

Glossar

A.	Akkusativ
A	Adjektiv (in Tab. (17) und (18))
AHD.	Althochdeutsch (ca. 750 - 1050/100)
D.	Dativ
Dim.	Diminutiv
f.	feminin
G.	Genetiv
I.	Instrumental
m.	maskulin
MHD.	Mittelhochdeutsch (ca. 1050/100 - 1350)
NHD.	Neuhochdeutsch
N.	Nominativ
N	Nomen (in Tab. (17) und (18))
Perf.	Perfekt
Pl.	Plural
Sg.	Singular
T-S	Tiefen-Struktur
V	Verb

Abstract

This article deals with diachronic and synchronic aspects of German umlaut in derivational wordformation. Umlaut can be analysed as an additional *I element* within Government Phonology. This *I element* takes part in umlaut processes as a special morpheme, residing on an autonomous tier: within an Autosegmental framework umlaut operates as a *floating I element* which occurs together with a special set of derivational suffixes. In those cases, umlaut is a regular process and can be opposed to lexicalized umlaut phenomena.

J. Magdalena Scheiner

DEVELOPMENT OF THE GERMAN FUTURE

PERIPHRAISIS *WIRD* + *INFINITIVE* AND THE ONE FOR THE SUBJUNCTIVE *WÜRD* + *INFINITIVE*¹

In this paper I will explore the grammaticalization of the present tense of *werden* ("become") + *Inf*, thus entering the verbal inflection paradigm as a periphrasis of future tense and further as an expression of epistemicity, accompanied by the more or less acknowledged development of its subjunctive II, *würde* + *Inf* into a substitute for subjunctive inflection.

The phenomenon will be connected to morphonological change in Old High German (OHG) which will be argued to have facilitated reanalysis of the former copula construction. An attempt will be made to locate the new construction within the I-System of Modern High German (ModHG), also regarding other auxiliaries. Some reasoning concerning the complete loss of *wurde* (past tense) + *participle/infinitive* will help to further clarify the reanalysis in question, while the recently acquired epistemicity of *wird* + *Inf* and especially the normatively suppressed spread of *würde* + *Inf* will be mentioned as a possible starting point for further examination.

¹ A previous version of this paper (lacking the morphonological analysis) has been written for a class Ian Roberts taught in Vienna, WS 1998/99. I want to thank him for the inspiring lectures and his extremely helpful comments. Further thanks go to Wolfgang Dressler, who drew my attention to the literature on grammaticalization, Elisabeth Rieder and Friedrich Neubarth, who finally succeeded in convincing me that phonology was fun and who helped me a lot with data and theoretical background, Martin Prinzhorn, Christian Huber for review of content and language and Maria Theresia Waldstein, who tried to improve my clumsy, German-like English. Of course it is me who is responsible for remaining errors in style and argumentation.

1 Historical Background

1.1 Future Periphrases in the History of German

Various analytic expressions have been exploited during the history of Germanic languages in order to find a means to express future tense more definitely than by simply using Present Tense. Mainly the fields of obligation, volition, inchoativity and possibility, all of them necessarily having in common the view into future as an accompanying idea², gave rise to the new future periphrases. The close connection with translation work must not be forgotten in discussing the ongoing developments. So it may be of some interest for the rise of the German future expression that Ulfilas encountered numerous inchoative constructions to express futurity when translating Church Latin: *incipere* (besides *habere*³) + *Inf.*

Until the end of the Middle High German (MHG) period *scal* ("shall") + *Inf.* was the most frequent expression to convey future meaning. It is only the preacher Berthold von Regensburg (†1272) in whose work *werden* + *present participle* or *infinitive* has taken predominance.⁴ Besides some examples of *wollen* ("want", in these cases corresponding to the development of English "will") + *inf.* or even rarer, *muoz* ("must") + *inf.* can be found in the MHG and early Modern High German (eModHG) literature.

1.2 Rise of *werden*-Constructions

The purely inchoative construction built by any form of *werden* + *present participle* is completely lacking in Old Saxon and very rare in OHG, even seldomer in examples where it conveys future tense.

Behagel (1923-32) cites Tatian 44, 21 as one of the earliest examples, where the construction [*werden*]_{FIN, PRES} + *present participle* is used to express future tense:

² Here I may roughly correspond to the implication model of typological analyses to come up for the acquisition of new meaning an expression acquires, e.g. Traugott & König (1991)

³ Where the latter (wrongfully considered inchoative by Behagel (1923-32.III)) is known to have given rise to the Romance future expressions, cf. Roberts (1993a).

⁴ Behagel (1923-32.III, 259)

- (1) *the min furloungnit inti min scamenti wirdit*
who 1.Ps.Sg.-GEN denies and 1.Ps.Sg.-GEN being-ashamed becomes
(‘who will deny me and will be ashamed of me’)

He also mentions constructions like (2) as possible Greek examples:

- (2) ἔσονται πινοντες (Mk 13, 25)
be/FUT-3.P.PL drink-AOR-PART-NOM-PL
(they will drink)

The difference between these two constructions lies in the fact that the Greek one encodes inchoativity by the participle, which, being Aorist and therefore punctual, can encode ingressivity or effectivity.⁵ In combination with the future tense of εἶμι “to be” it is thus most likely to locate the onset of an action in the future (“they will be such who start to drink”). The German example, on the other hand, encodes inchoativity by the use of *werden*, whereas the participle expresses that the action is going on at the *Event Time*⁶ specified via the tensed main verb. Combining the participle with *sein* expresses a notion of progressivity holding at utterance time (present tense), but normally isn’t used that way. Therefore I would not consider this the immediate example, thus giving rise to an analogous construction in German, but it might have supported the German inchoative construction’s acquisition of future tense meaning.

