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The comparative cycle in crosslinguistic perspective

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Abstract

This paper traces the diachronic development of comparison constructions crosslinguistically, highlighting a recurrent pattern of change with respect to standard markers: the comparative cycle. Using diachronic corpus data as well as data from descriptive grammars and handbooks, it is demonstrated that comparison particles and other standard markers in many languages undergo a syntactic-semantic distributional shift from marking equality to marking inequality. More specifically, we witness a stepwise and recurrent – i.e. cyclical – shift of standard markers from similatives to equatives and to comparatives. The comparative cycle is compared to other instances of cyclical change and linked to linguistic economy and the markedness hierarchy of comparison constructions.

Keywords: comparative cycle; diachronic typology; similative; equative; comparative.

1. The comparative cycle: Aims and scope of the paper

Diachronic typological investigations may deepen our understanding of principles and regularities of language change by uncovering systematic, recurrent patterns of change that are not limited to a single language but constitute very basic, potentially universal patterns of language change. One noteworthy case in point is the stepwise and recurrent – i.e. cyclical – shift of linguistic expressions in comparison constructions, notably standard markers (e.g. comparison particles) from comparisons of equality/similarity to those of inequality/dissimilarity, more specifically from similatives to equatives and to comparatives that is aptly referred to as the comparative cycle (Jäger 2010; 2018; a terminology taken up e.g. by Reinarz et al. 2016). While previous literature only very occasionally and in passing mentions an

incidental similarity of two languages in this respect (cf. Zeilfelder 2001 for Sanskrit and German, Heine & Kuteva 2002 for Chinese and German), this paper systematically traces the comparative cycle in the history of about 20 languages and varieties on the basis of corpus data as well as data from descriptive grammars and handbooks in a diachronic typological perspective. Occasional developments in the opposite direction are also discussed. The comparative cycle is compared to other instances of cyclical change (Jespersen's cycle, subject-agreement cycle etc.) and causes for this development are explored.[1]

After giving an overview of the central types of comparison constructions and introducing the markedness hierarchy of comparisons as well as a typology of standard marker systems in section 2, the crosslinguistic diachronic phenomenon captured in the comparative cycle is investigated in various languages in section 3. Section 4 puts the empirical findings in the language-change theoretical context comparing the comparative cycle to other instances of cyclical language change and discussing a number of potential causes for this change, arguing for an explanation based on linguistic economy and markedness.

2. Comparison constructions – a taxonomy

Semantically, comparison constructions can roughly be characterised as expressing linguistically the equality/similarity or inequality/dissimilarity of two entities generally referred to as comparee and standard. This (dis-)similarity may or may not relate to degrees of a specific gradable property, the so-called *tertium comparationis* or parameter. The best-researched type of comparisons is the one in which dissimilarity between two entities in relation to degrees of a specific property is expressed, the comparative construction or simply comparative, as illustrated with English in (1)(a). Comparatives have been at the centre of attention of linguistic research because cross-linguistically they show the most grammaticalized and most specific markers. In English and many other languages, it is only in this type of comparison construction that the adjective or adverb that constitutes the parameter (*faster* in (1)(a)) may bear a specific inflectional suffix marking the comparison while there is no equivalent inflectional suffix marking the parameter in other types of comparison.[2] In other

[1] This paper builds on and extends parts of ch. 7 of Jäger (2018), making the results available to an English-speaking audience.

[2] Similarly, a language using comparison case may also only show case-marking on the standard in comparatives and not in other comparisons.

words, comparatives are the most marked type of comparisons. This can be expressed by using the two rough semantic features dissimilarity and degree for specifically relating to degrees of a gradable property. Comparatives can be characterized by [+ dissimilarity] and [+ degree].[3]

(1) a. *Anne walks faster than Mary.* comparative
b. *Anne walks as fast as Mary.* equative
c. *Anne walks like Mary.* similative

Somewhat less marked are comparisons expressing similarity in relation to degrees of a gradable property, i.e. ones that can be characterized by [- dissimilarity] and [+ degree], as illustrated in (1)(b). I will follow the usual terminology employed in the typological literature here and refer to this type of comparison as equatives.[4] While in English, the adjective/adverb constituting the parameter is never marked for this type of comparison by an inflectional suffix, note that it is marked in a less grammaticalized way by the free morpheme *as* in front, a type of expression that I will refer to as the correlate in the following (in the literature it is also referred to as the parameter marker).[5]

The least marked type of comparisons, illustrated in (1)(c), are those referring to similarity, i.e. [- dissimilarity], in a way that is not specifically restricted to degrees of a property, thus [- degree], but holds in a more unspecific way that may include a complex number of gradable or ungradable properties, referring for instance to what one might call manner.[6] In this type of comparison, there is accordingly typically no linguistic expression representing a parameter.[7] In line with the usual typological

[3] For a more detailed discussion of the markedness relations (incl. dissimilarity being marked as opposed to similarity) see sect. 4.3 below.

[4] Alternatively, one may call them degree equatives, using equatives as a cover term for all comparisons characterized by [- dissimilarity], cf. Jäger (2018; 2019); Hohaus (2015); see also Thurmair (2001: "Gradvergleiche" 'degree comparisons').

[5] Parameter marking by a free morpheme also occurs with certain adjectives/adverbs in comparatives in English in the form of *more* in front of the parameter. Note, however, that the most grammaticalized form, an inflectional suffix, only ever appears in comparatives in English.

[6] Note, however, that it is not limited to manner. Thus even the mere truth/validity of two propositions may be stated to be similar/the same, consider for example *Peter is a farmer like/as his father was* - a use that comes very close semantically to mere coordination, which is why there is a well-established crosslinguistic grammaticalization path from standard markers to coordinating conjunctions.

[7] If a parameter is expressed, one is not referring to specific degrees of this property. For instance in comparisons such as *He is tall like a bear* (sometimes misleadingly referred to as 'generic equatives') one does not refer to specific degrees of height in terms of concrete measure (in contrast to *as tall as*)

terminology (e.g. Haspelmath & Buchholz 1998), I will refer to these comparisons as similatives.[8] These comparisons, being the least-marked type and therefore also displaying the least specific linguistic markers crosslinguistically, have attracted the least attention by linguists so far. Yet, they play a central role in language change as will become evident below. The features of the three main types of comparison distinguished here and the resulting markedness hierarchy are summarized in (2).[9]

(2) Markedness hierarchy of comparison constructions:

similatives	<	equatives	<	comparatives
[- dissimilarity, - degree]		[- dissimilarity, + degree]		[+dissimilarity, +degree]

Note that in the English examples in (1), a different standard marker (in English a comparison particle, in other languages possibly also a case marker or equivalent functional preposition)[10] is used for each of the three types of comparison, viz. *than,*

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but to being tall in the way that bears are tall compared to salient other animals for instance. Note that *He is tall like a bear* may also formally be identified as a similative rather than an equative by virtue of the availability of the standard marker *like* in English (or *comme* in French etc.) which is ungrammatical in equatives, cf. **as tall like*.

[8] Heine & Kuteva (2002) use the term simile. Alternatively, one may call them non-degree equatives (cf. Jäger 2018, 2019) or property equatives (cf. Hohaus 2015) contrasting with degree equatives. Other terms used in the literature include 'pure comparisons' (Zifonun et al. 1997: “reine Vergleiche”), 'open comparisons' (Thurmair 2001: “offene Vergleiche”, with subtypes: “Modalvergleiche”/modal comparisons and “Faktizitätsvergleiche”/facticity comparisons) or 'similarity comparatives' (Alrenga 2007).

[9] Note that a factorial typology of the two features predicts a fourth type of comparisons whose degree of markedness would also lie inbetween that of comparatives and similatives as defined here, viz. comparisons characterized by [+ dissimilarity] and [- degree]. To my knowledge, this fourth type (which could be termed non-degree comparatives) has not been explicitly distinguished or addressed in the literature on comparisons. Comparisons including expressions meaning ‘different(ly)’ or ‘(an)other’ constitute such cases, as they express dissimilarity without restricting it to specific degrees of a gradable property, but also referring for instance more generally to manner etc. (thus for instance German *Anna läuft anders als Maria* ‘Anne walks differently from/in another way than Mary’ is in fact the also [- degree], but comparative, i.e. [+ dissimilarity] equivalent of *Anna läuft so wie Maria* ‘Anne walks like Mary’), see also Jäger (2018: 35, fn. 35; 368, fn. 330). In this paper, however, I will concentrate on the three types similatives, equatives and comparatives, leaving a more detailed discussion of this fourth type of comparison (‘non-degree comparatives’) to future research.

[10] The main types of comparative constructions in the languages of the world (cf. Stassen 1985, 2005) include languages with (i) a comparative particle, (ii) a verbal comparative construction ('exceed‘ construction), (iii) a ‘conjunctive comparative construction‘ (coordination of two clauses) or (iv)

as and *like*, respectively.[11] As stated in Table 1, crosslinguistically, but also over the course of the diachronic development of one language, this may differ according to whether both features, [± dissimilarity] and [± degree] are expressed, or just one, leaving the other feature underspecified, as in the case of Spanish, which only expresses [± dissimilarity] by different standard markers using *como* in similatives and equatives but *que* in comparatives (type IIa in Table 1), or French, which only expresses [± degree] using *que* in comparatives and equatives but *comme* in similatives (type IIb in Table 1, see also sect. 3.7 on Romance languages). Some languages even use one uniform standard marker in all three types of comparison, leaving both features unexpressed by the standard marker. This is the case in Hungarian, which uses the comparison particle *mint* in similatives, equatives and comparatives alike (type I in Table 1, see also sect. 3.9 on Hungarian).

<table>
<tr><td rowspan="3">Language type</td><td>similatives</td><td>equatives</td><td>comparatives</td></tr>
<tr><td colspan="2">[- dissimilarity]</td><td>[+ dissimilarity]</td></tr>
<tr><td>[- degree]</td><td colspan="2">[+ degree]</td></tr>
<tr><td>Type I:
1 standard marker,
e.g. Hungarian</td><td colspan="3">mint</td></tr>
<tr><td>Type IIa:
2 standard markers,
e.g. Spanish</td><td colspan="2">como</td><td>que</td></tr>
<tr><td>Type IIb:
2 standard markers,
e.g. French</td><td>comme</td><td colspan="2">que</td></tr>
<tr><td>Type III:
3 standard markers,
e.g. English</td><td>like (/ as)</td><td>as</td><td>than</td></tr>
</table>

Table 1: Typology of standard marker systems.

comparative case of the standard (or case-equivalent functional preposition) with separative, allative or locative semantics.

