

How – and Why – Do Inflectional Classes Arise? A Case Study on Swedish and Norwegian Conjugation

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1. Introduction¹

This article addresses a highly instructive example of inflectional class change: the emergence of a new weak conjugation class (the so called 3rd conj.) in Swedish and Norwegian, e.g. SWE *tro* – *trodde* – *trott* ‘believe’. As inflectional classes are mostly looked upon as formal complication without functional gain, the rise of a new class is a thought-provoking event for inflectional class theorists. This event will be analyzed from a diachronic-contrastive perspective and discussed regarding its implications for a general theory on inflectional class change.

A common presumption on inflectional classes, or rather, on the suppletive allomorphy underlying classes,² is that they are a formal complication without functional gain, violating the principle of *one function : one form*. This classical quote by Wurzel (1986: 76, my translation) is a nice example: “Inflectional classes increase definitely the complexity of an inflectional system, without serving a purpose in grammatical structuring; from this viewpoint, they are ballast in a language system. The existence of inflectional classes cannot be functionally motivated synchronically.” From the statement that inflectional classes are synchronically just formal ballast, it is only a small step to predict the loss of inflectional classes in morphological change (e.g. Mayerthaler 1981).

But nevertheless, inflectional classes are widespread and quite stable in diachrony (cf. also Enger 2007: 289). Sometimes, we can even observe new class distinctions emerge. There are several ways this can happen accidentally, e.g. through erosion of former classifier systems or through context induced phonological change, with the phonological rules then becoming unproductive. But the case discussed here is not as straightforward. The 3rd conjugation seems to have developed at least partly through morphological motivation (reinforcing tense exponence) and means (reanalysis, analogy).

The article is structured as follows: first, I introduce the synchronic characteristics of the 3rd conjugation in the context of the Swedish conjugational system (section 2). Then, I sketch a scenario of how this class emerged (section 3). In section 4, I discuss reasons for its semi-productivity and in the general discussion (section 5), I argue that the preservation of inflectional classes and the rise of new ones may in fact sometimes be functionally motivated.

2. Characteristics of the 3rd conjugation

I concentrate on Swedish, for sake of consistence and because diachronic data and research on Swedish are more substantial, but I will consider Norwegian evidence where important. The

¹ I am grateful to Hans-Olav Enger, Stig Eliasson, and Damaris Nübling for helpful discussion on the topic of this paper, and to the reviewers for thought-provoking comments on an earlier version.

² The definition of inflectional class used here is “a group of words or stems that inflect in the same or a similar fashion” (Enger 1998: 134, cf. Matthews 1991: 129f). “Same or similar” implies that the notion inflectional class is secondary to the primary notion of suppletive allomorphy (Haspelmath 2002: 115). What we observe is allomorphy and what we do for heuristic reasons is constitute inflectional classes from (bundles of) allomorphs. For the fact that setting up classes is secondary, to a certain degree subjective and dependent on research traditions see the discussion in Enger (1998: Ch. 1.1.4, 2.5, 5.5). Thus, a more exact title of this paper would be ‘How – and why – do new allomorphs arise?’ Even so, I chose ‘inflectional class’ as the more widespread label, but what I analyse and discuss is indeed the development of allomorphy.

inflectional characteristics of the 3rd conjugation are shown in Table 1 (cf. e.g. Holl 2001, SAG 1999: 560f). The class is constrained to monosyllabic verbs ending in V: and thus is clearly phonologically conditioned. Most important for my point are the markers of the preterit and supine.³ Both forms have a very salient dental suffix with a long consonant implying vowel shortening. In Swedish and Norwegian, vowel and consonant length are in complementary distribution (syllable harmony). Though it is an unsolved controversy, which of both (vowel or consonant length) is primary, the vowel alternation is very salient in perception, as for most vowels shortening goes along with a change in vowel quality (observable in Table 1). The origin of the double dental suffix in the preterit leading to vowel alternation is my main concern in the diachronic part (section 3).