The use of *werden* + *present participle* to encode that something has not yet happened/does not hold now but will be true of some point in the future gets more frequent in MHG.

In all of these cases the participle can occur as well with direct as with indirect objects:

⁵ Lachawitz (1989: 86 f)

⁶ See Footnote for clarification of tense semantics.

- (3) sol si nehmen Etzel, si getuot uns noch vil leide; ja wirt
 shall she take Etzel she does us PART much harm PART becomes
 ir dienende vil manic waetlicher man
 she-DAT serve-PART-PRES many capable man
 ('if she marries Etzel she will harm us thoroughly one day; many a capable man
 will stand behind her') (Nibelungenlied 1210,2)

- (4) swie mich der künec varnde siht,
 as me-ACC the king travel-PART-PRES see-3.P.SG
 er wirt mich gerne sehende
 he become-3.P.SG me-ACC gladly see-PART-PRES
 ('as soon as the king sees me travel, he will be pleased to see it') (Tristan 3954)

In both (3) and (4) the conditional aspect of the phrase's semantics unties the change encoded by *werden* from the present situation, automatically linking it to some point in the future at which the condition given in the antecedent happens to be fulfilled.

Besides these constructions with the present participle, there occasionally start to occur examples in which the participle is substituted for by the infinitive.

- (5) wer wirt in den luften gelichen dem herren, wer wirt gelich wesen dem herren
 who will in heaven be-similar to-the Lord, who becomes similar be-INF to-the Lord
 ('who in heaven will assimilate the Lord, who will be similar to him';
 Psalm 88, interlinear version, 12.cent.)

The same possibility has developed in combination with the above mentioned *wesen* ('to be') + formerly present participle. Both constructions (and also attributive participles and contracted subordinated clauses) show reduced forms of the participle: the 'd' may be left out completely, resulting in >enne, which may be further reduced to >ene.

1.3 The Morphological History of the Present Participle during the MHG period

The morphological background for the reanalysis of present participles to infinitives in copula constructions is quite difficult to determine, as the forms for infinitives and present participles show a wide range of not only interdialectal but also intradialectal variation.

The most crucial step is the weakening of the original ending of the present participle –ende⁷, deriving from –anti/-enti/-onti to –enne, further to –ene and –en. This is not limited to contexts in which the participle later is substituted for by the infinitive, but occurs in attributive uses as well.⁸

For regional restrictions Bech argues that the phenomenon has invaded the MHG area coming from the north (Low German), first influencing the middle German dialects (Franconian), later Alemannic and last in the Austrian/Bavarian dialects (arriving only in the 14th century).

At the same time, from the 13th century onward, especially Alemannic dialects show infinitives with –d-insertion and inflecting infinitives which have been reduced from –annes/-ônnnes/-ênnnes to –ennes, and after short syllables to –enes, –ens or –en. These forms might have given rise to further confusion.

Considering in addition the fact that middle high German writers often show characteristics of different dialectal areas in a rather unsystematic way⁹, the exact interplay of the above mentioned factors is quite difficult to determine. A careful analysis considering travelling, movement and interrelation of the writers in question would be required to sort them out reliably.

What can be said clearly enough is:

Nearly all the reduced forms that we find in Bech's data (comprising some hundred examples) show the vowel –e, apart from about 11 instances with –in. 2 of them

⁷ The actual form depends on the distinction of weak vs. strong inflection paradigm of German verbs. Each paradigm is further subdivided into several classes. This distinction will be ignored for further discussion, since already the first occurrences of reduced participles as given in Weinhold (1967(1883):470) show an unsystematic distribution over the different classes.

⁸ Bech (1882)

⁹ In zahlreichen Fällen vereinigt derselbe Schriftsteller Eigentümlichkeiten von verschiedenen Mundarten, ohne daß die Mischung einen bestimmten Grundsatz erkennen läßt; sie gestaltet sich bei verschiedenen Schriftstellern auf die verschiedenste Weise und kann ganz verschiedene Ursachen haben. Sie ist unter Umständen die Folge eines Wechsels im Aufenthaltsort des Dichters, [...] in den meisten Fällen das Ergebnis literarischer Einwirkung. (Behagel 1911: 62)

arise as rhymes on other words and thus seem to be reduced for metric reasons, 1 in conjunction with an unreduced participle in *-inde*.¹⁰

There are no instances of *-anne*, *-an*, *-inde*, *-onde*, *-on* as these other vowels have already been weakened to *-en(de/ne)*.

Those dialects that show secondary *-ande*, *-onde*, or *-unde/-unte* (the latter pair typical for the Bavarian area) are exactly the ones that are most resistant against reduced participles. So it seems reasonable to argue that only participles in *-ende* could undergo reduction as described in the following.

I have chosen the framework of Autosegmental Phonology to capture the data because it describes them quite clearly and further provides mechanisms corresponding to the phonological rules that have been postulated to be at work in these cases by Behagel¹¹ and others. It offers fruitful explanation for what happened to German inflectional endings on the verge from OHG to MHG in general.¹²

The main principles of the standard theory needed to capture the data are the following:

Phonological words can be represented by associating a skeleton tier with a melody tier, further indicating the prosodic realization on the latter. The skeleton tier consists of an iteration of the sequence "consonant-vowel", CV.

V positions are only realized phonetically if they are either associated with elements on the melodic tier or unlicensed by other structural means.