[11] In similatives, *as* is also used, especially with clausal standards, in which *like* is not acceptable in the standard language but is also used in colloquial English.

The hierarchy given in (2) is also reflected in the diachronic development of comparisons in various languages as discussed in section 3, and will accordingly also play a role in explaining the changes observed crosslinguistically and captured in the comparative cycle in section 4. The selection of languages covered is largely contingent upon the availability of data. It is highly likely that many more examples of the comparative cycle in various languages will become apparent as more diachronic typological data become available. As mentioned above, the discussion in section 3 is partly based on diachronic corpus data and partly on descriptive grammars and other handbooks. For the reasons discussed above, many handbooks do not explicitly treat similatives or clearly differentiate them in their discussion of comparison constructions. Thus, in many cases we can only demonstrate that the development in the respective language follows the direction of the comparative cycle from comparisons of equality/similarity to those of inequality/dissimilarity, notably from equatives to comparatives leaving a detailed investigation of the individual steps of the development including similatives to future research. However, where there is sufficient information on all three types of comparison we can trace in detail the individual steps of the comparative cycle, which concur with the markedness hierarchy of comparison constructions.

3. The comparative cycle crosslinguistically

3.1. Germanic languages

3.1.1. German

One language in which the comparative cycle may be observed very clearly and even with several rounds of the cycle during the attested history of the language is German, cf. Jäger (2018). The stepwise syntactic-semantic shift of markers of comparison - in German as in many other languages the standard marker (comparison particle) - from similatives to equatives to comparatives that constitutes the comparative cycle, first occurred with the comparison particle *also/als*. While in classical Old High German (OHG), *thanne* ‘than’ constitutes the most common standard marker in comparatives, cf. (3), and *so* ‘as/like’ both in similatives and equatives, cf. (4) and (5), a strengthened form of the latter, *also*, cf. (6), built by univerbation with the originally adverbial

element *al* ‘all, fully’, starts to occur in similatives in (Late) OHG.[12] In similatives, no adjective/adverb expressing the parameter occurs between the superordinate clause originally containing the adverbial *al* on the one hand and the standard marker *so* on the other hand. Accordingly, similatives but not equatives constitute a possible bridging context for the relevant univerbation and grammaticalization of new standard markers formed according to this pattern. Univerbation of the comparison particle with a frequently adjacent expression in the preceding clause constitutes a crosslinguistically common grammaticalization path for new standard markers and occurs with different types of expressions that precede the original standard marker.[13]

(3) OHG (Tatian 70, 17)

Eno	*ni*	*birut*	*ir*	*furirun*	***thanne***
Q	NEG	be:PRS;2PL	you:NOM;PL	far:CPD;NOM;PL	than
sie		*sín*			
they: NOM		be:SBJV;PRS;3PL			

‘Aren’t you worth more than they are?’

[12] Throughout the paper, comparison particles in the examples are glossed with the semantically corresponding particle in the metalanguage English for the respective type of comparison, even if the same particle is used for several types of comparison in the object language. Thus the same lexical item, e.g. French *que* etc., is glossed for instance as ‘than’ in a comparative, but as ‘as’ in an equative.

[13] Grammaticalization of new comparison particles by ‘strengthening’ (reanalysis of matrix-clause internal elements and adjacent comparison particle as a new comparison particle) frequently takes place with the following kinds of elements (cf. Jäger 2018: 370f.):

(i) correlate (parameter marker): e.g. OHG *soso*, ENHG/NHG *als wie,* Latin *sicut*, *tamquam*, Gothic *svasve*, Old English *swa swa*, Middle English *so as*, Swedish *såsom*, Dutch *zoals*, French *ainsi comme/ainsi que, autant que*, Jiddish *azoy vi*, Romani *kade sar*

(ii) item with identity semantics (‘same’, 'equal' etc.): e.g. OHG (*so*) *selb so*, *sama so* > MHG *same/*(*al*)*sam*, ENHG *gleichwie,* Dutch *gelijk*, English *like*, Norwegian *like*, Swedish *lika*, *som*, Danish *lige så, som*, Icelandic *eins og*

(iii) intensifier (‘fully’, ’completely’, ‘exactly’ etc.): e.g. OHG/MHG *also* > *als*, Dutch *als*, Old English *eallswā* > *as*, Provencal *tot aissi/atressi*

(iv) noun (possibly within PP; ‘(in) the way/manner/look/degree’ etc.): e.g. ENHG *inmassen*, *gestalt*, (*ce*)*gleicherweis*, Italian/French/Spanish/Portuguese/Romanian *com*(*o*)*/com*(*m*)*e/cum* < Latin *quomodo* (< *quo modo* ‘in which way’), Irish *cosúil* (< *chomh/comh* ‘as’ + *samhail* ‘picture/appearance’).

(4) OHG (Tatian 40, 3)

inti	*gibit*	*imo*	*só*	*manag*	***so***	*her*	*bitharf.*
and	give:PRS;3SG	he:DAT	as	much	as	he:NOM	need:PRS;3SG

'and gives him as much as he needs'

(5) OHG (Tatian 44, 16)

thaz	*só*	*sí*	***só***	*sín*	*meistar*
that	so	be:SBJV;PRS;3SG	as	his:NOM	master:NOM

'that he is like his master'

(6) OHG (Notker Ps. 35, 7)

Din	*reht*	*trûhten*	*ist*	***also***	*bérga.*
your:NOM	justice:NOM	Lord:NOM	be:PRS;3SG	as	mountain:NOM;PL

'Your justice, Lord, is like the mountains.'

In Middle High German (MHG) *also* (> *alse* > *als*) constitutes the main pattern already in similatives, as in (7), while *so* continues to be the main pattern in equatives, such as (8), and *dann*(*e*) (< *thanne*) in comparatives, cf. (9). However, during this period, *also* already starts to occur occasionally in equatives, cf. (10), and very exceptionally even in comparatives, cf. (11).

(7) MHG (TrHL 10r,21f.)

diu	*tvost*	*uns*	***alse***	*diu*	*uil*	*gvote*
you	do:PRS;2SG	we:DAT	like	the:NOM;F	very	good:NOM;F

muotir.
mother:NOM
'You do unto us like the very good mother.'

(8) MHG (Phys 151r, 18f.)

unt	*izzit*	*danne*	*so*	*lange*	***so***	*got*	*wil*
and	eat:PRS;3SG	then	as	long	as	God:NOM	want:PRS;3SG

'and then eats as long as God wants'

(9) MHG (Phys 133r, 4-6)

Trehtin,	*diniu*	*wort*	*diu*	*sint*
Lord	your: NOM;PL	word:NOM;PL	they:NOM;PL	be:PRS;3PL

suozzere		*in*	*minem*	*munde.*	***danne*** *daz*		*honich*
sweet:CPD;NOM;PL		in	my:DAT;M	mouth:DAT	than	the:NOM;N	honey:NOM
unt	*der*		*flade*				
and	the:NOM;M		cake:NOM				

'Lord, your words, they are sweeter in my mouth than honey and cake'

(10) MHG (Lil 8, 15-16)

Disen		*zuiuel*	*muzen*	*wir*	*hauen.*	*alse*
this:ACC;M		doubt:ACC	must:PRS;1PL	we:NOM	have:INF	as
lange	***alse***	*de*	*sumer*	*dis*	*leuenes*	
long	as	the:NOM	summer:NOM	this:GEN	life:GEN	
weret.						
last:PRS;3SG						

'This doubt we must have as long as the summer of this life lasts.'

(11) MHG (SalH 097, 05-08)

daz	*dv*	*nie*	*von*	*dinge*	*in-wordes*	*svzer*
that	you:NOM	never	by	thing:DAT	NEG-AUX:PST;2SG	sweet:CPD
geminit.	***alse***	*von*	*gode.*			
love:PTCP	than	by	God:DAT			

'…that you were never loved more dearly by anything than by God.'

During 15th century Early New High German (ENHG), *als* becomes the main standard marker in equatives, too. In the 16th century, also its use in comparatives, as in (13), increases, which, however, still show *dann/denn* as the main standard marker employed, as illustrated in (12). Only since 17th century New High German (NHG) does *als* also constitute the main pattern in comparatives, superseding *dann/denn*.

(12) ENHG (JBang 17r, 5f.)

Da	*nun*	*die*	*Sachssen*	*sahen/*	*das*	*der*	
since	now	the: NOM;PL	Saxon:NOM;PL	see:PST;3PL	that	the:GEN;PL	
Thueringer		*Acker*	*besser*	*war*	***dann***	*jhrer*	
Thuringian:GEN;PL		field:NOM	good:CPD	be:PST;3SG	than	theirs:NOM;M	

'Since the Saxons now saw that the field of the Thuringians was better than theirs'

(13) ENHG (JMath 44r, 22-24)

Denn	*er*	*ist*	*grewlicher*	*vnd*	*heßlicher/*	***als***	*jrgend*
because	he:NOM	be:PRS;3SG.	ghastly:CPD	and	ugly:CPD	than	any
der	*aller*	*geringsten*	*oder*	*ergsten*			*vnd*
the:GEN;PL	very	low:SPD;GEN;PL	or	wicked:SPD,GEN;PL			and
Gottlosesten	*einer*	*zugerichtet.*					
ungodly:SPD;GEN;PL	one:NOM;SG;M	injure:PTCP					

'because he is injured in a ghastlier and uglier way than any of the lowest, most wicked and ungodly ones'

The same kind of shift as observed for *als*(*o*) also occurs with the standard marker *wie*: this comparison particle, which was grammaticalized from the interrogative/relative adverb 'how', is first very occasionally used in similatives in MHG, cf. (14), in which *also* constitutes the main pattern, as discussed above. In similatives, such as (15), *wie* becomes the main pattern superceding *als*(*o*) in 16th century ENHG, during which period it also starts to occur in equatives, such as (16), for the first time, which however most frequently still contain *als* at that time, as described above. During 17th century ENHG, the first attestations of *wie* in comparatives occur as illustrated in (17). In equatives, *wie* becomes the main pattern only in 19th century NHG and since that time is also increasingly used in comparatives, in which it represents the main pattern in most present-day High German dialects, as illustrated in (18), whereas the standard language has preserved *als*.