The 3rd conjugation is quite small, it has about 40 members in Swedish, but more in Norwegian (Bokmål about 70, Nynorsk about 90). Concerning semantics and token frequency, the class is inconsistent. The only common ground is phonological form.

general	monosyllabic stem, infinitive ending in V: → phonologically conditioned	<i>tro</i>	[tru:] ‘believe’
present	-r (no thematic or epenthetic vowel)	<i>tror</i>	[tru:r]
preterit	strengthened dental suffix -dde implying shortening V: → V	<i>trodde</i>	[trød:ə]
supine	strengthened dental suffix -tt implying shortening V: → V	<i>trott</i>	[tröt:]

Table 1: Characteristics of the 3rd conjugation in Swedish

The other weak conjugations of Swedish seem to be straightforwardly phonologically conditioned, too (Table 2). The first class is characterized by the thematic vowel -a- as in *kastade*. It is the most open and productive and also the most uniform class, as the thematic vowel prevents the root from influencing the dental suffix. In the second class, the suffix adapts to the final sound of the root with -de after voiced sounds as in *ärvde* and -te after voiceless sounds as in *köpte*.⁴ In the third conjugation, the interaction between tense exponent and root increases and changes direction. Now, the root is shaped by the tense exponent, which triggers vowel shortening. In strong verbs, at last, stem alternation is most extensive and morphologically conditioned.

Conjugation	WEAK					STRONG	
	1. -a-de, -a-t	2. -del-te, -t			3. -dde, -tt	short	normal
final sound	formative -a-	-C(C)			-V:	-V:	-C(C)
		[+voice]	[-voice]	<i>d</i>			
infinitive, present	<i>kast-a, -a-r</i>	<i>ärv-a, -er</i>	<i>köp-a, -er</i>	<i>tyd-a, -er</i>	<i>fly, -r</i>	<i>be, -r</i>	<i>strida, -er</i>
preterit	<i>kast-a-de</i>	<i>ärv-de</i>	<i>köp-te</i>	<i>tyd-de</i>	<i>fly-dde</i>	<i>bad</i>	<i>stred</i>
supine	<i>kast-a-t</i>	<i>ärv-t</i>	<i>köp-t</i>	<i>tyt-t</i>	<i>fly-tt</i>	<i>be-tt</i>	<i>strid-it</i>
translation	‘throw’	‘inherit’	‘buy’	‘interpret’	‘flee’	‘request’	‘fight’
		increasing interaction between tense exponent and stem progressive → regressive determination					
types : tokens	67% : 25%	20% : 33%			1,3% : 1,4%	12% : 28%	

Table 2: Swedish conjugational classes (cf. SAG, Allén 1971: 1080)

So, from left to right in Table 2, we get higher degrees in phonological fusion of tense exponence and lexical information. This is mirrored by the type-token relations. While in the first class the types dominate, in all other classes the tokens do. This correlation between a high degree in formal fusion and high token but low type frequency is well known (cf. e.g. Bybee 1985; Werner 1987; Nübling 2000, Fenk-Oczlon 2001; Burzio 2002). I will resume it in section 5.2.

³ In grammars of Mainland Scandinavian languages, *supine* is the term for the invariant past participle used in verbal function, e.g. perfect. It descends from the nom./acc. neuter indef. sg. form of the adjectival past participle.

⁴ There are further assimilative processes blurring the root-suffix border. Retroflex assimilation turns e.g. *hörde* ‘hear, preterit’ into [ʰø:ɖə].

We find several formal overlaps (bold print in Table 2) between the second conjugation verbs with stem final *d* (*tyda*) and the third conjugation (*fly*) on the one hand, and between the 3rd conjugation and the strong short verbs (*be*) on the other. The former overlap will concern us regarding the emergence, the latter regarding the semiproductivity of the 3rd conjugation (sections 3 and 4).