The development of German inflectional endings from OHG to MHG can thus be described in the following way:

In OHG, syllables with secondary stress consist of fully associated phonological elements. They are phonetically realized as vowels. The same syllables are unstressed in ModHG and do not contain phonologically associated elements. These melodically empty (V-) positions are phonetically realized as Schwa or left out completely.

The development of the present participle to occurrences where it is phonetically equivalent to the infinitive can be analysed as follows:

¹⁰ Bech (1982)'s instances of *-in*: *wart bewisin* (Mitteld. Schachb) *sie wurden da entsebin* (:nebin), Joh Rothe, R. Spiegel: *nutzin*(:schutzin); *schâmin* (: vornâmin); *anebellin unt aneruoſin, lebin, lenkin, vorscheybin und vorwysinde*

¹¹ Behagel (1911)

¹² For further study of the theory cf. Goldsmith 1976, McCarthy 1981, 1982. My application is inspired by discussion with Elisabeth Rieder and her MA-thesis (Vienna, 2000), further influenced by insights she will present in her PH-thesis (work in progress).

(6) original OHG structure:

[CVCV]CVCVCV	[CVCV]CVCVCV
/	/
k y s e n t i	n e m a n t i
X x x ¹³	X x x
('kissing')	('taking')

Besides *-t* turning into *-d*, the next step reduces the final *-i* to *-e* which might indicate that it has already lost its association with the phonological element (0). It makes sense to assume that the last-but-one *-e-* is still phonologically associated, as we frequently find alternative forms in *-ande*, *-inde* or *-unde*, cooccurring with *-ende*. These alternatives are not the older forms, but later, regionally restricted developments. The variety of forms is thus not explained by loss of phonological association, thus resulting in *-e-* but might indicate that the element in question is still phonologically associated and can be realized melodically different. But we don't find forms with vowels different from *-e* in final position any longer. So it might well be that the last position is already reduced to schwa.

(7) [CVCV]CVCVCV	[CVCV]CVCVCV
/	/
k y s e n d e	n e m e n d e
X (x) 0	X (x) 0

The participles in *-enne* which we encounter in MHG might have the representation given in (8). Since we don't find participles in *-anne/-inne/-unne* I would assume that it presupposes that the *-e-* whose status is in question in (7) has finally lost its phonological association:

(8) [CVCV]CVCVCV	[CVCV]CVCVCV
/ /	/ /
k y s e n e	n e m e n e
X 0 0	X 0 0

A further available alternative is the reduced form in *-ene*. After the last-but-one *-e* has lost its phonological association, as soon as the *-n-* is shortened, the CV formerly associated with these two elements is lost, thus yielding a shorter structure:

(9)	CVCVCVCV	[CVCV]CVCV
	/	/
	k y s e n e	n e m e n e
	X 0 0	X x 0

As soon as the final *-e* has lost its phonological association and is spelled out first as Schwa (indicated as @) and then lost, the structure comes out equal to the one associated with the infinitive:

(10)	[CVCV]CVCV	[CVCV]CVCV
	/	/
	k y s e n e	n e m e n e
	X 0 0	X 0 0
	[kys:@n@]	[ne:m@n@]
	or: [kys:@n]	[ne:m@n]

This final *-e* can be lost easily, which renders the representation equal to the one we would have to assume for infinitives and participles in late MHG and ModHG:¹⁴

[kys:@n]	[ne:m@n]
or: [kys:n]	

¹³ Phonetic weight is assumed to be diminishing with increasing distance of the main accent. (Elisabeth Rieder, personal communication).

¹⁴ I am not sure where exactly the transition from associated (and thus full *-e*) to schwa in the last-but-one position has to be assumed. Perhaps it is as early as for *-enne*, since we never find any structure like *-anne*, *-unne*, or *-inne* for MHG participles. Nevertheless we do find these very rare forms in *-in*. Elisabeth Rieder (personal communication) pointed out, that this might be a phonetic feature, depending on speed of pronunciation.

2 The development in terms of underlying structural changes

2.1 What seems to have happened in terms of structural change

The developments I have outlined in 1.3 had thus created a state in which a participle could be spelled out in a reduced form that is equal to the infinitive. These participles can be found in attributive position as well as in predicative constructions. Therefore it depended only on the syntactic context, whether they were understood as participles (e.g. could be conjoined with adjectives) or as infinitives.

Let us examine the differences between the structure that should be attributed to *werden* + participle vs the one for *werden* + infinitive.¹⁵ The following discussion is based on the assumption that learners always favour the easier construction¹⁶ if two competing ones could be attributed to a phonological string. "Easier" is defined in terms of movement that has to be exercised and projections that have to be proposed. Considering the range of variation in the morphology of participles at that time it seems reasonable that a learner chose the easier construction once it had been made available, even if there was no strict phonological necessity to delete the final *-e* in his very own dialect.

For the source structure (11) I would, as it is a copula-construction, assume an underlying representation like (12)¹⁷ to be complement to the Agreement-system:

(11) *daz sie got sehende werden*

that they god seing-P become
(that they (will) begin to see god)¹⁸

¹⁵ The initial and the final state of a diachronic process is often called source and target construction in the literature on grammaticalization, cf. Heine 1993. Of course this is difficult to determine or even arbitrary when talking about the phonological string spelled out. However, it is a helpful concept when considering the structures that can be attributed to it.

¹⁶ Formulated as *Least Effort Strategy* (LES) in Roberts (1993a:228): representations that are assigned to sentences are required to contain the set of the shortest possible chains (consistent with (a) the principles of grammar, (b) other aspects of the trigger experience).

¹⁷ I follow proposals made by Kayne (1994) concerning the copula but still stick to Principles & Parameters concerning word order.

As it is shown by (17) a new T-element has been gained whose complement AgrOP can also contain a copula construction.