(14) MHG (Walter 48, 7 (after Paul 2007))

swie	*si*	*sint,*	*sô*	*wil*	*ich*	*sîn*
how/as	they:NOM	be:PRS;3PL	so	want:PRS;1SG	I:NOM	be:INF

'However/as they are, so do I want do be'

(15) ENHG (WRal 2, 7f)

es	*zergehet*	*vnd*	*schmeltzet*	*nicht*	*von*	*der*	
it:NOM	dissolve:PRS;3SG	and	melt:PRS;3SG	NEG	by	the:DAT	
Sonnen/	***wie***	*das*	*Hartz*	*vnd*	*Pech*	*auß*	
sun:DAT	like	the:NOM;N	resin:NOM	and	pitch:NOM	from	

Norwegen
Norway
'It does not dissolve and melt from the sun like the resin and pitch from Norway'

(16) ENHG (JMath 51v, 16-20)

Darumb	*sie*	*auch*	*also*	*schmehlich*	*vnd*	*Gotteslesterlich/*
therefore	they:NOM	also	as	disgracefully	and	blasphemously
wie	*die*	*Mahometisten*		*vom*	*Abendmal*	*des*
as	the:NOM;PL	muslim:NOM;PL		of.the:DAT	supper:DAT	the:GEN
HERRN	[…]	*gedencken*		*vnd*	*reden.*	
Lord:GEN		think:PRS;3PL		and	talk:PRS;3PL	

'Therefore, they think and talk as disgracefully and blasphemously as the muslims about the Lord's supper'

(17) ENHG (H.U. Krafft, Reisen 248, Lit. Verein (after DWB 29: 1483f.))

mer	*daran*	*verbrechen*	***wie***	*gutt*	*machen*
much:CPD.	there.at	break:INF	than	good	make:INF

'destroy it rather than making amends'

(18) NHG (Central Hessian dialect (after Jäger 2018: 316))

Dr	*Thomas*	*ess*	*grieser*	***wej***	*sei*
the:NOM;M	Thomas:NOM	be:PRS;3SG	tall:CPD	than	his:NOM
Brourer.					
brother:NOM					

'Thomas is taller than his brother.'

The development in German can be summarized as given in Table 2,[14] highlighting the repeated stepwise shift of standard markers from comparisons of

[14] The same development as in High German, yet at a much slower pace, can also be observed in Low German, cf. Jäger & Walkden (2021: 316). The original comparative particle *than* represents the main pattern in Old and Middle Low German and is perserved in some Low German dialects in the form of *denn* even today. On the other hand, the standard marker *also*, which – as in OHG - first occurred in similatives in Old Low German became the main comparison particle used in equatives in Middle Low German. In most Low German varieties it has subsequently also become the main particle used in comparatives so that a uniform comparison particle *as* (< *also*) in all types of comparison is typical of most Modern Low German dialects. Only recently, *wie* and its Low German equivalent *wu/wo* ('how')

equality/similarity to those of inequality/dissimilarity, more specifically from similatives to equatives to comparatives that is typical of the comparative cycle.[15] While German represents a very clear instance of the comparative cycle, evidence for the same kind of change can be found in many related and unrelated languages.

	similative	equative	comparative
	[- dissimilarity]		[+ dissimilarity]
	[- degree]	[+ degree]	
OHG	*so*		*danne*
MHG	*also*	*so*	*dann/denn*
ENHG 15th cent.	*als*		*denn*
ENHG 16th cent.	*wie*	*als*	*denn*
NHG 17/18th cent.	*wie*	*als*	
NHG 19th cent., Mod. Standard	*wie*		*als*
Dialects/Colloquial German	*wie*		

Table 2: The comparative cycle in German (after Jäger 2018: 364).

3.1.2. English

The diachronic development of comparison particles in English shows several parallels to that in German although, with *as* in equatives and partly in similatives and *than* in comparatives in present-day English, the language has, on the whole, preserved a pattern corresponding to that observed for MHG and 15th century ENHG. While in Old English similatives and equatives the standard marker *swa*, cognate of OHG *so*, was prevalent as in OHG, cf. (19), in Late Old English in the same way as in Late OHG a new strengthened standard marker arose in similatives from univerbation

are used in similatives and equatives, occasionally even already in comparatives in some Low German dialects, again repeating the shift observed for *also/as*.

[15] Another comparison particle that never constituted the main pattern, however, in historical German and therefore is not included in Table 2, but also survives in some present-day dialects is *als wie*. It was grammaticalized on the basis of the correlate (parameter marker) *als* and the frequently adjacent comparison particle *wie* (= pattern (i) in fn. 13) and first occurs in similatives in the 17th century. It is then extended to equatives and since the 18th century also occurs in comparatives, cf. Jäger (2018: 255-259). (In contrast to the statement by Dückert (1961: 216) *als wie* does not constitute an intermediate stage in the development from *als* to *wie*, but only occurs after *wie* has been firmly established as a comparison particle.) Accordingly, there is in fact evidence for three rounds of the comparative cycle in the history of German – with *als*(*o*), *wie* and *als wie*.

with an item meaning ‘all, fully’, viz. *eall swa* > *alswa/ also/alse/as* (CHEL II: 357; Jäger & Walkden 2021: 317-322), cf. (20). Since then, this comparison particle has mostly been restricted to comparisons of equality, while *þonne* > *than* has been the prevalent standard marker in comparatives since Old English (Jäger & Walkden 2021: 325-327), cf. (21), for Modern Standard English see also (1) above.

(19) Old English (cobede,Bede_3:16.226.26.2325 (after Jäger & Walkden 2021: 322))

swa	*swiðe*	***swa***	*þa*	*neowan*	*Cristnan*
as	much	as	the:NOM;PL	new:NOM;PL	Christian:NOM;PL
þa	*get*	*hit*	*neoman*	*meahton*	
then	yet	it:ACC	take:INF	may:PST;PL	

‘as much as the new Christians were capable of it’

(20) Old English (cowulf,WHom_3:7.52 (after Jäger & Walkden 2021: 318))

And	*witodlice*	***ealswa***	*flod*	*com*	*hwilum*	*ær*
and	truly	as	flood:NOM	come:PST;3SG	at.time	before
for	*synnum,*	*swa*	*cymð*	*eac*	*for*	*synnum*	*fyr*
for	sin:DAT;PL	so	come:PRS;3SG	also	for	sin:DAT;PL	fire:NOM

‘And truly, just as the flood came before (to punish us) for our sins, now the fire is coming (to punish us) for our sins.’

(21) Old English (cobeowul,16.465.391 (after Jäger & Walkden 2021: 326))

se	*wæs*	*betera*	***ðonne***	*ic*
this:NOM	be:PST;3SG	good:CPD	than	I:NOM

‘He was better than me’

Despite of this basic continuity, there has also been some change concerning standard markers in English comparisons. On the basis of strengthening with a regularly adjacent expression meaning ‘same’, viz. *gelice* > *like*, another common grammaticalization path for new standard markers arising in similatives (cf. (ii) in fn.13), the standard marker Old English *gelice swa* (Jäger & Walkden 2021: 319f.), Middle English *lyk as / like as* (CHEL II. 358), arose as illustrated in (22) and (23). It became more frequent during the 15th and 16th century. Eventually, the second part of this combination began to be dropped giving way to simple *like* in similatives since the early 16th century (CHEL III: 316), see (24). Note that this standard marker, which

originated in similatives, is still restricted to this type of comparison today, in which *as*, however, also still occurs.

(22) Old English (coverhom,HomS_40.3 (after Jäger & Walkden 2021: 320))

Emne	*hit*	*bið*	***gelice swa***	*man*	*mid*	*wætere,*
even	it:NOM	be:PRS;3SG	same as	man:NOM	with	water:DAT
þone	*weallendan*		*wylm*	*agiote*		
the:ACC	surging:ACC		flame:ACC	quench:PRS;SBJV;SG		

'It is just like putting out a surging flame with water'

(23) Middle English ([HC] Vicary 69 (after CHEL III: 316))

the	*lyuer* […]	*should*	*be*	*plycable*	*to*	*the*	*stomacke,*
the	liver	should	be:INF	pliant	to	the	stomach
like		***as*** *a*	*hande*	*dothe*	*to*	*an*	*apple*
like/same		as a	hand	do:PRS;3SG	to	an	apple

'The liver should be pliant to the stomach like a hand is to an apple'

(24) Middle English (1530 Berners Arth. Lyt. Bryt. 520 (after CHEL III: 316))

Ye	*have*	*said*	***lyke***	*a*	*noble*	*lady*	*ought*	*to*	*say*
you	have:PRS;2SG	say:PTCP	like	a	noble	lady	ought	to	say:INF

'You have spoken as a noble lady should speak'

Besides this rise of a new standard marker in similatives, there is crucially also evidence for a distributional shift in line with the comparative cycle in diachronic and dialectal English data. According to Small (1924: 43), since early Middle English up to Modern dialectal varieties, *as* has repeatedly 'threatened' to take over the function of a comparative particle. This is of course reminiscent of the development of *als* in German. The Historical Thesaurus of English (s.v. as)[16] states that *as* was used as a standard marker in comparatives in English from the mid 15th to the mid 17th century, and in archaic use even until the beginning of the 19th century. The OED (s.v. as, B.I.5)[17] lists examples for *as* in comparatives from 1300 up to the 20th century, cf. (25) and (26).[18]

[16] http://historicalthesaurus.arts.gla.ac.uk/category-selection/?qsearch=as.

[17] http://www.oed.com/view/Entry/11307?rskey=jq3qkq&result=6&isAdvanced=false#eid.

[18] Most of these contain a negation. On negated comparisons as potential bridging contexts see section 4.3.

(25) Middle English (c 1300 St. Edward Elder (Laud) l. 38 (after OED s.v. as))

Fellere	*þing*	*n-is*	*non*	***ase***	*wumman*	*ȝware*
wicked:CPD	thing	NEG-be:PRS;3SG	none	than	woman	when
heo	*wole*	*to*	*vuele*	*wende.*		
she:NOM	will:SBJV;PRS;3SG	to	evil	turn:INF		

'There is nothing more wicked than a woman if she turns to evil'

(26) Middle English (a 1425 J. Lelamour tr. Macer Herbal f. 67v (after OED s.v. as))

Also	*this*	*erbe*	*haviþ*	*mo*	*vertues*	***as***	*endyue*
also	this	herb	have:PRS;3SG	many:CPD	virtue:PL	than	endive
haþe.							
have:PRS;3SG							

'Also, this herb has more virtues than endive has.'

(27) Scottish English (Brian Holton: The Mossflow)

A	*wad-na*	*think*	*you*	*'d*	*be*	*onie*	*better*
I	would-NEG	think:INF	you	would	be:INF	any	good:CPD
as	*them!*						
than	they						

'I wouldn't think you were any better than them.'

