus replaced the inherited nominative singular in the inflection of Lith *jis, ji*. This calquing process was probably set in motion by those communities at the Lithuanian-Byelorussian language boundary whose members secondarily switched from Byelorussian to Lithuanian, thereby unconsciously copying structural properties of their native language into their Lithuanian speech. After the suppletion pattern had been established in bilingual communities of this kind, it could secondarily spread among monolingual Lithuanians living in the region as well.

In the continental West Germanic dialects, the suppletion seems to have emerged in a slightly different way. Old High German dialects exhibiting suppletion in the masculine inflection of their 3rd person pronoun (roughly between Nuremberg in the south and Trier, Cologne, Kassel in the north) were situated between two large dialect areas without suppletion. West Germanic dialects spoken to the north of the suppletion zone used Proto-Gmc **hi*- ‘this here’ in the entire paradigm. The dialects to the south of this zone had reflexes of **i*- ‘this’ in all cases.⁴³

41 The nasal in Ukr *néju* is secondarily generalized from the prepositional phrase *z n-éju* ‘with her’; cf. Ru *s n-ej*. Historically this nasal is a part of the preposition.

42 Cf. Otrębski (1956: 143), Zinkevičius (1989: 6), Petit (2010: 38).

43 Note that the suppletion zone between the two homogeneous areas might have considerably grown in the centuries immediately preceding the written record due to the south- and eastward spread of Franconian, which secondarily superseded parts of Upper German in Bavaria and, probably, Thuringia.

Speakers of West Germanic dialects living at the border between the two large areas probably often heard both reflexes of Proto-Gmc *hi- and reflexes of Proto-Gmc *i- as 3rd person pronoun from their neighbors. In other words, inhabitants of the transition zone were frequently confronted with two different forms of the same personal pronoun. It seems natural to assume that these speakers simply reinterpreted the two etymologically different 3rd person pronouns as allomorphs of one and the same pronoun and subsequently redistributed them within the paradigm, following a pattern already familiar to them from other personal pronouns. In some local varieties of this transitional West Germanic (as, for instance, in the Middle Franconian of Cologne) the reflex of Proto-Gmc *i- was selected for the oblique cases, in others (as in the Middle Franconian of Trier) the reflex of Proto-Gmc *hi- was chosen for this function; but in all varieties the distribution of the allomorphs copied the paradigmatic structure of the 1st singular pronoun with its inherited split between the nominative and the rest of the inflection.

A similar scenario may be assumed for the recorded Old Saxon. Dialects of this language—originally spoken roughly between Groningen in the north and Kassel in the south—were in contact with both Germanic dialects at the North Sea coast (Low Franconian, which later became Middle Dutch, and Frisian) and Upper German (in Thuringia). It is also possible that the development of suppletion in the masculine inflection of the 3rd person pronoun in Old Saxon was (additionally) supported by the influence of the transitional Franconian dialects, which may have acquired suppletion earlier.

These observations allow for an important insight into the ontological status and *modus operandi* of the proposed suppletion replication tendency. The tendency of copying pre-existing suppletion in the inflection of grammaticalized pronouns cannot be held responsible for new suppletion patterns all by itself. Rather, the tendency seems to manifest itself only if it is triggered by other factors, which means only if a change in the particular inflectional pattern is desirable for some different reason. This reason might be a phonological shortcoming in the paradigm (as in Slavonic), a structural influence of a contact language (as in the eastern High Lithuanian) or, finally, simply the co-existence of two etymologically different forms of the same pronoun (as in the northern dialects Old High German and in Old Saxon). When triggered by such factors, the hypothetical suppletion replication tendency performs the following two tasks. First, it provides a means for resolving the particular problem by generating new suppletion. Second, it distributes the participating pronominal stems within the new suppletive paradigm according to the pattern found in the inflection of pronouns with pre-existing inherited suppletion.

The dependency of the proposed suppletion replication tendency on such triggering factors as suboptimal phonology of word forms or language and dialect contact might entail consequences for its ontological status. In recent times several cross-linguistically valid trends in the development of inflection have been described; for instance, the tendency to externalize inflectional morphology trapped in the middle of a word after its univertation with a clitic is broadly accepted.⁴⁴ However, this latter tendency was not described as operating only when triggered by factors within or outside the grammar of the language in question.

This difference seems to suggest that natural languages may follow different kinds of cross-linguistically valid diachronic tendencies, some dependent on triggering factors from other domains of language structure or even from outside the grammar, some being independent of such influences. But the difference can also be purely observational. Potential triggering factors such as language or dialect contact are often difficult to detect in historical stages of languages. At the same time, these factors can hardly ever be excluded. In other words, the superficial particularity of the suppletion replication regarding its need for external triggering might simply result from a lack of systematic research: that is, the question why other tendencies, for instance, the diachronic externalization of inflection, manifest themselves in a particular language at a particular time has never been systematically pursued.