One should add that the phonological conditioning of the weak conjugations is not as straightforward as it first seems. Tables 3 and 4 show that lexical and morphological conditioning is involved, too. Lexical conditioning is the most idiosyncratic form of conditioning. It means that there is no generalizable rule underlying the choice of the suffix, which must be stored individually in the lexical entry (e.g. Neef 2000, 474). Thus, the thematic vowel *-a-*, which continues the Germanic stem format *-ō-* of the first conjugation, is lexically conditioned, or rather the lack of it – as its presence is the normal case considering type frequency. This is shown by minimal pairs such as *roa* ‘rest’ (1st conj.) and *ro* ‘row’ (3rd conj.) or *röka* ‘smoke’ (2nd conj.) and *öka* ‘increase’ (1st conj.). Also the [voice]-distinction internal to the 2nd conj. cannot be described in purely phonological terms: stems in /V:n/ such as *bryna* – *brynte* ‘to brown sth.’ take unexpectedly the voiceless allomorph. This exception seems to be morphologically motivated. There are roots ending in *-nd* and *-nn* in Modern Swedish, but none with final *-nt*. Thus, of the two 2nd conj. preterit suffixes, only *-te* avoids blurring the root-suffix border (Wijk-Andersson 1993).

1 st conj.	2 nd conj.	3 rd conj.	conditioning
<i>-a-</i> ∞		<i>-∅-</i>	lexical ∞ (thematic vowel)
<i>kast-a-</i>	<i>ärv-, köp-,</i>	<i>fly-</i>	
	[+voice]	[V:]	phonological ~ (stem final sound)
	<i>-de</i> ~?	<i>-te</i> ~?	
		<i>-dde</i>	

∞ = lexical conditioning, ~ = phonological conditioning

Table 3: Conditioning of the Swedish weak conjugations

The constraint leading to consonant gemination and vowel shortening in the 3rd conj. preterit and supine is insensitive toward word class (cf. e.g. SAG 1999: 562f). It holds also for adjectives, e.g. *nytt* ‘new_{NEU INDEF}’ in Table 4. But the alternation is not negligible as an automatic phonological one. Table 4 shows that the constraint is only active for morphologically derived forms, prohibiting long vowels before morpheme borders **{...V:}{C...}*. Thus it is morphologically sensitive and the conditioning of the 3rd conjugation’s preterit and supine allomorphs is only secondarily phonological (cf. Kastovsky 1971: 16).

	simplex	morphologically derived
V:C	<mat> [ma:t] ‘meal’	*V:}{C
VCC	<matt> [matt] ‘matt adj.’	{ny}{tt} ‘new sg.-neuter-indef.’ {tro}{tt} ‘believe sup.’
V:C	<mata> [ma.ta] ‘feed’	*V:}.{C
VC.C	<matta> [mat.ta] ‘rug’	{tro}{dde} ‘believe pret.’

Table 4: Quantity constraint on morphologically complex word forms in Swedish (Raffelsiefen 2002)

Hence, we are justified to treat the Swedish and Norwegian weak conjugations as “true” inflectional classes, not just as automatic phonologically conditioned allomorphy, even if they might not be near canonicity (cf. Corbett this volume).

3. Emergence of the 3rd conjugation

The scenario outlined in the following comprises two phonological catalysts and one morphological factor. The phonological factors are the development of syllable harmony and the loss of the voiced dental fricative [ð] <dh, d> in intervocalic position. I argue that the rise of the 3rd conjugation was the morphological reaction to these developments, the functional motivation being to ensure that tense exponence remained distinctive.