While this use of *as* in comparatives has never become the prevalent pattern in English, it is preserved in regional varieties such as Scottish English, cf. (27), Irish English, Yorkshire English and certain American-English varieties (Small 1929: 22; OED s.v. as, B.I.5).[19]

3.1.3. Dutch

In Dutch, a distributional shift of standard markers (comparison particles) according to the comparative cycle can also be observed. Like OHG and Old English, Old Dutch (Old Low Franconian) mostly used *than* in comparatives and *so* in similatives and equatives, in which, occasionally the strengthened form *also* occurs instead (cf. Jäger & Walkden 2021: 300-311, 316). Phonologically reduced to *als*, it became the main particle used in similatives and equatives in Middle Dutch, while in comparatives the

[19] http://www.oed.com/view/Entry/11307?rskey=jq3qkq&result=6&isAdvanced=false#eid.

typical comparison particle was still *dan* (cf. Postma 2006: 3). During the 14th and 15th century, however, *als* begins to appear in comparatives, replacing *dan* since the second half of the 16th century (van der Horst 2008: 728, Postma 2006: 20 with reference to Klooster 2001: 352), cf. (28). As a result, *als* was widely used as a uniform comparison particle in equatives and comparatives in Dutch during the second half of the 16th and especially the 17th century.

(28) Dutch (early 17th c., Bredero (after van der Horst 2008: 1272))

Een	*Vrouw*	*brenght*	*meer*	*te*	*weegh,*	***als***	*dysent*
one	woman	bring:PRS;3SG	more	to	way	than	thousand
mannen	*souwen*						
man:PL	would:3PL						

'One woman achieves more than a thousand men.'

However, since the 18th century, this change was partly turned back – according to van der Horst (2008: 1442) and Hubers & de Hoop (2013: 90) due to normative pressure by prescriptive grammarians demanding the use of *dan* in comparatives (e.g. Balthazar Huydecoper at the beginning of the 18th century). As a consequence, *dan* is used in comparatives in Standard Dutch until today, whereas *als* is generally used in comparisons expressing similarity, both similatives and equatives. According to SAND (2005: 13), *dan* is the only acceptable comparison particle in Standard Dutch comparatives; according to ANS,[20] however, *als* is acceptable instead of *dan* in the spoken standard language, too, but in the written language, *dan* is mostly used. In fact, as this paper is written, over 20 years after the latest edition, a new, revised edition of ANS is being prepared in which *als* is now treated as equally acceptable in Standard Dutch comparatives.[21] For many native speakers, however, *als* is generally not acceptable in comparatives and *dan* represents a kind of shibboleth for good Dutch. Hubers & de Hoop's (2013) investigation of the corpus of spoken Dutch shows that in comparatives indeed mostly *dan* is used. However, in the southern Netherlands (Limburg, Noord-Brabant, Zeeland) *als* appears almost as often as *dan* in comparatives. Besides, sociolinguistic factors play a role insofar as speakers with a lower educational background use *als* slightly more often than *dan* in comparatives, while those with a higher educational background almost only use *dan*. Hubers & de

[20] http://ans.ruhosting.nl/e-ans/index.html

[21] Cf. https://taalunie.org/actueel/120/hoe-de-e-ans-grondig-wordt-herwerkt-en-verbeterd

Hoop conclude that the dominance of *dan* in comparatives is due to normative pressure against *als* taught at school and that, without this pressure, *als* would be the usual comparative particle in Dutch today. This impression is corroborated by dialectal research: according to SAND (2005: 13, map 15b) the historically widespread use of *als* in comparatives is preserved in Dutch dialects until today, in fact, *als/as* constitutes the main pattern in dialectal comparatives in the entire Dutch-speaking area except for West and East Flanders.

In Belgian Standard Dutch (BSD), which is used in the Belgian Media and formal situations, the comparison particle used in similatives is *zoals*, a particle formed by univerbation of the correlate *zo*, originally part of the superordinate clause, and the adjacent comparison particle *als* (= (i) in fn. 13). Due to this rise of a new comparison particle in similatives, Belgian Standard Dutch has developed a system with three comparison particles for the three types of comparisons: *zoals* in similatives, cf. (31)(b), *als* in equatives, cf. (30)(a), and *dan* in comparatives, cf. (29)(a) (= type III in Table 1; compare also MHG *also – so – dann*). In most Flemish dialects, as in most Dutch dialects in general, *als/as* has, however, replaced *dan* in comparatives so that *als/as* is uniformly used in comparatives and equatives while *zoals* (*zoas, zuas* etc.) or another more recent comparison particle, viz. (*ge*)*lijk/gelak*, appears in similatives, for instance in the dialect of the city of Antwerp, cf. (29)(b), (30)(b) and (31)(c). The comparison particle (*ge*)*lijk/gelak* was presumably grammaticalized in similatives in the same way as English *like* (= (ii) in fn. 13, see also sect. 3.1.2). In certain varieties in the region of Antwerp, it even occurs in comparatives, cf. (32).

(29) Dutch

a. *Mijn kat is een beetje kleiner* ***dan*** *je hondje.* (Stand. Dutch, BSD)

b. *Mijn kaet is een bekke klender* ***as*** *awen ond.* (Antwerp Dutch)

my cat be:PRS;3SG a bit small:CPD than your dog

'My cat is a little smaller than your dog.'

(30) Dutch

a. *Koen is even (/ zo) oud* ***als*** *Antje.* (Standard Dutch, BSD)

b. *De Koen is even / zoe oud* ***as*** *Antje.* (Antwerp Dutch)

the Koen be:PRS;3SG equally as old as Antje

'Koen is as old as Antje.'

(31) Dutch

a.	*Zij*	*zingt*	***als***	*Kylie Minogue.*	(Standard Dutch)
b.	*Zij*	*zingt*	***zoals***	*Kylie Minogue.*	(BSD)
c.	*Zij*	*zingt*	***zuas/gelak***	*Kylie Minogue.*	(Antwerp Dutch)
	she	sing:PRS;3SG	like	Kylie Minogue	

'She sings like Kylie Minogue.'

(32) Sint Lenaarts Dutch (Sint Lenaarts (K209p), DynaSAND)[22]

ze	*gelove*	*da*	*wij*	*rijker*	*zijn*	***lijk***	*zullie*
they	believe:PRS;3PL	that	we	rich:CPD	be:PRS;1PL	than	they

'They believe that we are richer than them.'

In this particular dialect, we can accordingly observe a recurrent change according to the comparative cycle with *als* replacing *dan* and subsequently (*ge*)*lijk* replacing *als* in comparatives, both particles shifting from similatives to equatives to comparatives.

3.2. Sanskrit

Diachronic distributional shifts of standard markers according to the comparative cycle are not limited to Germanic languages, but are also found in many other Indo-European languages. A syntactic-semantic shift of the comparison particle of this kind presumably already occurred from Vedic to Classical Sanskrit. In Vedic, the particle *ná*, which is of the same origin as the negation particle and is assumed to have developed from it (cf. Pinault 1985; Dunkel 2014: 546f.),[23] is used as a similative/equative particle meaning 'as/like', as illustrated in (33). In Classical Sanskrit, however, it appears as a comparative particle meaning 'than', cf. (34). According to Zeilfelder (2001: 99) it is not continuously attested, which is why she rather supposes an independent source, taking a semantic change from an equative particle to a comparative particle to be unlikely. However, she also explicitly indicates a similarity to the 'confusion' of *als* and *wie* in colloquial German. Viti (2002:77) also

[22] http://www.meertens.knaw.nl/sand/

[23] According to Pinault (1985), the Vedic equative particle *ná* is derived from the negation particle *ná* via bridging contexts such as 'Not (as one might think) A, (but) B is speaking' > 'B speaks like A', see also Dunkel (2014: 546f.: "Der Ausgangspunkt liegt in implizierten Negativvergleichen" 'The origin lies in implicit negative comparisons', same origin as negation particle, PIE **ne* 'not').

considers the possibility of classical Sanskrit *ná* in comparatives continuing on from Vedic equative *ná* and again mentions the Non-Standard German use of *wie* in comparatives as a parallel.[24]

(33) Vedic (RV 1.39.10)

íṣum	***ná***	*sṛjata*	*dvíṣam*
arrow:ACC;SG	like	send:PRS;IMP;2PL	hatred:ACC;SG

'Shoot the hatred like an arrow.'

(34) Classical Sanskrit (Pañcatantra 1.417 (after Viti 2002: 79))

paṇḍito	*'pi*	*varaṃ*	*śatrur*
wise:NOM;SG;M	even	better	enemy:NOM,SG

na	*mūrkho*	*hitakārakaḥ*
than	stupid:NOM;SG;M	ally:NOM;SG

'Even a wise enemy is better than a stupid ally.'

3.3. Baltic languages

If on the basis of Vedic *ná*, one posits PIE **né* with the two functions of negative and (secondarily) similative/equative particle, a distributional shift of a standard marker from equative to comparative according to the comparative cycle can also be assumed for Baltic languages: Old Lithuanian as well as Latvian *ne*, which are used as negative particles, also rarely appear in comparatives, as illustrated in (35) and (36), and can be considered to have undergone a development 'not' > 'like' > 'than' (cf. Petit 2021: 123-127).[25] This scenario is supported by the fact that the "Baltic languages show sporadic, but unequivocal traces of purely similative meaning of **ne* 'like'" (Petit 2021: 126), as in (37), which can be traced back to at least the 17th century.

[24] Delbrück (1888: 196) already points out constructions corresponding to Latin *quam* + comparative in the 'popular language' ('Volkssprache') giving a Late Vedic example including *yác ca* 'than' and stating "dass die Erklärung dieser Construction beim Comp. aus der gleichen Construction beim Positiv herzuholen ist, ist wohl klar" ('It is clear that the explanation of this construction with comparatives is to be found in the same construction with the positive').

[25] Petit (2021) also discusses an alternative scenario of 'not' > 'than'.

(35) Latvian (K. Barons & H. Wissendorff, Latwju dainas (19th c., BW I 3320d) (after Petit 2021: 123))

Sche	*meitas*	*wezakas,*	***ne***	*pate*	*mahte.*
here	girls:NOM;PL	old:CPD;NOM	than	self:NOM	mother:NOM

'Here, the girls are older than the mother herself.'