An interesting intermediate stage is documented by Behagel (19:II,261):

- (18) **wann des herrn tag wird kommen werden** (Hans Sachs, XV,417,17)
 when the-GEN lord-GEN day become-3.P.Sg. arrive-INF/PART become-INF/PART
 ('when the day of the lord will be at the point of arrival')

The double expression of *werden* (become) can only make sense, if the finite one is understood to mean future tense, while the lower one still has the inchoative notion. This is a further argument for the rich structure that has been postulated for the copula construction. The infinite copula *werden* appears in COP°, moving and incorporating to INCH°, the finite auxiliary *wird* is a T°-element expressing future tense. So far it is completely parallel to the ModHG construction in (17). The crucial difference is that for Hans Sachs *kommen* could still be the present participle which is selected by the copula *werden*. The moment infinitives and participles become easy to tell apart again, (18) is ungrammatical due to subcategorization failure. In (17) *werden*-COP selects a noun (*Bürgermeister* "mayor") therefore yielding a grammatical sentence.

2.2 Is this an instance of grammaticalization?

The question of the classification of the changes currently discussed has to be posed since it has been argued (Dik 1987) that a copula is only a supportive verb and therefore can not be subject to grammaticalization. Recently acquired uses are said not to display a higher degree of grammaticality than the source ones. So he calls it copula auxiliarization and avoids the term of grammaticalization to refer to the development in question. I will point out some facts that strongly propose to classify the change described in 2.1 not only as an instance of reanalysis but also as one of grammaticalization. (see Newmayer 1995 for a scheme of possible subsections).

²¹ Even if one would not want to postulate an underlying abstract copula BE and its incorporation to an aspectual head at least one functional projection can clearly be spared.

Dik argues that the copula is a purely functional element whose phonetic realisation is not necessary from a semantic point of view (e.g. it isn't spelled out in Hebrew). This is not completely valid for the case of German *werden*_{COP} since it incorporates the notion of inchoativity. I would further argue that *sein*_{COP} ("to be") is also composed of the abstract BE copula, further incorporating to an aspectual head which contains stativity/durativity in this case. On the other hand the traditional notion of grammaticalization also accounts for the phenomena of elements that already have grammatical meaning becoming even more grammatical. (e.g. Lehmann 1995) So I assume that the German copula is an element that can undergo further grammaticalization.

Christian Lehmann (1995, ch.4) is the only one to have given some parameters to "measure" instances of grammaticalization which are extremely useful to describe the degree in which grammaticalization is present in an historical process. In the following I will try to apply them to the development discussed above.

Weight, cohesion and variability are discussed regarding the syntagmatic and the paradigmatic axis whereby increase in cohesion and syntactic weight, decrease in variability and paradigmatic weight are understood as indices of (further) grammaticalization. *Werden* +inf. shows no decrease in integrity (paradigmatic weight) as it cannot be phonologically reduced and has not been morphologically. The reduction we have mentioned is not a surface phenomenon involved in grammaticalization but only a necessary precondition for it (respectively the reanalysis). As far as paradigmatic cohesion is concerned it can be argued that this has been increased when ASP_{inch.} + COP are reanalysed as T°, such entering the paradigm of analytic tenses. The paradigmatic variability is reduced since *werden* + inf. has ruled out all the other future periphrases at the beginning of the ModHG period. The structural scope has increased as *werden* as a T° element is base generated higher up and therefore has a larger c-command domain. (This surfaces as the possibility to take a copula construction as its complement, cf. 2.1) While syntactic variability has not been affected remarkably, coalescence can be argued to be present in the condensation of an aspectual head, a copula and a A/V-P into an ordinary IP - VP structure. (Which has been mentioned as the desirable simplification favoured by the learner.) However, morphological boundedness has not been increased.

Regarding the opposition of functional vs. lexical auxiliaries (in further opposition to lexical verbs) taken up from Rivero & Lema by Roberts (1993), MHG *werden*, the T°-

element, fits in nicely. As a predicative copula, it had to distribute at least one θ -role, perhaps even a second one to the quasi-sentential complement. (cf. Pollock 1983) The T^0 element has clearly lost all its θ -roles and is therefore located in an I node, so it can easily be acknowledged as a functional auxiliary. Insofar it parallels the English modals, just as the German temporal/ aspectual auxiliaries *haben* ('to have') and *sein* ('to be') parallel their English counterparts in being lexical auxiliaries (verbal elements lacking θ -roles, nevertheless able to appear non-finite, which is impossible for the functional auxiliary *werden* – cf. (21)).²²

3 Consequences of the structural reanalysis

3.1 Compatibility with modal verbs

The assumption of an underlying structural change made available by the surface morphological one can also account for visible syntactic phenomena. So both Behagel (1923:32) and Bech (1882) cite the possibility of embedding a construction of the type *werden* + infinitive/participle under a modal such as *soln* ('shall'), *mac* (corresponding to E. *may*, meaning 'can') or *muoz* ('must').