Syllable harmony developed from mid 13th century on and led to today's complementary distribution of vowel and consonant length. This is a necessary precondition for the new suffix to arise. But the decisive phonological factor is the loss of the voiced dental fricative, which endangered tense exponence (cf. also Seip 1930: 234; Wessén 1992: 148). It is documented from mid 14th century on and fits chronologically well with the first instances of 3rd conjugation forms (Jansson 1948/1966: 76; Seip 1930: 234f). It is widespread in spoken varieties of Swedish and Norwegian and for the latter even part of the standard varieties. The loss of ð affected for example the dental suffix in the 1st conjugation (*kasta*-class, see bold print in 1). Thus, tense is only expressed in the basic feature present by *-(e)r* (Werner 1993). Why this is tolerated in the 1st conjugation but not in the 3rd (see below), is a puzzle yet unsolved.

(1) SWE/NOR *kasta* 'throw'

	infinitive	present	preterit	supine
Middle SWE/NOR	<i>kasta</i>	<i>kastar</i>	<i>kast-a(dhe)</i> [-a(ð)ə]	<i>kast-a(t)</i> [-a(ð)]
SWE (coll.)	<i>kasta</i>	<i>kastar</i>	<i>kastade (kasta)</i>	<i>kastat (kasta)</i>
NOR/Bokmål	<i>kaste</i>	<i>kaster</i>	<i>kastet/kasta</i>	<i>kastet/kasta</i>
NOR/Nynorsk	<i>kaste</i>	<i>kastar</i>	<i>kasta</i>	<i>kasta</i>

Table 5 shows the two phonological factors for all Scandinavian languages. Using the sister languages as negative evidence, it reveals syllable harmony as a necessary, and the loss of the dental fricative as a sufficient condition for the emergence of a third conjugation.⁵

	+++	---
syllable harmony	SWE, NOR, FAR, ICL	ICL, DAN
ð-loss/ V_(V)	SWE, NOR, FAR	ICL, DAN
3 rd conjugation	SWE, NOR, FAR	ICL, DAN

**Table 5: Phonological preconditions of the 3rd conjugation
(phonological data from Haugen 1982: 66, Eliasson 2005: 1117f)**

The loss of the dental fricative should not only have affected the preterit of the 1st conjugation, but also of the verbs ending in a long vowel (today's 3rd conj.). So Middle SWE *trôdha* 'believe' should have become **trôa*, same as e.g. *fadher* 'father' became *far*. Instead, these verbs developed their new strengthened dental suffix (*-dde*) and thereby launched the 3rd conjugation. How could this happen? I propose the scenario of analogical extension (similar to Jansson 1948/1966:76) outlined in (2).

⁵ This holds for the standard varieties but should be verified checking the dialects. Faroese has developed a third conjugation but not to the extent of Swedish and Norwegian.

Today's 2nd conj. verbs with a stem final *d* (*tyda*, 2a) must have been the model. Both groups were already similar in the supine, which provides one anchorpoint for the analogy in the preterit. In the preterit, the vocalic verbs (*fly*, 2b) adopt the double dental suffix including vowel shortening of the verbs with stem final *d*.

(2a) Today's 2 nd conjugation, stem final <i>d</i>			
	inf.	pret.	supine
i) MiddleSWE	<i>tyda</i> (V:)	<i>tydde</i> (Vd:)	<i>tytt</i> (Vt:) 'interpret'
ii) ModernSWE	<i>tyda</i>	<i>tydde</i> (Vd:)	<i>tytt</i> (Vt:)
(2b) Today's 3 rd conjugation, stem final V:			
	inf.	pret.	supine
i) Early MiddleSWE	<i>fly(a)</i> (V:)	<i>flydha</i> (V:δ)	<i>flytt</i> (Vt:) 'flee'
ii) from 14th ct. on	<i>fly</i>	<i>flydde</i> (Vd:)	<i>flytt</i> (Vt:)

The loss of the intervocalic dental fricative not only stipulated this analogy, it made it easier, too, by affecting also the infinitive and present of the verbs ending in *d* (*tyda* > *tya*, *tye*), which were heavily subject to this phonological process in oral varieties.⁶ This increased the interparadigmatic similarity of both groups. And this similarity allowed the reanalysis in (3).