(36) Old Lithuanian (Jacob Brodowski, Lexicon Germanico-Lithvanicum et Lithvanico-Germanicum (18th c., I 153, 9) (after Petit 2021: 121))

Kétures	*Akkis*	*daugiaus*	*máta*	***ne***	*wiena.*
four:NOM	eye:NOM;PL	much:CPD;ADV	see:PRS;3	than	one:NOM

'Four eyes see more than one.'

(37) Old Lithuanian (Jacob Brodowski, Lexicon Germanico-Lithvanicum et Lithvanico-Germanicum (18th c., I 151, 9) (after Petit 2021: 126))

Auga	*waikai*	***ne***	*Girroj'*	*Médźei.*
grow.up:PRS;3	child:NOM;PL	like	forest:LOC	tree:NOM;PL

'Children grow up like trees in a forest.'

There are further comparison particles in the Baltic languages which are formed on the basis of *ne*, consider for instance the Lithuanian similative/equative particle *néi* and comparative particle *neĩ*, which are almost identical, both formed from **né* + particle **ei / *i*, only differentiated by intonation (cf. Vine 1978: 183f., see also Petit 2021: 120f., 127), cf. (38) and (39). This similative/equative particle presumably arose at a time when Lithuanian *né* was not yet a comparative particle but like PIE **né* a negative and a similative/equative particle, in which case we are dealing with another instance of the comparative cycle.

(38) Lithuanian (after LKŽ 8: 622)

Grikojai	*menkesni,*	***nei***	*avižojai.*
buckweat-straw:NOM;PL	smaller:NOM	than	oat-straw:NOM;PL

'Buckweat straw is shorter than oat straw'

(39) Lithuanian (after LKŽ 8: 624)

laukia	***nei***	*gervė*	*giedros.*
wait:PRS;3	like	crane:NOM;SG	good.weather:GEN;SG

'He/she/they is/are waiting for it like a crane for good weather'

Further instances of the comparative cycle are found in the Baltic languages in the case of Lithuanian *kaĩp*, Latvian *kā* and Old Prussian *kai*. All of these were originally "conjunctions of manner derived from the relative stem **ka*- < PIE **k*^{w}*o*-" (Petit 2021: 103) and occur in similatives cf. (40)/(43)/(46) as well as equatives cf. (41)/(44)/(47),[26] which generally do not differ in terms of the standard markers used in the Baltic languages (cf. Petit 2021: 105), but also in comparatives especially after negation, cf. (42)/(45)/(48), since at least the 16th/17th century (for examples of Modern Lithuanian *kaĩp* as a similative, equative and comparative particle see LKŽ 5: 60f.). In fact, Jensen (1934: 124) already explicitly mentions Lithuanian *kaĩp* as a parallel case to German *wie*, Russian *kak* and Romance *que/che* of a comparative particle that was originally only used in similatives/equatives, in other words, that underwent the comparative cycle.

(40) Old Lithuanian (Jacob Brodowski, Lexicon Germanico-Lithvanicum et Lithvanico-Germanicum (18th c., II 723, 39641), (after Petit 2021: 103))
Sauſa Málka ***kaip*** *Kanklys*
dry:NOM wood:NOM like harp:NOM
'wood dry like a harp'

(41) Old Lithuanian (Jacob Brodowski, Lexicon Germanico-Lithvanicum et Lithvanico-Germanicum (18th c., I 115, 9–12) (after Petit 2021: 106))
taip maźas ***kaip*** *Pelle*
as small:NOM as mouse:NOM
'as small as a mouse'

(42) Old Lithuanian (Mikalojus Daukša, Postilla Catholicka (1599: 84, 6) (after Petit 2021: 119))
Teip' wel bażnîczia ne túri níeko pikteſnio
thus again church:NOM NEG have:PRS;3 nothing:GEN bad:CPD;GEN
kaip' *mókſzłą Heŗetíkų.*
than science:ACC heretic:GEN;PL
'Thus also the Church has nothing worse than the science of heretics.'

[26] In (47) *gi* constitutes an emphatic particle that is added to *kāi*.

(43) Old Latvian (Georg Mancel, Phraseologia Lettica (1631: Cap. X 16) (after Petit 2021: 103))

Dſållt̊ans	***ka***	*Waſʒka.*
yellow:NOM	like	wax:NOM

'It is yellow like wax.'

(44) Old Latvian (Enchiridion (1586: G3A 1, 14) (after Petit 2021: 107))

Eſſet	*packlouſʒige* […]	*tha*	*Kunge*	*peetcʒ / Tick*	*lab*
be:IMP;2PL	obedient:NOM;PL	the:GEN	Lord:GEN	behind	as well

tam	*K̊oningam/*	***kha***	*tham*	*Wuerſʒenekam*
the:DAT	king:DAT	as	the:DAT	superior:DAT

'Be obedient behind the Lord as well to the king as to the superior.'

(45) Old Latvian (Georg Elger, Geistliche catholische Geſänge (1621: 46, 8–9) (after Petit 2021: 122))

Nå̊war	*bût*	*ſaldak*	*dômaſʒan /*	***Ka***	*no*	*Jeſu*
NEG.can:PRS;3	be:INF	sweet:CPD;NOM	thought:NOM	than	of	Jesus:GEN

muſe	*dwå̊ſels*	*gan.*
1PL;GEN	soul:GEN	well

'There cannot be any sweeter thought than of Jesus, our soul.'

(46) Old Prussian (Enchiridion (1561: III 49, 6–7) (after Petit 2021: 103))

Swintai	***kai***	*ſtai*	*malnijkai*	*Deiwas*
holy:NOM;PL	like	the:NOM;PL	child:NOM;PL	God:GEN

'holy like God's children'

(47) Old Prussian (Enchiridion (1561: 103, 14-15) (after Petit 2021: 107))

Tītturri	*dijgi*	*ſtai*	*wijrai*	*ſwaians*	*gannans*	*milijt*
so have:PRS;3	also	the:NOM;PL	man:NOM;PL	REFL:ACC;PL	wife:ACC;PL	love:INF

kāi-gi	*swian*	*ſubban*	*kērmenen.*
as-PTCL	REFL:ACC	self:ACC	body:ACC

'Men should also love their wives as much as their own body.'

(48) Old Prussian (Enchiridion (1561 : III 115, 8–9) (after Petit 2021: 118))

ſteimans	*malnijkikamans*	*ni*	*maſſais*	***kai***	*ſtēimans*	*vremmans*
ART:DAT;PL	young:DAT;PL	NEG	less	than	the:DAT;PL	old:DAT;PL

'to the young ones not less than to the old ones'

3.4. Armenian

In Classical Armenian, we also find evidence for a shift of standard markers from equatives to comparatives. According to Zeilfelder (1996: 195f.; 2001: 3) the Classical Armenian comparative case accusative stems from an accusative originally governed by the preposition *i*, which together with an imperative 'compare!' formed the equative particle *ibrew*. Kölligan (2021: 72) suggests instead that *ibrew* is originally formed on the basis of *ibr*, an instrumental of 'thing/which' and a preposition *ew* which the accusative was originally governed by. At any rate, due to the grammaticalization of *ibrew* into an equative particle, the accusative was reanalysed as a case of comparison. This comparison case as a standard marker was then extended from equatives to comparatives.

Besides, there appears to be another case in point in Classical Armenian, viz. the comparison particle *k'an*. This particle is mostly attested in comparatives, cf. (49), but also appears in comparisons of equality/similarity, as in (51), a type of comparison in which otherwise *ibew* and other particles (see Kölligan 2021: 53) are used, cf. (50). Etymologically *k'an* is generally assumed to be related to Latin *quam / quantus* < PIE **kwānt* 'how much', which suggests that it originally expressed equality/similarity so that we are dealing with another distributional shift of a standard marker according to the comparative cycle (see also Kölligan 2021: 71f.).

(49) Classical Armenian (Ps. 18(19).11 (after Kölligan 2021: 60))

c'ankali	*ê*	*na*	***k'an***	*zoski*
desirable	be:PRS;3SG	3SG;NOM	than	ACC.gold

'They (God's commendments) are more precious than gold.'

(50) Classical Armenian (Matt. 28.4, Ms. E (after Kölligan 2021: 55))

ełen	***ibrew***	*zmeŕeals*
become:AOR;3PL	like	ACC.dead:ACC;PL

'They became like dead men.'

(51) Classical Armenian (Matt. 17.19[20] (after Kölligan 2021: 71))

et'ê	*ownic'ik'*	*hawats*	***k'an***	*zhat*	*mananxoy*
if	have:PRS;SBJV;2PL	faith:ACC;PL	as (much as)	ACC.seed	mustard:GEN;SG

'if you have faith like/as small as a mustard seed'

3.5. Greek

Ancient Greek also shows a repeated shift of standard markers according to the comparative cycle. The Ancient Greek comparative particle *é́*, which is used as a standard marker in comparatives (besides comparison case genitive), etymologically derives from **ê̂e* 'or' or **ēé* 'how' (cf. Schwyzer 1950: 565; Zeilfelder 2001: 65). In the latter case, it constitutes a first instance of a comparison particle that shifted from similatives/equatives to comparatives in Greek. Its strengthened form *ēý́te* underwent the same change, being originally used in comparisons of equality/similarity, as in the similative in (52), but occuring in Homer already also as a comparative particle, cf. (53) (see also Schwyzer 1950: 565).[27]

Finally, the same development can be observed for *hōs*, a standard marker that was grammaticalized on the basis of interrogative 'how' like German *wie* and is mainly used in comparisons of equality. According to Zeilfelder (2001: 297-318) *hōs* occurs mostly in similatives as in (54), and only secondarily also in equatives. Already during later stages of Ancient Greek, however, it also starts to be used in comparatives, cf. (55). We thus see the same three steps of the development as in German starting from similatives to equatives to comparatives. The similarity of this change to the development of German *wie* was already explicitly pointed out by Hildebrand (1871: 362, fn. 2) and Lerch (1942: 354). As in German, we witness a repeated shift of standard markers according to the comparative cycle in Ancient Greek.

(52) Ancient Greek (Homer Iliad 2, 872)

hòs	*kaì*	*chrysòn*	*échōn*
who:NOM;SG;M	also	gold:ACC;SG;M	have:PTCP;PRS;NOM;SG;M
pólemónd'	*íen*	***ēý́te***	*koúrē*
battle:ACC;SG;M;ALL	go:PST;3SG	like	girl:NOM;SG;F

'This one came to the battle dressed in gold like a girl.'