- (19) **also daz gar groze kriuge sülle ufstande werden** (Nik. v. B 328)
PRT that PRT big-PL war-PL shall-SUBJ arise-PART/INF become
(‘that big fights were to arise’)
- (20) **er mac wol werden vliegen und vederen gewinnen** (Pass R. 88, 87)
he may PRT become fly-PART/INF and feathers win-PART/INF
(he may start to fly and grow feathers)
- (21) **dasz ein blinde mocht sehen werden** (Alsfelder Passionsspiel 1567)
that a blind might see-PART/INF become
(that a blind man turn seeing)

²² German modals seem to be split between all of the three categories although I cannot go into detail

These constructions are no longer available in ModHG as can be shown in (22) – (24):

- (22) ***daß wirklich große Kriege sich sollten erheben werden.**
that really big war-PL REFL. should arise-INF AUX-FUT-INF
- (23) ***Er kann fliegen werden und Federn bekommen.**
he can fly-INF AUX-FUT-INF and feathers get-INF
(intending something like: ‘he can be able to fly in the future and then also get feathers’)
- (24) ***daß ein Blinder sehen werden könnte.**
that a blind man see-INF become-INF could

While Behagel does not further comment on this construction, Bech sees it as an instance where the reduced participle is no longer processed as a participle.

Offenbar nicht als Partizipium empfunden aber ist die abgeschliffene Form in Fällen, wo werden neben sal gesetzt ist. (Bech 1882:82)

(The reduced form is obviously no longer perceived as a participle where *werden* can appear together with *sal* ('shall'))

Considering example (19), this yields a straight-forward contradiction to his former assertion that each form keeping the final *-e* is still understood as a participle (Bech 1882:82). In (19) the form in question is embedded under *saln* but still bears the final vowel and is therefore marked as a participle.

This does not come as a big surprise considering the reanalysis we have been led to assume: arguably the embedding under a modal form is possible only as long as the construction is analysed as containing the copula. As soon as *werden* is reanalysed as a TP-element the construction is rendered ungrammatical due to complete lack of the T^0 -element's infinite form.

While the analytic perfect and pluperfect with the auxiliaries *sein* ("be") and *haben* ("have"), (25), and also the passive with *werden* ("become") (26), allow for infinitive forms, the analytic future tense (27) does not:

- (25) **Gut gegessen (zu) haben/ Lange spazierengegangen (zu) sein,**

ist ein angenehmes Gefühl.

well eaten to have-INF/ long being-gone-for-a walk to be-INF, is a nice feeling
(‘Having eaten well/ Having gone for a long walk is a nice feeling.’)

- (26) **Jeder Pizza kann es passieren, gegessen zu werden.**

(every pizza)DAT can EXPL(it) happen-INF, eaten to get-INF.

(It can happen to every pizza that it gets eaten.)

- (27) ***Es ist ein angenehmes Gefühl, gehen zu werden.**

EXPL is a nice feeling go-INF to FUT-AUX-INF

(intending something like: “being about going for a walk is a nice feeling”)

The reverse order of embeddedness is possible in ModHG at least with *müssen* (“must”), and *wollen* (“want”). Although not attested in Bech’s corpus they should not have been excluded in the MHG (and marginally OHG) copula construction, where they would have encoded the onset of some state of volition or obligation.

- (28) **Unsere Verwandten werden zu Ostern kommen wollen.**

our relatives will at Easter come-INF want-INF

‘Our relatives will want to come for Easter.’

- (29) **Hans wird aufräumen müssen/ ??sollen.**²³

John will tidy-up must-INF/ shall-INF

‘Hans will have to tidy up.’

²³ The incompatibility of *sollen* (“shall”) seems to be due to either morphosyntactic (near lack of infinitive if not used as a nominal) or pragmatic properties (agent-oriented). The latter might be suggested by the lack of perfect and pluperfect (*Hans hat/hatte aufräumen sollen.), while the corresponding subjunctive forms are acceptable (Hans habe/hätte aufräumen sollen.) [each consisting of the auxiliary *haben* (“have”) + Past Participle]

- (30) **Hans wird sicher nicht ins Kino mitgehen dürfen.**

John will surely not to the cinema come-along-INF be-allowed-INF

‘Hans will certainly not be allowed to come along to the movies.’

- (31) **Der Installateur wird morgen doch nicht kommen brauchen.**²⁴

the plumber will tomorrow PRT not come-INF need-INF

‘It will not be necessary that the plumber comes tomorrow.’

- (32) **Hans wird morgen nicht kommen können.**

John will tomorrow not come-INF can-INF

‘John will not be able to come tomorrow.’

All of these examples are very close to the epistemic sense. (28) for example is ambiguous between a reading that the relatives are supposed to be planning at speech time to come over Easter, or, and this is the true future sense, we release the prediction that by the time it is Easter our relatives will have the wish to come and see us. I think it can also mean that at some specified time in the future they will have the wish to come and see us at Easter. This is the truly future reading of *werden*, but it is rather hard to get for interference of the epistemic sense.

Therefore *werden* as a future auxiliary lacking infinitive forms has acquired an even higher degree of auxiliariness²⁵ than *haben*, *sein* and also *werden* in its use to form the passive of event. On some occasions and from different viewpoints the German modals have been argued to be full verbs rather than auxiliaries (e.g. Abraham 1990, Heine 1993). The facts seen in this section further confirm the position assigned to *werden* + infinitive in the I-system.

²⁴ regarding the grammaticalization of negated *brauchen*, see Lehmann 1988.

²⁵ Heine 1993:72: parameters of auxiliariness

3.1.1 What has become of *wurde* + participle/infinitive?

Modern German allows only *werden*_{fin,pres} + infinitive expressing futurity or epistemicity, the present subjunctive (*ich werde, du werdest, er werde, wir/ihr/sie werden*) + infinitive²⁶ and the past subjunctive (*ich würde, du würdest, etc.*) + infinitive. The latter has been gone beyond the function of a future subjunctive by now.²⁷ Since at least the preterite of *werden* seems to have occurred rather frequently with the present participle but also with the reduced form assembling or equalling the infinitive in MHG, and perfect is attested at least twice in the corpus cited by Bech²⁸, it is reasonable to ask where these forms have gone.