7 Further Development of Copied Suppletion

The suppletion replication tendency which has been established in the previous sections of this paper may generate new suppletion in the inflection of pronominal stems when they grammaticalize into a 3rd person pronoun. The aim of the present section is to demonstrate that this tendency does not necessarily predetermine the further development of inflection patterns it once called into being. It seems that suppletive paradigms which once emerged by copying pre-existing suppletion are not bound to retain their original structure, but may also develop features alien to their prototype.

This is most clearly demonstrated by the development of the feminine form of the 3rd person pronoun in the Germanic languages Gothic and Old High German. As shown by Gothic and Old English, the feminine allomorph of

44 Haspelmath (1993) and Mithun (1999). For a slightly different interpretation of the data cf. Hill (2007: 97–106) and, most recently, García Castillero (2013).

this pronoun was originally based on the same pronominal stems Proto-Gmc *i- ‘this’ (< PIE *(h₁)i-) and *hi- ‘this here’ (< PIE *k_i-) as the corresponding masculine and neuter forms. Cf.:⁴⁵

(28)	Goth		OE	
	Proto-Gmc *i- masc.	fem.	Proto-Gmc *hi- masc.	fem.
gen. sg.	<i>is</i>	<i>izōs</i>	<i>hē</i>	<i>hire</i>
dat. sg.	<i>imma</i>	<i>izai</i>	<i>his</i>	<i>hire</i>
acc. sg.	<i>ina</i>	<i>ija</i>	<i>him</i>	<i>hīe</i>

However, those dialects which grammaticalized Proto-Gmc *i- ‘this’ used the feminine form of this pronoun only in the oblique cases. In the nominative, a different pronoun was used, namely the Germanic reflex of the PIE reflexive pronoun, whose unstressed (enclitic) allomorph can be reconstructed as acc. sg. PIE *se, dat. sg. PIE *so_i in the masculine and nom. sg. PIE *sih₂ in the feminine gender. Cf. the following evidence:

(29)	acc. sg. masc.	dat. sg. masc.	nom. sg. fem.
Greek	<i>he</i>	<i>hoi</i>	–
Old Avestan	–	<i>hōt</i> ⁴⁶	<i>hī</i> ⁴⁷
Old Russian	–	<i>si</i>	–
Lithuanian	–	<i>si</i>	–
Old Irish	–	–	<i>sī</i> ⁴⁶

45 The unexpected equation Goth *z* ~ OE *r* is caused by the so-called ‘rhotacism,’ which is a characteristic feature of all West Germanic languages including Old English; cf. Section 4 above on Goth *z* ~ OHG *r*.

46 This form functions synchronically as enclitic dative singular of the masculine 3rd person pronoun.

47 Secondarily stressed. In synchronic terms, the nominative singular of the feminine 3rd person pronoun.

In Gothic and Old High German, the descendant of the feminine nominative singular of this pronoun Proto-Gmc **sī* ‘she (herself)’ (reflected in Goth *si*, OHG *sī*, OFr *se*) was secondarily integrated into the inflection of the new 3rd person pronoun. Cf. the full suppletive paradigm in these languages.⁴⁸

(30)	Goth	OHG
nom. sg.	<i>sī</i>	<i>sī</i>
gen. sg.	<i>izōs</i>	<i>ira</i>
dat. sg.	<i>izai</i>	<i>iru</i>
acc. sg.	<i>ija</i>	<i>sia</i>

The inflection pattern of Gothic is structurally reminiscent of the paradigm of the 1st singular personal pronoun (Goth nom. sg. *ik* ~ acc. sg. *mik* etc.)⁴⁹ and, therefore, seems to have emerged due to the suppletion replication tendency. The replication of suppletion was probably triggered by the fact that the inherited feminine nominative singular of Proto-Gmc **i*- ‘this’ must have been Proto-Gmc **ī*, indistinguishable from the sentence particle **ī* (preserved in Goth *ei* ‘so, so that’) and therefore prone to being replaced by a different pronominal with suitable semantics.