(53) Ancient Greek (Homer Iliad 4, 277f.)

tôi	*dé*	*t'*	*áneuthen*	*eónti*
this:DAT;SG;M	PTCL	PTCL	far.away	be:PTCP;PRS;DAT;SG;M
melánteron	***ēý́te***	*píssa*	*phaínet'*	
black:CPD;NOM;SG;N	than	pitch:NOM;SG	appear:IPF;3SG;MID	

'To him [= a goatherd] standing in the distance, it appeared blacker than pitch.'

[27] De Kreij (2021: 357) treats the example given in (53) as an instance of an equative. However, morphologically (comparative form of the adjective) as well as semantically, it is clearly a comparative.

(54) Ancient Greek (Homer Iliad 2, 190)

daimóni'	*oú*	*se*	*éoike*	*kakòn*
by.god.punished.one:VOC;SG	NEG	you:ACC	befit:PRF;3SG	mean.one:ACC;SG;M
hồs	*deidíssesthai*			
like	be.afraid:INF			

'Man of ill fortune, it does not befit you to be afraid like a mean one!'

(55) Ancient Greek (Plato Republic 526c)

Kaì	*mến,*	*hōs*	*egôimai,*	*há*	*ge*	*meízō*	
and	indeed	as	believe:PRS;1SG	which	PTCL	big:CPD;ACC;SG;M	
pónon	*paréchei*	*manthánonti*		*kaì*			
toil:ACC;SG;M	cause:PRS;3SG	learn:PTCP;PRS;DAT;SG;M		and			
meletônti,	*ouk*	*àn*	*rhāidíōs*	*oudè*	*pollà*		*àn*
strive:PTCP;PRS;DAT;SG;M	NEG	well	easily	nor	many:ACC;PL;N		well
heúrois	***hōs***	*toûto.*					
find:OPT;AOR;2SG	than	this:NOM;SG;N					

'And indeed, as I believe, studies that cause more toil to the learning and striving one than this you may not easily discover nor find many of them.'

3.6. Latin

The Latin comparison particle *quam*, which derives from an accusative or old instrumental form of the relative/interrogative stem PIE *k^wo, constitutes another case of a standard marker shifting according to the comparative cycle, cf. Hildebrand (1871: 362, fn. 2), Middleton (1892: 59), Small (1924: 123, 1929: 22), Lerch (1942: 354), Weiss (2009: 425) and Tarriño (2009: 384), who, for the most part, explicitly point out the similarity in development to German *wie*. In Classical Latin, *quam* is attested as a comparison particle in equatives in combination with the correlate *tam*, cf. (57),[28] and is otherwise used in comparatives, as illustrated in (56).[29] The usual

[28] Besides *tam* … *quam* further correlative patterns used in Latin equatives are *talis* … *qualis*, *tantus* … *quantus* etc., cf. Tarriño (2009: 383). On the basis of the correlate *tam* and the frequently adjacent comparison particle *quam* the comparison particle *tamquam* was grammaticalized (= (i) in fn. 13.)

[29] Instead of using a comparison particle, the standard in Latin comparatives may also be marked by comparison case, viz. ablative, or the case-equivalent functional preposition *a/ab* (cf. Weiss 2009: 451).

comparison particle in similatives, on the other hand, is *ut* (cf. Lerch 1942: 330f.; Tarriño 2009: 399f.), as illustrated in (58).

The distribution of *quam* in Classical Latin thus corresponds to that of *als* in 17th century German: just as *als*, which had originated in similatives, had already been largely replaced in this type of comparison by *wie* in the 17th century but still represented the main pattern in equatives (with correlate + parameter) as well as in comparatives, *quam* is hardly used in similatives in Classical Latin any more,[30] but has largely been replaced in this type of comparison by *ut*, whereas it is still used in equatives and at the same time already in comparatives. This suggests that *quam* also changed in three steps from similatives to equatives to comparatives.[31]

(56) Latin (Plaut. Stich. 109 (after Tarriño 2009: 380))

Facile	*inuenis*	*peiorem*	[…]	***quam***	*illa*	*fuit*
easily	find:PRS;2SG	bad:CPD;ACC;SG		than	that:NOM;SG;F	be:PRF;3SG

'You'll easily find [a wife] worse than she was.'

(57) Latin (Cic. Verr. II 4, 126 (after Tarriño 2009: 381))

tam	*beati*	***quam***	*iste*	*est*
as	happy:NOM;PL;M	as	that:NOM;M	be:PRS;3SG

'as happy as that one is'

(58) Latin (Plaut. Cas. 419 (after Tarriño 2009: 402))

faciam	***ut***	*iubes.*
do:FUT;1SG	as	command:PRS;2SG

'I will do as you bid me.'

(59) Latin (Petron. 38, 15 (after Tarriño 2009: 401))

Solebat	*sic*	*cenare*	***quomodo***	*rex.*
use.to:IPF;3SG	so	dine:INF	like	king:NOM

'He used to dine like a king.'

[30] Remnants of the use of *quam* in similatives are attested in all stages from Plautus to Late Latin (cf. Tarriño 2009: 387).

[31] According to Small (1924: 55) Latin *et*, which is also used as a comparison particle, represents another instance of the distributional shift from equatives to comparatives.

Besides *ut*, a new standard marker appears in Latin, viz. *quomodo*, cf. (59), which was grammaticalized on the basis of a nominal syntagm (< *quo modo* 'in which manner'; = (iv) in fn. 13). This comparison particle is restricted to similatives in Latin, cf. Gamillscheg (1957: 743), so that, once more, the innovation starts in similatives. *Quomodo* and its successor forms *como/com/come/comme/cum* etc., which over the course of the development completely replaced *ut* in similatives, play a role as a standard marker in various Romance languages until today and also show a shift according to the comparative cycle in the further diachronic development.

3.7. Romance languages

For the standard markers *como/com/come/comme/cum* etc. in the individual Romance languages, continuing on from Latin *quomodo* which had been restricted to similatives (see above), in the next step a distributional shift can be observed again in the same direction as in German and other languages, viz. an extension to equatives. According to Tarriño (2009: 389), this development follows "a general trend of expressions of manner to change into expressions of degree" – a trend which is obviously part of the more general phenomenon of the comparative cycle. The resulting situation can be observed in Modern Spanish, Catalan, Portuguese and Italian, cf. Price (1990), where *como*, *com* and *come*, respectively, are used in similatives as well as in equatives, as illustrated with Italian in (60) and (61)(a). In comparatives, on the other hand, *que/che* appears as a standard marker, cf. (62)(a).[32] This comparison particle and its cognates in various Romance languages are generally assumed to derive from Latin *quam*, cf. Mattoso Camara (1972: 73, 214) on Portuguese, Gamillscheg (1957: 743, 748) and the etymological online dictionary of the Centre National de Ressources

[32] In these Romance languages with *como/come/com* in equatives and similatives vs. *que/che* in comparatives we are accordingly dealing with system IIa in Table 1. In equatives a comparison particle that was grammaticalized on the basis of the interrogative/relative 'how much', viz. *quanto*, is alternatively used in Portuguese and Italian, cf. (61)(b). In comparatives, besides the comparative particle *que/che* we partly find a functional preposition *de/di*, which is typologically equivalent to a comparison case construction, cf. (62)(b), and in most Romance languages relative constructions with the comparison-case equivalent preposition *de/di* and a pronominal element, which are grammaticalized to varying degrees: Spanish *de lo que*, Portuguese *do que*, French *de ce que*, Italian *di quanto/di quello que/di come*, Romanian *decît*, Catalan *del que* etc. (cf. Price 1990).

Textuelles et Lexicales[33] on French.[34] In these languages, *quam* > *che/que* is accordingly only kept in its historically most recent context of use, viz. comparatives, just as *als* in present-day German. Note, however, that quite a number of Latin elements introducing subordinate clauses phonologically merged in *que/che* in the Romance languages, viz. besides *quam* also *quia, quid, quod* and *quem* so that *que/che* constitutes a kind of universal complementizer in Romance languages today.[35]

(60) Italian

Maria	*corre*	***come***	(*corre*)	*Anna.*
Maria	run:PRS;3SG	as/like	run:PRS;3SG	Anna

'Maria runs like Anna (does).'

(61) Italian

a.

Maria	*è*	(*così*)	*alta*	***come***	*Anna.*
Maria	be:PRS;3SG	as	tall:F	as	Anna

b.

Maria	*è*	*alta*	*tanto*	***quanto***	*Anna.*
Maria	be:PRS;3SG	tall:F	as.much	how.much	Anna

'Maria is as tall as Anna.'

(62) Italian

a.

Tu	*sei*	*più*	*bella*	***che***	*una*	*rosa.*
you	be:PRS;2SG	more	beautiful:F	than	a:F	rose

b.

Tu	*sei*	*più*	*bella*	***di***	*una*	*rosa.*
you	be:PRS;2SG	more	beautiful:F	from	a:F	rose

'You are more beautiful than a rose.'

The same distribution as observed for *como/com*(*e*) in the languages discussed above can also be found for *com*(*e*) in Old French: In contrast to Modern French *comme*, it was not only used in similatives but also in equatives, cf. (63). According to Lerch (1925, I: 232) and Gamillscheg (1957: 748), there is even evidence for a further

[33] www.cnrtl.fr/etymologie/que

[34] Vs. Seuren (1984: 123): *que* < Lat. *quo*, Small (1924: 53f.): French *que*/Ital. *che* etc. < Lat. *quem/quia*, only Romanian *ca* < *quam*.

[35] In Romanian *ca*, however, the distinct vowel of the underlying *quam* is preserved (see below).

distributional shift of this standard marker into comparatives in Old French, cf. (64) – again in line with the comparative cycle.

(63) Old French (Joinville in Paris-Langlois, Chrestom. 220 (after Lerch 1925, I: 228))

Aussi	*gros*	***come***	*li*	*bondons*	*d'*	*un*	*tonel*
as	big	as	the:NOM;PL;M	plug:NOM;PL	of	a	barrel:OBL

'as big as the plugs of a barrel'

(64) Old French (Gaydon 31 (after Gamillscheg 1957: 748))

Vëis	*tu*	*onques*	*home*	*plus*	*mal*	*mené*
see:PST;2SG	you	ever	man	more	badly	behave:PTCP

com	*fu*	*mes*	*sires*?
than	be:PST;3SG	my:NOM;SG;M	lord:NOM;SG

'Did you ever see a man more badly behaved than my Lord?'

(65) Old French (Perceval 16 (after Gamillscheg 1975: 750))

Mais	*je*	*proverai*	*que*	*li*	*cuens*
but	I	prove:FUT;1SG	that	the:NOM	count:NOM

vaut	*miauz*	***que***	*cil*	*ne*	*fist*
be.worth:PRS;3SG	much:CPD	than	this:NOM;SG;M	NEG	do:PRS;3SG

'But I will prove that the count is worth more than this one.'