I will argue that *wurde* + infinitive "has died out" because it has never existed at all. Even Bech has argued that at least all forms ending in *-e* were still understood as participles, but also some which had lost the final vowel which would have distinguished them from the infinitive and so have rendered them unavailable for the reanalysis, were still understood as participles. In terms of my analysis the underlying structure was still the copula-construction and the meaning was purely inchoative. Bech argues this to be the case where such a morphologically ambiguous form is paralleled by a second (morphologically full) participle or adjective. He cites *sint leben oder tot* (are live-INF/? or dead). This – not properly cited – example is clearly paralleled by the following, involving the construction *werden*_{pret, fin} in question:

- (33) **want ich von blinde wart sehen** (Alsfelder Passionsspiel 6392)
 when I from blind grew see-INF/?
 (when I turned from blind to seeing)

Although many other examples of *werden*_{pret} + Inf. do not automatically fall into this class of "understood as a participle", no example in Bech's corpus seems to encourage future

²⁶ Seldom used today: spoken German completely avoids it while it can be found in writing of higher formality or literature to render future in indirect speech without further commenting on the commitment to the referred utterance. (it is the neutral form, whereas *würde* might signal the speaker's distance or even disbelief). Spoken German would use the indicative (present or future) to indicate neutral quotation, the form *würde* to display uncertainty or disbelief.

²⁷ The function of the German subjunctive II is hard to define in general; see 4.2

tense interpretation. (To carefully check all of them in the context of the literary text in which they occur would be inevitable to definitely exclude possible counterevidence.)

Examples (34)–(35) show clear evidence for the immediate coming about of the activity/state:

- (34) **den bischof wart ein angst jagen** (Marienlegende ed. Pfeiffer, 8,66)
 the-ACC bishop became a fear hunt-INF/PART?
 ('fear took hold of the bishop')
- (35) **ich erschreckte und wart wachen** (2 Gespräche zw. Leib und Seele
 ed. Rieder III, 405, 244)
 I startled and became being-awake-INF/PART?
 ('Fear struck me and I awoke')

Both examples strongly indicate the beginning of the action encoded in the form in question at the very moment indicated by the preterite of *werden* in the past. It obviously does not encode that there exists a moment in the past, after which the action of the INF/PART? took place.

This can be shown even more clearly with sentences modified by an adverbial of time:

- (36) **dô die unsern brennen wurden** (Chronik der Deutschen Städte.II, 196,19)
 when the ours set-fire-INF/PART? became
 when/because our troupes started to set fire
- (37) **da ward sie einen list erdencken** (Hans Sachs nach Kehrrein III, 10)
 there became she a-ACC cunning devise-INF?PART
 (so she started to devise a plot)
- (38) **dô ich an dem suntag trinken wart** (Marg. Ebener 138,20)
 there I on the-DAT sunday drink-INF/PART? became
 (when/because I started to drink on sunday)

²⁸ Augsburger Traktate in Alemann 8, 109 *dadurch wir alle plinden seien gesechen (sehend) worden*. (So all of us blind men became seeing.)

(38) clearly shows that "*an dem suntag*" is to modify the change between the state of not-drinking and the activity of drinking.

A possible representation of its temporal semantics might be (39):²⁹

- (39) R, E _____ S
 sunday
 abstinence → drinking

If the reanalysis had taken place, the interpretation of immediate inchoativity as it is encoded in the copula construction and may be anchored in time by any possible tense form of *werden* (Present, Past, Perfect are attested), would no longer have been available. A reinterpreted structure with *werden_{pret}* would have had to mean existence of a moment R in the past, after which an action had taken place (E) with respect to utterance time S. This would yield an interpretation like (40):

- (40) R _____ E _____ S
 sunday abstinence → drinking utterance time

For the temporal part this roughly corresponds to an interpretation of the original meaning of *würde + inf.* (subjunctive II of *werden*) The only difference lies in modality: *werden_{pret}* (being indicative), would also have to postulate that the action had actually taken place (which is neither stated nor denied by *würde* (being the past subjunctive of *werden*) + *infinitive/participle*).

German and in fact no other Indo-European language I can think of has grammaticalized an expression for immanence of an action in the past and at the same time its having actually happened. So this has to correspond at least to a systematic gap if not to an universal incompatibility.³⁰

²⁹ The somewhat sketchy diagrams in Reichenbachian notation serve our purpose of semantic clarification well enough. 3 moments are located on the time axis: S means *Speech Time* (this is utterance time), E *Event Time* (the time at which the event described in the main predicate took place), R *Reference Time* (providing a further possibility to identify a point of time in relation to E and S, thus distinguishing for example English Simple Past and Present Perfect). For an introduction to the theory of tense cf Hornstein (1990).

³⁰ See Vincent 1987 for discussion of gaps in grammaticalization paradigms.

The reason we have no *werden_{pret}* + infinitive in ModG is not loss of this construction but that it has never existed: the participle has never been reanalysed in this context, what makes – after the period of confusion of morphologically marked participles, unmarked participles in a regionally and sociologically restricted range of texts, and already reanalysed infinitives – the construction completely unavailable. Like all of the other attributive and predicative participles not reanalysed it would again have to be marked as such, but – most likely due to the complete grammaticalization of the *wird/werde/würde*-paradigm – the Copula-construction is no longer available with a present participle.³¹

4 Some comments on the further history of *werden* and *würde* + infinitive

4.1 *werden* acquiring epistemicity

A development which can be observed quite often as an instance of grammaticalization is a future element's acquisition of epistemic meaning. Heine analyses this as corresponding to an universal pathway of grammaticalization ("chain", called "cline" by Bybee et al., for critical discussion of both notions see Newmeyer 1995). As there is neither reanalysis (and therefore structural change) nor desemanticization involved, it seems difficult to subsume this change under grammaticalization. Like its English counterpart *will* it can be argued to achieve the notion of epistemic modality by extension through inference (something occurring in the future is not sure). Most promising seems to my mind the account of Comrie (1989) who argues that the epistemic use arises out of a sense like "it might be – therefore you will find it to be this way if you investigate after". As argued by Newmeyer (1995) historical change without reanalysis can't be analysed in terms of generative syntax.³²

³¹ Sounding pretty odd, the meaning of *würde* + *present participle* is perfectly understandable though – in sharp contrast to the form of *würde + inf.* which can be hardly assigned any meaning without referring to MHG-examples.