(3) {stem-*d*}-{*de*} → {stem}-{*dde*}: *tyd-a* > *ty(d)-a* allows *tyd-de* → *ty-dde*

Due to its loss in the present and infinitive, the *d* in the preterit was interpreted as part of the suffix instead of belonging to the stem, creating the new double dental-suffix. This kind of reanalysis in which a suffix is formally enriched by absorbing a part of the root is also discussed in Haspelmath (1995: 8-10) as *secretion*. In the present case as in some of Haspelmath's examples, *secretion* is promoted by phonological change causing ambiguity of the stem-suffix border.⁷ The enriched suffix is subsequently generalized by analogy to verbs ending in a long vowel (*fly*).

Jansson (1948/1966) provides diachronic evidence for assuming an analogical scenario: he shows that the 3rd conjugation emerges gradually for verbs with different stem vowels. The determining factor is the respective number of verbs with stem final *d* (like *tyda*) sharing the same stem vowel and acting as the model. If we had to do with phonological change, the changeover would not have been sensitive to the number of rhyming partners exhibiting the target shape in the preterit.

Hence, in this case, the interplay of context induced phonological change (especially δ-loss) and morphological processes (reanalysis plus analogical extension) led to the emergence of a new conjugational class. The rise of the 3rd conjugation had a morphological motivation: Instead of undergoing δ-loss and severely weakening tense exponence, these verbs developed a reinforced dental suffix. The strengthened dental suffix is an increase in allomorphy that is functional. Its function is to keep tense exponence distinct in a context where it is especially endangered.⁸

⁶ In Swedish, this is only reluctantly mirrored in the standard variety (e.g. *kläda* > *klä* 'dress') but in both Norwegian standard languages, many of these verbs underwent *d*-loss and thus entered the 3rd conj., which explains why in Norwegian the members of the 3rd conj. are more numerous than in Swedish.

⁷ Other of Haspelmath's examples show that context induced phonological change is not a necessary precondition for *secretion*.

⁸ Alternative interpretations are possible, cf. the suggestions of one of the reviewers: In NM terms the development could be interpreted as a conflict of Naturalness principles. *One function : one form* would have been neglected in favour of syntagmatic *transparency*, guaranteeing segmentability of the stem-suffix-boundary in all phonological contexts. This interpretation is well compatible with the one proposed above, both relying on morphological transparency.

The ratio behind the development could also be phonological well-formedness. As most Swedish roots end in a consonant, the development in the preterit would be an approximation of the Vi-verbs in the direction of the preferred formal shape. But this leads to the question why the root structure is only optimized in the preterit but not in the present and infinitive, where, quite to the contrary, root final consonants are abandoned freely (especially in NOR and Spoken SWE).

4. Productivity of the 3rd conjugation

The 3rd conjugation is not fully productive. New verbs ending in a long vowel enter the 1st conj., e.g. SWE *bua* – *buade* – *buat* ‘to boo’. But it is semiproductive for strong short verbs (Table 6). These verbs overlap with the third conjugation in the infinitive and present. Most of them adopted at least a 3rd conj.-supine in the standard variety of Swedish (Karlsson & Sahlquist 1975). In colloquial speech and in child language, overgeneralization extends to 3rd conj. preterit forms such as SWE *bedde* ‘*beg_{PRET}*’ and *blidde* ‘*stay_{PRET}*’. For the perfect auxiliary *ha* this is even standard. This verb is the second most token frequent one (Allén 1971) and its preterit is one the earliest preterit forms learned (Christensen 2003). It seems to be a strong model for the 3rd conjugation preterits of the other strong short verbs.