Most obviously, a similar development must be assumed for the prehistory of Old High German as well. However, in this language, the original inflection of *sī* ‘she’ was apparently modified. The inherited form of the accusative, preserved in Gothic as *ija*, was replaced by OHG *sia*, which is clearly based on the nominative *sī*. The model for this innovation is obvious. In the inflection of feminine nouns and adjectives, a nominative singular ending in Proto-Gmc **-ī* presupposed an accusative singular ending in Proto-Gmc **-ijōn*, which regularly yields OHG *-ia*. This inflection pattern is particularly well preserved in Gothic. See the paradigm of Goth *bandi* ‘fetters,’ whose endings are inherited from Proto-Indo-European (cf. the inflection of Lith *pati* ‘lady, wife’):

48 Concerning the shape of OHG gen. sg. *ira* and dat. sg. *iru* beside Goth *izōs* and *izai* respectively, cf. footnote 45 above.

49 Cf. section 5 above.

(31)	Goth	Proto-Gmc	Lith ⁵⁰
nom. sg.	<i>bandi</i>	*bandī	<i>pati</i>
gen. sg.	<i>bandjōs</i>	*bandijōz	~ <i>pačīōs</i>
dat. sg.	<i>bandjai</i>	*bandijōj	<i>pāčīai</i>
acc. sg.	<i>bandja</i>	*bandijōn	<i>pāčīq</i>

As it seems, in the immediate prehistory of Old High German, the pattern nom. *sī* ~ acc. **ia* was secondarily transformed into the attested nom. *sī* ~ acc. *sia* on the model of such nouns and adjectives as shown in (31). This innovation separated OHG *sī* 'she' from the inflection of other personal pronouns, where the accusative always grouped with the other oblique cases, not with the nominative (cf. the OHG 1st singular pronoun: nom. *ih* ~ acc. *mih*, like gen. *mīn* and dat. *mir*). This separation shows that inflection patterns which once emerged by replication of inflectional suppletion do not necessarily preserve their structural properties in later times.

This observation entails potentially important consequences for any practical work on suppletion replication in inflection. The development just described for Old High German shows that the suppletion replication tendency, although a cross-linguistically valid generalization, might be more difficult to detect or to prove in a particular case than in the three cases presented at the beginning of the paper. With early varieties of languages in particular, information on the original structures might crucially depend on the beginning of the written record, which is often a matter of historical accident. If Gothic had not been recorded for religious purposes as early as in the 4th c., our earliest sources on the feminine 3rd person pronoun in languages using Proto-Gmc **i*- 'this' would be Old High German texts written around 800. Since these texts do not attest the original structure of the paradigm with its contrast between the nominative and all oblique cases, the origin of this suppletion would be far from obvious.

50 The palatalization of *t* to *č* in the oblique cases of Lith *pati* is regular. The nasalized *q* in the accusative reveals that this case form originally ended in a nasal.

8 Conclusions

The data presented in this paper indicates that suppletion in inflectional paradigms of lexemes which are in the process of acquiring a new grammatical function may be generated by a cross-linguistic tendency to copy suppletion that pre-exists in other lexemes of the relevant functional class. The data shows, furthermore, that this pre-existing suppletion alone does not suffice for generating new suppletion, but a triggering factor of a different nature is usually required. In some cases this factor may be identified within the grammar of the language in question. In other cases the new suppletion is triggered by contact with geographically adjacent languages or dialects. The theory of suppletion replication proposed in this paper makes it possible to understand, first, why new suppletion arises; second, why the emerging suppletive paradigms have the structure we observe; third, why suppletion emerges in the particular languages; and, fourth, why it emerges there at the particular time.

9 Future Prospects: Suppletion Replication and Typology of Morphological Change

In this final section I would like to briefly address two issues of theoretical interest which are relevant first to the ontological status of the proposed suppletion replication tendency, and second to its usefulness for typological research.

Firstly, the tendency towards suppletion replication in grammaticalization certainly does not explain all cases of suppletion in inflectional paradigms. It is just a further step towards identifying more factors which may, alongside phonological change and grammaticalization of derivational patterns, generate suppletion in inflection. It is possible that other factors, not yet identified at present, are of a different nature than the postulated tendency. Their investigation remains a task for future research.

However, the investigated copying of suppletion in grammaticalized pronouns seems to be related to similar phenomena outside the domain of pronominal inflection. It even seems probable that replication of suppletion in grammaticalization is just a part of a more general cross-linguistic tendency of copying pre-existing allomorphy into the inflection of new lexemes that enter a word class in different ways. Hippisley et al. (2004: 398–407) observe a strong cross-linguistic correlation between the distribution of allomorphs in nominal and verbal paradigms without suppletion and the configurations of suppletion patterns in the synchrony of the same language.