³² An enriched system of functional projections as the one Cinque postulates on the basis of an universal ordering of adverbs would force us to assume structural change whenever there is a change in semantics associated with functional elements. This might well be the case, but I won't go into it here.

4.2 *würde* + infinitive substituting the subjunctive ?

Originally the past subjunctive corresponding to *werden* + participle/infinitive, the further history of *würde* + infinitive could readily be studied as a characterization of German normative grammar. Slogans like "*Wenn-Sätze sind würdelos*" (if-clauses don't contain *würde*) were to be heard until recently, in order to prevent the German language from immediate decay.³³ Nevertheless it should be discussed why the construction was normatively excluded from subordinate sentences but not from main sentences. As has been noted by Bybee, Pagliuca and Perkins (1994), newer modal constructions arise in main clauses and only slowly spread to subordinate ones. The older expressions in the subordinate sentences get fossilized and thus e.g. grammaticalized to mood. Being obligatory under certain conjunctions it doesn't add anything to the semantics of the subordinate sentence in question. This might be a starting point for the analysis of what has really become of *würde* + Inf.

5 Conclusion

The postulation of the structural change that has happened to *werden* + Infinitive (always paralleled by the corresponding present subjunctive) due to new phonological possibilities thus proved to be able to account also for the fact that there is no *wurde* + Inf grammaticalized in MHG. Insofar the discussion of the development of the German analytic future tense seems to be a further example how the structural analysis done by generative grammar can prove useful for the exploration of diachronic syntax.

³³ That the construction exists since MHG has been clearly revealed by the corpus of Bech in 1882 !

References

- Bech, Fedor (1882) "Beispiele von der Abschleifung des deutschen Partizipium Präsens und von seinem Ersatz durch den Infinitiv", überarbeitet *Zeitschrift für deutsche Wissenschaft*. 1, 81.
- Behagel, Otto (1911) *Geschichte der deutschen Sprache*. 3. vollst. überarb. Aufl. Strassburg: Trübner.
- Behagel, Otto (1923-32) *Diachrone Syntax*. Bd. I – IV, Bd. III, Heidelberg: Winter.
- Bybee, Joan & Pagliuca & Perkins (1994) *The Evolution of Grammar: Tense, Aspect and Modality in the Languages of the World*. Chicago: University of Chicago Press.
- Chomsky, Noam (1970) "Remarks on Nominalizations", In: R. Jacobs & P. Rosenbaum (eds) *English Transformational Grammar*. Waltham, Mass.: Gin. pp 184 – 221.
- Cinque, Guglielmo (1999) *Adverbs and Functional Heads*. New York, Oxford: Oxford UP.
- Comrie, Bernd (1989) "On identifying future tenses", In: Abraham, Werner & T. Jansen (eds) *Tempus – Aspekt – Modus*. Tübingen: Niemeyer. pp 51 – 63.
- Goldsmith, John A. (1976) *Autosegmental Phonology*. PhD-Thesis, MIT, Cambridge, Massachusetts. (erschienen bei Garland Press, New York, 1979)
- Heine, Bernd (1993) *Auxiliaries. Cognitive Forces and Grammaticalization*. Oxford: Oxford UP.
- Hornstein, Norbert (1990) *As Time Goes By: Tense and Universal Grammar*. Cambridge, Massachusetts: MIT Press.
- Kayne, Richard (1994) *The Antisymmetry of Syntax*. Massachusetts: MIT.
- Lachawitz, Günter (1989) *Einführung in die Griechische Sprache*. Wien: Braumüller.
- Lehmann, Christian (1988) "Grammaticalization in Modern German" Paper prepared for the Symposium on Grammaticalization, University of Oregon, Eugene, May 12-15, 1988.
- Lehmann, Christian (1995) *Thoughts on Grammaticalization*. München: LINCOM Europa.
- McCarthy, John J. (1981) "A prosodic theory of Nonconcatenative Morphology" In: *Linguistic Inquiry* 12,3,373-418.
- McCarthy, John J. (1982) "Formal Problems in Semitic Phonology and Morphology". In: Indiana University Linguistic Club, 82.
- Newmeyer, Frederick (1995) "Deconstructing Grammaticalization". Ch. 5 in *Language Form and Language Function*.
- Paul, Hermann et al. (1982) *Mittelhochdeutsche Grammatik*. 22., durchges. Aufl. Tübingen: Niemeyer.
- Pollock, J.-Y. (1983) "Sur quelques propriétés des phrases copulatives en français". *Langue Francaise* 58, pp 89 – 125.
- Rieder, Elisabeth (2000) *Autosegmentale Repräsentation NHD Umlautprozesse in derivationalen Wortbildungen*. Diplomarbeit, Universität Wien.
- Roberts, Ian (1985) "Agreement Parameters and the Development of English Modal Auxiliaries", In: *Natural Language and Linguistics Theory* 3, pp 21 – 58.
- Roberts, Ian (1993a) "A Formal Account of Grammaticalization in the History of Romance Futures", In: *Folia Linguistica Historica* 13, 1-2, pp 219 – 258.
- Roberts, Ian (1993b) *Verbs and Diachronic Syntax: a Comparative History of English and French*. Dordrecht: Kluwer.
- Roberts, Ian (1997) *Comparative Syntax*. London: Arnold.
- Roberts, Ian (1999) *Language Change and Learnability*.
- Traugott, E. & König (1991) "The Semantics – Pragmatics of Grammaticalization Revisited" In: Traugott & Heine (eds) *Approaches to Grammaticalization* 2.vol. Amsterdam: Benjamins.
- Vincent, Nigel (1987) "The Interaction of Periphrases and Inflection: Some Romance Examples", In: Harris & Ramat (eds) *Historical Development of Auxiliaries*. Berlin: Mouton de Gruyter.
- Weinhold, Karl (1967(1863)) *Alemannische Grammatik*. Amsterdam: Editions Rodopi.
- Weinhold, Karl (1968(1867)) *Bayrische Grammatik*. Neudruck Wiesbaden.
- Weinhold, Karl (1967(1883)) *Mittelhochdeutsche Grammatik*. Paderborn: Schöningh.