(66) Old French (Hugues Capet 125 (after Lerch 1925, I: 230))

Qui	*est*	*blance*	***qu'***	*aubespin*
which:SG;M	be:PRS;3SG	white:SG;F	as	hawthorn

'Which is white as hawthorn'

(67) Modern Standard French

Elle	*est*	*plus*	*grande*	***que***	*moi.*
she	be:PRS;3SG	more	tall:F	than	I

'She is taller than me.'

(68) Modern Standard French

Elle	*est*	*aussi*	*grande*	***que***	*moi.*
she	be:PRS;3SG	as	tall:F	as	I

'She is as tall as me.'

(69) Modern Standard French

Elle	*fait*	*cela*	***comme***	*moi*
she	do:PRS;3SG	this	like	I

'She does this like me.'

Over the course of the further development of French, however, a noteworthy development into the opposite direction can be observed: The standard marker *que*, which in Old French constitutes the regular comparison particle in comparatives, cf. (65), starts to appear very occasionally in equatives, cf. (66) (see Lerch 1925, I: 230). Since the 13th century its use in equatives increases, cf. Gamillscheg (1957: 743) and Buridant (2000: 550), eventually replacing *comme*, which, however, is used in equatives 'up to the Classical period' according to Lerch (1942: 331), according to Buridant (2000: 555) until the 17th century and occurs in equatives in Colloquial French and certain dialects occasionally even today, see examples (74) and (75) below. Since the 17th century prescriptive grammarians also demand the use of *que* instead of *comme* after correlates such as *autant, tel, si* and *aussi*, i.e. in equatives.[36] Thus, the distributional pattern arose that we still find in Modern Standard French with *que* as a uniform particle in [+ degree] comparisons, i.e. comparatives and equatives, cf. (67) and (68),[37] and *comme* in similatives, cf. (69).[38] In contrast to Old French, where it was only the feature [± dissimilarity] that was expressed by the choice of the standard marker, it is now only the feature [± degree] so that we witness a diachronic change from type IIa to IIb in Table 1.

The reason for this development in French since the late Middle Ages in the opposite direction to the crosslinguistically predominant pattern of change captured in the comparative cycle, which we also observed in the earlier development of

[36] According to Lerch (1925, I: 228), among the prescriptive French grammarians, during the first half of the 17th century Vaugelas demands *que* instead of *comme* after *autant* and *quel*, but still accepts *comme* after *aussi* und *si*. However, during the second half of the 17th century Ménage, Corneille and Richelet demand *que* instead of *comme* in all of these contexts.

[37] Similarly, Occitan *que* and Walloon *k'* are used as uniform standard markers in comparatives and equatives, cf. Price (1990: 232).

[38] Besides *comme*, a number of other standard markers occur in similatives over the course of the French language history, viz. *ainsi comme*, later also *ainsi que* and *autant que* (16th-18th century) grammaticalized according to pattern (i) in fn. 13, but also standard markers grammaticalized according to pattern (iv), for instance *de même que* (cf. Gamillscheg 1957: 746f.).

French, can be seen in the fact that, as discussed above, numerous Latin expressions introducing subordinate clauses merged in *que*. Therefore, this ubiquitous complementizer is also increasingly generalized in comparison constructions. According to Gamillscheg (1957: 744), it was in particular the homonymy with the relative complementizer *que* in semantically and syntactically similar constructions that contributed to the distributional extension of *que* into equatives, notably the relative construction *le même que* 'the same as' as a bridging construction for a reanalysis of *que* as an equative particle.

Similar distributional shifts in the opposite direction, i.e. from comparatives to equatives, can arguably also be found for the cognates of *que* in a few other Romance languages: in Romanian (phrasal) equatives, besides *cum* (< *quomodo*), cognate of French *comme*, the standard marker *ca* (< *quam*), cognate of French *que* is also possible, which otherwise is used as a comparative particle, as illustrated in (70), (71) and (72) (cf. Price 1990: 200, 205). Meyer-Lübke (1899: 304), on the other hand, views Romanian *ca* as the continuation of Latin *quam* in equatives and as an innovation in comparatives, which would correspond to the usual development in the comparative cycle.

(70) Romanian (after Price 1990: 205)

Scriu	*tot*	*așa*	*de corect*	***cum***	*citești*
write:PRS;1SG	all:M/N	as	of correctly	as	read:PRS;2SG
tu.					
you:NOM					

'I am writing as correctly as you are reading.'

(71) Romanian (after Price 1990: 202)

Ion	*e*	*mai*	*mic*	***ca***	*mine.*
Ion	be:PRS;3SG	more	small	than	I:ACC

'Ion is smaller than me.'

(72) Romanian (after Price 1990: 205)

E	*la*	*fel*	*de*	*înalt*	***ca***	*mine.*
be:PRS;3SG	after	kind	of	big	as	I:ACC

'He is as tall as me.'

In Colloquial Italian we partly also find an extension of a standard marker from comparatives to equatives in so far as, in contrast to the standard language, *che* is not only used in comparatives but also in equatives as in (73) (cf. Price 1990: 176). The same is true of regional varieties of Italian such as Friulian and even more so Sardinian where *che* not only appears in comparatives and equatives but optionally also in similatives (cf. Haspelmath & Buchholz 1998: 315).

(73) Colloquial Italian (after Price 1990: 176)

Riesce	*tanto*	*nella*	*pittura*	(***quanto***	/ ***che***)
succeed:PRS;3SG	as.much	in.the	paiting	how.much	as
nella	*scultura.*				
in.the	sculpting				

'He is as good at painting as he is at sculpting.'

The diachronic development starting from Latin and continuing in individual Romance languages is summarized in Table 3, in which the distribution of standard markers in Latin, Old French and Modern French are given. Further Romance varieties, which of course do not constitute historical periods of French, but potentially correspond to further steps in the development are added in the shaded cells.[39] Thus the situation in Friulian corresponds to a stage between Old and Modern French, while the distribution in Sardinian corresponds to a potential further stage in the development.

Note that while in these particular Romance languages, the original development according to the comparative cycle is turned back, as it were, due to the ubiquitous use of the complementizer *que/che* resulting in diachronic stages with a uniform

[39] This scenario holds provided that there was indeed an intermediate diachronic stage at which *como/com*(*m*)*e* etc. was used in similatives and equatives as in Old French and Modern Spanish, Portuguese and Standard Italian, and *que/che* in Friulian, Sardinian etc. equatives and partly similatives does not simply constitute a direct continuation of Latin *quam* in these contexts, in which case these languages would not show a development in the opposite direction to the typical comparative cycle, after all. Considering the distribution in Latin, where *quam* was hardly used in similatives any more, this alternative scenario seems unlikely, but as discussed above, it is in fact proposed for Romanian by Meyer-Lübke (1899: 304).

standard marker in [+ dissimilarity] or in [+ degree] comparisons (type IIa and IIb in Table 1, respectively) or even for all three types of comparison as partly in Sardinian (type I in Table 1), this change, even if it takes place in the opposite direction to the usually observed comparative cycle, still evolves in the stepwise manner predicted by the markedness hierarchy of comparisons with equatives taking up an intermediate position between comparatives and similatives.

	similative	equative	comparative
Latin	*ut /quomodo*	*quam*	*quam*
Old French (≈ Spanish, Portuguese, Catalan, Italian)	*(quomodo >) come*	*come*	*(quam >) que* (rarely *come*)
Friulian (≈ Romanian)	*come*	*come/que*	*que*
Modern French	*comme*	*que*	*que*
Sardinian	*comente/che*	*che*	*che*

Table 3: Development of standard markers in Romance languages.

Interestingly, in Modern non-standard varieties of French, especially in Western parts of France, and in North-American French, for instance in Nova Scotia and Louisiana, *comme* and its equivalents are not only used in similatives but also in equatives, as (74) and (75) illustrate. It remains to be ascertained whether this represents a relict form, as Lerch (1925, I: 228) and Neumann-Holzschuh & Mitko (2018: 740) suggest, or whether this use represents a recent, secondary development. The fact that it is socially very marked as decidedly lower-class or very informal speech seems to support the latter scenario, in which case there would be evidence for a renewed development into the typical direction according to the comparative cycle in French.

(74) North-American French: Nova Scotia (after Neumann-Holzschuh & Mitko 2018: 743)

I	*est*	*aussi*	*haut*	***coumme***	*Pierre.*
he	be:PRS;3SG	as	high	as	Pierre

'He is as tall as Pierre.'

(75) Modern Non-Standard French (after Gadet 1992: 93)

Il	*est*	*aussi*	*grand*	***comme***	*moi*
he	be:PRS;3SG	as	big	as	I

'He is as tall as me.'

3.8. Slavic languages

Slavic languages show evidence of developments of standard markers in comparisons according to the comparative cycle, too. In Polish – as in German and many other European languages – an interrogative-based comparison particle is used in equatives and similatives, viz. *jak*, cf. (76) and (77). In comparatives, on the other hand, the comparison particle *niż*, cf. (78)(a) and (79)(a), or more rarely (and only in phrasal comparatives) the particle *od* in combination with genitive case mark the standard of comparison, cf. (78)(b) and (79)(b).[40] However, in Colloquial Polish the comparison particle *jak* also appears in comparatives if they are negated, cf. (79)(c).[41] Adverbial function of the parameter and the occurrence of negative concord, cf. (80), increase the acceptability of *jak* in comparatives in Polish.

(76) Polish

Anna	*idzie*	*tak*	(*samo*)	*szybko*	***jak***	*Maria.*
Anna:NOM	walk:PRS;3SG	so	same	fast	as	Maria:NOM

'Anna walks as fast as Maria.'

[40] This goes back to a comparison case construction with the case-equivalent functional preposition *ot* > *od* 'from' (corresponding to the Italian comparison-case equivalent preposition *di*, which occurs in comparatives as an alternative to *che*, cf. (62)(b)). For an analysis of phrasal as opposed to clausal comparatives in Slavic see Pancheva (2006; 2010).

[41] "Przyimek *jak* jest używany w konstrukcjach porównawczych, zawierających w pierwszym, zaprzeczonym członie przymiotnik w stopniu wyższym, np. *Nie ma nic lepszego jak mocna herbata.* Natomiast niepoprawne jest używanie w takich porównaniach przyimka *jak* z członem pierwszym niezaprzeczonym." ('The pronoun *jak* is used in comparative constructions that contain a comparative form of an adjective in the first, negated clause, e.g. *There is nothing better than* [= *jak* 'as/like', A.J.] *strong tea*. However, it is ungrammatical to use the pronoun *jak* if the first clause is not negated.' Krystyna Długosz-Kurczabowa, University of Warsaw, https://sjp.pwn.pl/poradnia/haslo/lepszy-niz-i-lepszy-od;10270.html).