Aski (1995), Juge (1999) and Maiden (2004) observe that several suppletive verbs of Romance languages basically replicate the allomorphy pattern typical for numerous Romance verbs without suppletion, which arose in these verbs by a sound change originally caused by alternating stress. Cf. the present tense paradigm of Italian *andare* 'to go,' which comprises reflexes of Proto-Romance **vadere* 'to rush' and **ambitare* 'to go around':

(32)	1sg.	<i>vado</i>	1pl.	<i>andiamo</i>
	2sg.	<i>vai</i>	2pl.	<i>andate</i>
	3sg.	<i>va</i>	3pl.	<i>vanno</i>

The distribution of the originally independent verbs in this suppletive paradigm basically follows the allomorphy pattern of such verbs as, for instance, *udire* 'to hear' or *sedere* 'to sit':

(33)	1sg.	<i>odo</i>	1pl.	<i>udiamo</i>	1sg.	<i>siedo</i>	1pl.	<i>sediamo</i>
	2sg.	<i>odi</i>	2pl.	<i>udite</i>	2sg.	<i>siedi</i>	2pl.	<i>sedete</i>
	3sg.	<i>ode</i>	3pl.	<i>odono</i>	3sg.	<i>siede</i>	3pl.	<i>siedono</i>

The conflation of Proto-Romance **vadere* and **ambitare* in one and the same Italian paradigm seems to be caused by a loss of the inherited semantic distinction between the verbs, which, hence, became synonyms. This recent synonymy might be attributed to a situation of contact between two dialects of Italian, each of which had previously lost one member of the pair and used the other as the basic means of encoding 'to go.'

Romance suppletion through replication of inherited allomorphy seems to come very close to the developments described in the present paper for personal pronouns. The secondary synonymy as most probable trigger of the process is reminiscent of the situation in the northern varieties of Old High German, where suppletion arose at the boundary between dialects generalizing Proto-Gmc **i-* 'this' and those generalizing Proto-Gmc **hi-* 'this here.' This similarity speaks clearly in favor of regarding suppletion replication in grammaticalization as a special case of a more general tendency to replicate allomorphy of any kind.

Secondly, the described tendency towards suppletion replication might help to explain why suppletion is so frequent in personal pronouns. The case studies presented in this paper show that it may be enough for a language to have inherited suppletion just in one personal pronoun. Due to the replication tendency established in the present paper, the suppletion may, under favorable circumstances, reproduce and multiply itself for many times as soon as the

word class in question acquires new members through grammaticalization or borrowing. If a similar tendency of replicating suppletion is indeed, as just hypothetically assumed here, often at work in conjugation cross-linguistically, it might be instrumental in explaining why, within a given language, the pattern of suppletion tends to be the same (i.e. suppletion by tense ~ aspect ~ mood or suppletion by person ~ number) for all suppletive verbs, as stated already by Rudes (1980).⁵¹ As Wodtko (2005) demonstrated for Armenian, suppletion of a given type may increase in the conjugation of a particular language. This is most easily explained by the tendency to replicate inherited suppletion patterns whenever new members enter a particular class of verbs. If this is true, the choice of the particular pattern of verbal suppletion in a particular language would be essentially predetermined first by the starting conditions and second by the dynamics of grammaticalization and borrowing. If these speculations are not entirely beyond the linguistic reality, the proposed diachronic tendency to replicate suppletion may be a valuable contribution to the general theory of morphological change and, with its mediation, to the synchronic typology of inflection systems.

Abbreviations

Gk	Old Greek
Gmc	Germanic
Goth	Gothic
IE	Indo-European
Lat	Latin
Latv	Latvian
Lith	Lithuanian
MDu	Middle Dutch
OCS	Old Church Slavonic
OE	Old English
OHG	Old High German
Ru	Russian
OFr	Old Frisian
ON	Old Norse
OPo	Old Polish
OPr	Old Prussian

51 Cf. Veselinova's (2005a and b) observations.

ORu	Old Russian
OS	Old Saxon
PIE	Proto-Indo-European
Po	Polish
Proto-Gk	Proto-Greek
Proto-Gmc	Proto-Germanic
Proto-Slav	Proto-Slavonic
Skt	Sanskrit
Slav	Slavonic
Ukr	Ukrainian
YAv	Young Avestan

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A terminological note is in order. The key concepts of the paper are “inflectional paradigm,” “suppletion” and “grammaticalization.” These terms are used in their canonical and most broadly accepted sense. An inflectional paradigm is simply a set of all inflection forms of a lexical unit. Suppletion in an inflectional paradigm means that not all its members share the same root morpheme, and the difference is unique within the relevant language. Grammaticalization is understood as development of a new grammatical function in lexical items. I am aware that all three terms may be also used (slightly) differently, but this does not seem to bear consequences upon the proposed interpretation of the data or the conclusions I reached.

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