infinitive	preterit		supine		translation
	standard	coll./child.	standard	coll.	
<i>be(dja)</i>	<i>bad</i>	<i>bedde</i>	<i>bett</i>		‘to beg’
<i>bli(va)</i>	<i>blev, vart</i>	<i>blidde</i>	<i>blivit</i>	<i>blitt</i>	‘stay’ (passive/inchoative aux.)
<i>dra(ga)</i>	<i>drog</i>		<i>dragit</i>		‘pull’
<i>dö</i>	<i>dog</i>	<i>dödde</i>	<i>dött</i>		‘die’
<i>få</i>	<i>fick</i>	<i>fådde</i>	<i>fått</i>		‘get, may’
<i>förse</i>	<i>försåg, (-sedde)</i>		<i>försett</i>		‘provide’
<i>ge (giva)</i>	<i>gav</i>	<i>gedde</i>	<i>gett, givit</i>		‘give’
<i>gå</i>	<i>gik</i>	<i>gådde</i>	<i>gått</i>		‘go’
<i>ha, har</i>	<i>hade</i> [haddə]		<i>haft</i>		‘have’ (perfect aux.)
<i>le</i>	<i>log</i>		<i>lett</i>		‘smile, laugh’
<i>slå</i>	<i>slog</i>		<i>slagit</i>	<i>slått</i>	‘beat’
<i>se</i>	<i>såg</i>	<i>sedde</i>	<i>sett</i>		‘see’
<i>stå</i>	<i>stod</i>		<i>stått</i>		‘stand’
<i>ta(ga)</i>	<i>tog</i>		<i>tagit</i>	<i>tatt</i>	‘take’

Table 6: Overgeneralization of the 3rd weak conjugation (bold print) in Swedish short verbs

The crucial factor leading to this class crossover is token frequency. Most of the strong short verbs are among the top 20 (Allén 1971). High token frequency leads to accelerated and thus irregular phonological reduction (cf. e.g. Nübling 2000), which in its turn provides the fitting root structure, e.g. in shortening *taga* to *ta* ‘take’ (Östman 1991). This shortening tendency favours also adopting the non-syllabic supine suffix from the 3rd conjugation, e.g. *tatt* instead of *tagit*. Thus in this case – though played against the boards – semiproductivity is based more on token frequency than on type frequency, which goes quite contrary to most accounts on semiproductivity (e.g. Bybee & Moder 1983).

5. General discussion

5.1. Why tense?

The development of the double dental suffix and its semiproductivity today have one thing in common: Both reinforce tense exponence.⁹ This gives the impression that distinctive tense marking seems to be really important – at least for these short verbs. But why?

⁹ The assumption that the dental suffix in Germanic languages is an exponent of tense has been disputed recently. Blevins (2003, also Demske 2008) analyzes the dental suffix as a morphomic stem extension, i.e. formal material lacking a functional counterpart. Blevins’ main argument rests on the formal similarity but semantic non-synonymy of the preterit and past participle exponents, the status of which he compares with the Latin dental suffix shared by such semantically heterogeneous forms as the past passive and future active participle (Blevins 2003: 743). I cannot discuss his point in detail but will state briefly the (more traditional) view underlying this paper, assuming that the dental suffix in the preterite actually is a tense exponent. I see the dental suffixes of preterit and past participle not as a case of homonymy but rather of polysemy, being semantically not congruent but highly related.

One general reason could be that tense is more vulnerable than other grammatical categories when it comes to paradigmatic homonymy, because the tense features present and preterit often occur in the same syntagmatic contexts (cf. Enger 2007: 298).

A second general reason could be that tense is a category very relevant to the verb in Bybee's (1985) terms (cf. also Booij 1996). It has a higher semantic impact on the concept of the verb than e.g. the contextual categories person and number. There is evidence that relevance plays a role in inflectional class change, e.g. in the way, conjugational classes were reduced in GMC languages: Allomorphy remains more extensive and is best preserved if it is bound to relevant categories such as tense. A development towards uniform exponence is more likely and reached earlier in less relevant categories such as person and number (cf. Dammel 2003; Nübling & Dammel 2004). Thus, from a cognitive perspective, a high amount of allomorphy can be seen as a symptom of the lexical strength of a category, and uniform exponence as a sign of its weakness, being the last step before deflexion (Dammel & Nübling 2006). Applying these findings to a theory on inflectional class change, we can assume that the stability of old and the rise of new inflectional class distinctions should be more likely for relevant categories. Thus, I think it was not accidental that the 3rd conjugation arose in the domain of tense and not of e.g. mode, person or number (which were not deflected yet in the 14th century).