Zusammenfassung:

Das vorliegende Paper gibt eine Beschreibung der Entwicklung der deutschen Futurperiphrase *wird* + Infinitiv. Da diese nachweislich aus der inchoativen Kopulakonstruktion *werden* + Partizip Präsens entstanden ist, bleibt zu erklären, weshalb dieses Partizip durch den Infinitiv ersetzt werden konnte. Ich argumentiere, daß zunächst die morphologische Entwicklung vom Althochdeutschen zum Mittelhochdeutschen und Frühneuhochdeutschen eine Situation geschaffen hatte, in der Infinitive und Präsenspartizipien manchmal nur durch den syntaktischen Kontext unterschieden werden konnten. Sobald jedoch diese Stufe überwunden ist und Partizipien anhand ihrer Endung wieder eindeutig von Infinitiven unterschieden werden konnten, treten in allen prädikativen und – mit Ausnahme von jenen mit *werden* – attributiven Kontexten – wieder Partizipien auf. Für den Fall der Futurumschreibung mit *werden* ist daher anzunehmen, daß das Ersetzen des Partizips durch den Infinitiv es erlaubte, entsprechenden Äußerungen eine einfachere Struktur zuzuschreiben, die daher im Erstspracherwerb von den Lernenden vorgezogen wurde (Reanalyse). Tatsächlich zeigt die syntaktische Analyse, daß die neue Struktur geringere Komplexität besitzt. Weiters läßt sich argumentieren, daß dort, wo die inchoative Kopula *werden* + Partizip Präsens im Präteritum auftritt, diese Reanalyse nicht durchgeführt wurde, da der Verlust der Inchoativität eine semantisch derart markierte Tempusform generiert hätte, daß sie – einer wie es scheint universalgrammatischen Tendenz folgend – nicht grammatikalisiert wurde. Im Gegensatz dazu durchläuft *würde* + Partizip Präsens/Infinitiv den gleichen Reanalyse- und Grammatikalisierungsprozeß wie *wird* + Partizip Präsens/Infinitiv.

Anita Schenner**HAUSA ABLAUTPLURALE***

Die Bildung nominaler Plurale im Hausa, wie in den meisten tschadischen Sprachen,¹ ist sehr komplex. Neben einer großen Zahl von Pluralformativen entsprechen häufig einer Singularform mehrere Pluralformen, ohne dass zwischen diesen – zumindest synchronisch – ein semantischer Unterschied besteht.

Die Bestimmung der ausschlaggebenden phonologischen Form des Singulars für die Wahl der jeweiligen Pluralform hat sich als äußerst schwierig erwiesen, da das Zusammenwirken mehrerer Faktoren für die Pluralwahl entscheidend zu sein scheint. Es gab verschiedene, mehr oder weniger erfolgreiche Versuche, in verschiedenen theoretischen Rahmen diese Faktoren zu bestimmen.²

Eine Gruppe der Hausaplurale, die der ‚Ablautplurale‘ oder ‚Polaren Plurale‘, scheint durch verschiedene, vokalische Suffixe, kombiniert mit einem distinktiven Tonmuster, gebildet zu werden. Die Wahl des jeweiligen vokalischen Suffixes gilt als weitestgehend unvorhersagbar. Es soll hier gezeigt werden, dass es sich bei diesen Formen nicht um einfache Suffigierung handelt, sondern dass Ablaut/Apophonie – im Sinne von Guerssel & Lowenstamm (1993) – an der Derivation der Pluralformen beteiligt ist. Mit dieser Annahme ist es möglich, die sonst als arbiträr angesehene Vokalisierung der Pluralformen vorherzusagen.

Den theoretischen Rahmen stellt die autosegmentale Rektionsphonologie³. In Abschnitt 1 wird das hier verwendete Ablautkonzept vorgestellt, in den folgenden Abschnitten werden Vorüberlegungen in bezug auf die Silbenstrukturen des Hausa im Rahmen der strikten CV-Hypothese (Lowenstamm [1996], Abschnitt 2), und auf das Hausa

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¹ Vgl. Newman (1990b).

² Vgl. z.Bsp. Newman (1972), Leben (1977a, c), Borowsky (1995), Parsons (1975), Pilszczikowa-Chodak (1979), etc.

³ Vgl. Kaye, Lowenstamm & Vergnaud (1985, 1989).