My main theoretical claim deduced from this case study is that inflectional class change is sensitive towards which grammatical categories host inflectional class distinctions (cf. similarly Plank 1999: 313). Categories have different degrees of relevance and thus are to differing degrees sensitive to paradigmatic homonymy and prone to different degrees of fusion.

5.2. *Inflectional classes – no ballast after all?*

The second claim deduced from this case study is that one should not abandon completely the idea that inflectional classes might be functional after all.

With his *no blur* principle Carstairs-McCarthy (1994) proposed a non-functional explanation for the persistence of inflectional classes.¹⁰ Though this principle is discussed controversially (cf. e.g. Blevins 2004; Enger 2007), it might be a valuable explanation for retaining class distinctions after all. But it provides no help for the problem at hand, namely to explain why new classes arise, and it nips the functionality question in the bud.

The case study in this paper suggests a particular answer: The emergence of the 3rd weak conjugation was a local morphological repair which secured material tense exponence for a group of verbs especially endangered in this respect and in this way yielded a new conjugational class. Thus, an increase in inflectional classes can indeed be functional (though it need not be). The emergence of new classes need not be due to semantic bleaching or phonological accident but can be actively (though of course not intentionally) promoted by the morphological system through reanalysis and analogy.

But why was this class – or were certain members of this class – especially in need? For high frequency items such as the strong short verbs, this is easier to answer than for the others. High frequency items – compared with the average – tend to be shorter but also to inflect more distinctly for the same grammatical categories. This correlation of token frequency with shortness and formal differentiation is cross-linguistically well investigated and generally interpreted as a side-effect of the higher lexical autonomy of token frequent forms. Werner (1987: 597) suggests that it might be more than a side-effect: it might be useful in production and perception to have short and “earcatching” forms for items occurring frequently and in unstressed position.

True, the past participle is used in several functions (e.g. passive), and the perfect periphrasis may refer to present or future contexts. But the main domain of past participle *usage* is the perfect periphrasis, which is most often used to refer to events beginning in past time. Diachronic evidence for the closeness of meaning between preterit (general past) and perfect (aspectual connection to moment of speech) is provided by West Germanic languages such as Southern varieties of spoken German, Yiddish, and Luxembourgish. Here, the perfect was grammaticalized into a general past superceding the preterit (e.g. Dentler 1998).

¹⁰ It assumes, in short, that inflectional classes are acquired automatically in L1-acquisition through Clark's principle of contrast. For each formal distinction they observe, children imply differences in meaning, even if these are purely intramorphological (inflectional classes).

Taking this into account, the case of the short verbs can be linked to a more general argument regarding the functionality question. The argument was already touched upon in the discussion of Table 1 on the Swedish conjugation above and is modeled in a more general way in Figure 1¹¹.

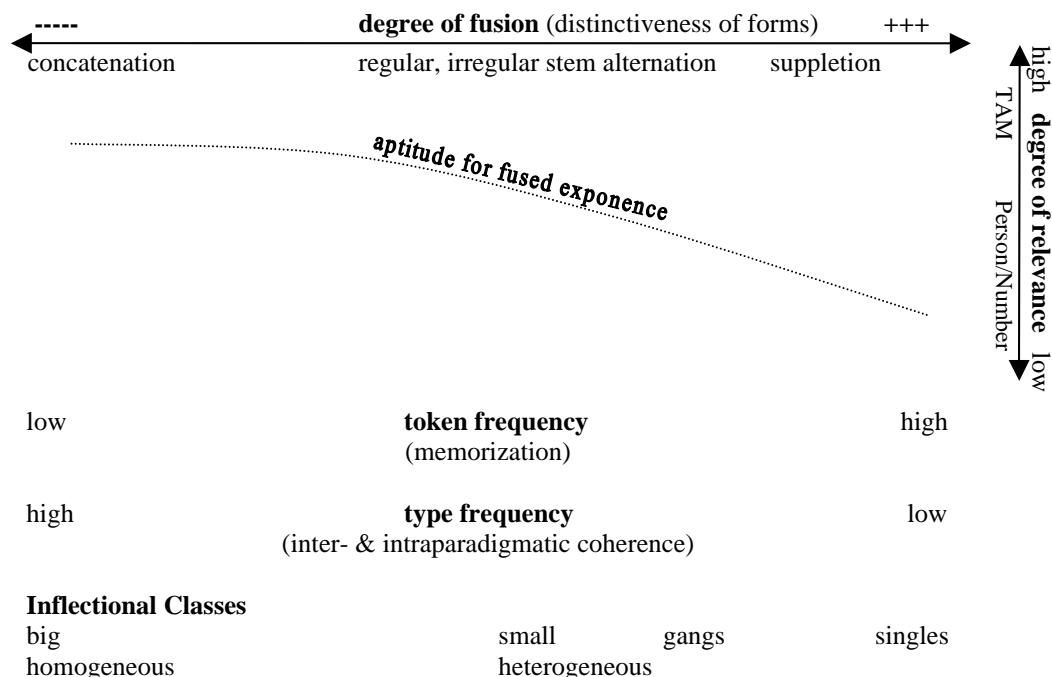


Figure 1: Frequency, relevance and phonological fusion in interplay

Inflectional classes provide various formal devices with different degrees of fusion attractive for different ranges in token frequency. In this way, they allow setting different priorities: morphological transparency for less token frequent items vs. phonological fusion for token frequent ones. Token and type frequency are measurable symptoms for the cognitive notions ‘strength of memorization’ vs. ‘interparadigmatic coherence’, which stand in a negative correlation. Memorized items tend to fusion and irregularity. Phonological change can apply freely and unrepaired. Less memorized items are repaired, whereupon interparadigmatic connections (type frequent and transparent models) are used. Of course, this correlation is not a new thought (cf. e.g. Paul 1880; Bybee 1985; Werner 1987; Fenk-Oczlon 2001, and from an OT perspective Burzio 2002), but I think it should be linked more to the question of inflectional classes and their formal characteristics. The key quote for this purpose comes from Werner (1987, the title): “The aim of morphological change is a good mixture, not a uniform language type.” He goes as far as to assume that the “good mixture” provided by allomorphy is not only a side effect of the interaction between phonological change, token and type frequency, but an aim of morphology in itself. For him, mixing devices is advantageous in parsing and lexical processing – both from a production and a perception perspective – providing readymade, short and distinct items under conditions of high token frequency and interparadigmatically coherent transparent patterns under conditions of low token frequency. So, why not claim as one general – and *synchronic* – function of inflectional classes to provide this good mixture?

¹¹ Figure 1 includes the relevance of the category hosting an inflectional class distinction (cf. 5.1) as an additional factor determining the extent and irregularity of allomorphy.

Abbreviations

DAN – Danish
 FAR – Faroese
 GMC – Germanic
 ICL – Icelandic
 NOR – Norwegian
 SWE – Swedish

aux. – auxiliary
 conj. – conjugation
 indef. – indefinite
 pret. – preterit
 sg. – singular
 sup. – supine
 TAM – Tense, Aspect, Mode

NM – Natural Morphology
 OT – Optimality Theory

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Selected Proceedings of the 6th Décembrettes: Morphology in Bordeaux

edited by Fabio Montermini,
Gilles Boyé, and Jesse Tseng

Cascadilla Proceedings Project Somerville, MA 2009

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