(77) Polish

Anna	*idzie*	*tak*	(*samo*)	***jak***	*Maria.*
Anna:NOM	walk:PRS;3SG	so	same	as	Maria:NOM

'Anna walks like Maria.'

(78) Polish

a. *Anna*	*idzie*	*szybciej*	***niż***	*Maria.*
Anna:NOM	walk:PRS;3SG	fast:CPD	than	Maria:NOM
b. *Anna*	*idzie*	*szybciej*	***od***	*Marii.*
Anna:NOM	walk:PRS;3SG	fast:CPD	from	Maria:GEN

'Anna walks faster than Maria.'

(79) Polish

a. *Anna*	*nie*	*idzie*	*szybciej*	***niż***	*Maria.*
Anna:NOM	NEG	walk:PRS;3SG	fast:CPD	than	Maria:NOM
b. *Anna*	*nie*	*idzie*	*szybciej*	***od***	*Marii.*
Anna:NOM	NEG	walk:PRS;3SG	fast:CPD	from	Maria:GEN
c. *Anna*	*nie*	*idzie*	*szybciej*	***jak***	*Maria.*
Anna:NOM	NEG	walk:PRS;3SG	fast:CPD	than	Maria:NOM

'Anna doesn't walk faster than Maria.'

(80) Polish

Nigdy	*nie*	*kupiłam*	*więcej*	***jak***	*5kg*	*ziemniaków*.
never	NEG	buy:PST;1SG	many: CPD	than	5kg	potato:GEN;PL

'I never bought more than 5kg potatoes.'

The usual similative and equative standard marker *jak/kak* ('how', 'like', 'as') is also possible in comparatives in other Slavic languages. Thus in Russian, the particle *kak* also appears in negated comparatives, cf. (81) and (82), where otherwise the standard of comparison is marked by the particle *čem* (in archaic speech also *neželi*) or by comparative case (genitive), see also Jensen (1934: 124).

In Ukrainian, *jak* is already generally acceptable instead of *niž* as a standard marker in comparatives. (83) and (84) illustrate *jak* in a similative and in a comparative. In this language, negated comparatives presumably also acted as bridging contexts for

the distributional extension of *jak* into comparatives according to the comparative cycle, as early examples of comparative *jak* from around 1800 suggest, cf. (85).

(81) Russian

nikto	*inoj*	***kak***	*ja*
nobody:NOM	other	than	I:NOM

'none other than me'

(82) Russian (NKRJa: Izvestija, 2002/09/27)

on	*ne*	*pridumal*	*ničego*	*lučše,*	***kak***	*posporit'*
he:NOM	NEG	concoct:PST;SG;M	nothing:GEN	good:CPD	than	quarrel:INF
s	*desantnikami*					
with	paratrooper:INSTR;PL					

'[…] he did not concoct anything better than to quarrel with the paratroopers'

(83) Ukrainian (Je. Hucalo (after Horodens'ka 2017: 657))

Ja	*vže*	*vil'nyj,*	***jak***	*ptaxa*	*v*	*nebi*
I:NOM	already	free:NOM;SG;M	like	bird:NOM	in	sky:LOC

'I am already free as a bird in the sky.'

(84) Ukrainian (Ukr. prysliv'ja (after Horodens'ka 2017: 658))

Lipše	*ves'*	*vik*	*divuvaty,*	***jak***	*z*
good:CPD	whole	life:ACC	be.a.virgin:INF	than	with
neljubom		*prožyvaty*			
unloved:INSTR;M		live:INF			

'Better to be a spinster the whole life than to live with an unloved one'

(85) Ukrainian (Hryhoryj Kvitka-Osnov'janenko (1778-1843) (after Medvedjev 1962: 80))

Ne	*bulo*	*j*	*na*	*usij*	*slobodi*
NEG	be:PST;SG; M	even	in	whole:LOC	settlement:LOC
durnišoho,		***jak***	*Parxim*	*Šereverten'*	
stupid:CPD;GEN;SG;M		than	Parxim	Šereverten'	

'In the whole settlement there was no-one more stupid than Parxim Šereverten'.'

3.9. Hungarian

Even in Non-Indo-European languages, distributional shifts of standard markers according to the comparative cycle can be found, for instance in Hungarian. In all three types of comparison constructions considered here, the comparison particle *mint* is used in Hungarian, cf. (86)-(88) (= type I in Table 1).[42] This particle, too, originates in the interrogative adverb 'how' (cf. Heine & Kuteva 2002: 177), and accordingly must have been used in similatives and equatives first and has subsequently been extended to comparatives, similar to *wie* in colloquial and dialectal German.[43]

(86) Hungarian

Néz	***mint***	*egy*	*bárány*
look:PRS;SBJV;3SG	like	a	lamb

'He looks like a lamb.'

(87) Hungarian

János	*olyan*	*kicsi*	***mint***	*Péter*
Janos	as	small	as	Peter

'Janos is as small as Peter.'

(88) Hungarian

János	*kisebb*	***mint***	*Péter*
Janos	small:CPD	than	Peter

'Janos is smaller than Peter.'

In the history of Hungarian, there is even evidence for a repeated change according to the comparative cycle. The original comparison particle in Old Hungarian is *hogy*, which was beginning to be replaced in equatives by the more recent standard marker

[42] The phenomenon that the same comparison particle appears in similatives, equatives and comparatives can also be observed in further Uralic languages, viz. Estonian *kui*, Finnish *kuin*. Whether these particles historically show the same shifts according to the comparative cycle as observed for Hungarian needs to be established in future research.

[43] Besides using a comparison particle, the standard may also be marked by comparison case in Hungarian comparatives, viz. by adessive case, a locative case expressing proximity to an object (e.g. *János kissebb Péter-**nél***. - Janos small:CPD Peter:ADESS 'Janos is smaller than Peter.')

mint already in Old Hungarian, cf. Haader (2003) and Bacskai-Atkari (2014).[44] In historical Hungarian, *hogy* constitutes a kind of uniform comparison particle in all types of comparison, too.[45] Etymologically, it also meant 'how' so that *hogy*, too, must have undergone a distributional shift from similatives and equatives to comparatives.

3.10. Chinese

Evidence for the comparative cycle can also be found in unrelated Non-European languages such as Chinese. Heine & Kuteva (2002: 256f.) discuss Chinese besides German (comparison particle *wie*) as an example for the development from equatives to comparatives and characterise the respective developments in both languages as directly comparable. The change in Chinese does not only evolve in the same direction as in German but has repeatedly taken place, too, in fact at least three times, which once more corroborates the analysis that we are dealing with an instance of cyclical language change. According to Heine & Kuteva, who base their discussion on Sun (1996), the Late Archaic Chinese and Han Chinese verbal equative marker *bi* 'to compare with, be like, imitate', cf. (89), developed into a marker in comparatives in Late Medieval Chinese of the 8th and 9th century with the meaning of 'more than', which it still has in Modern Mandarin Chinese today, cf. (90).[46]

The second lexeme that has undergone a development from comparisons of equality/similarity to comparisons of inequality/dissimilarity in Chinese is *ru*. Starting with a meaning of 'to resemble/be like', cf. (91), it changed into a standard marker in comparatives in Early Mandarin Chinese, cf. (92). The third instance of this type of syntactic-semantic distributional shift in Chinese concerns the lexeme *xiang*, which again used to mean 'to resemble/be like' and later also became used as a standard marker in comparatives.

(89) Old Chinese (Mengzi Gongsun Chou shang (Heine & Kuteva 2002: 256, after Sun 1996: 39))

er	*he*	*ceng*	***bi***	*yu*	*yu*	*shi?*
2SG	how	STRESS	compare	1SG	YU	3SG

'How (dare) you compare me to him?'

[44] Up to Middle Hungarian, the combination *hogy mint* is attested.

[45] In comparatives, *hogy* is, however, almost only found together with the negative/polarity particle *nem/sem*, later it is also occasionally found without the negation particle in the combination *hogy mint*.

[46] According to Sun (1996: 38f.) the steps of the development are as follows: Old Chinese: verb 'to compare' > Middle Chinese: equative preposition 'as/like' > comparative particle.

(90) Modern Mandarin Chinese (Heine & Kuteva 2002: 256, after Sun 1996: 38)

ta	***bi***	*meimei*	*piaoliang*.
3SG	than	sister	beautiful

'She is prettier than (her) sister.'

(91) Early Mandarin Chinese (Yuan kann zaju sanshi zhong Yu Shang Wang (Heine & Kuteva 2002: 256, after Sun 1996: 40))

x*iong-jiujiu*	*de*	*gongren*	***ru***	*hu*	*lang*.
gallantly	PTCL	policemen	resemble/like	tiger	wolf

'Arrogant policemen are like tigers and wolves.'

(92) Early Mandarin-Chinese (Yuan kann zaju sanshi zhong Yu Shang Wang (Heine & Kuteva 2002: 257, after Sun 1996: 40))

Chi	*le*	*xie*	*popei*	*chunno*	*sheng*	***ru***
eat	ASP	some	fermented	spirit	better	than
yu	*xie*	*qiongjiang*.				
jade	liquid	wine				

'(I) took some fermented wine, better than the best wine.'

Heine & Kuteva (2002: 257) state that further data besides those from the two languages they discuss, viz. German and Chinese, would be required to corroborate the grammaticalization path from equative markers (or 'to resemble/be like') to comparative markers. They speculate that the development in Chinese constitutes an instance of a verb with a salient feature becoming a grammatical marker for that feature. Note, however, that this salient feature would be similarity/equality, whereas the meaning of the resulting grammatical marker is one of dissimilarity/inequality. This can be explained if the development is seen as an instance of the comparative cycle turning a marker in comparisons of equality/similarity (standard markers or other linguistic expressions of similarity such as the discussed Chinese verbs) into a marker in comparisons of inequality/dissimilarity, i.e. comparatives, a phenomenon which is not limited to German and Chinese, but occurs in numerous languages as the discussion in the previous sections has shown.

4. The comparative cycle: Characteristics and causes

As demonstrated above, one can crosslinguistically observe a diachronic shift of comparison markers (notably comparison particles) according to the comparative

cycle. While the development may occasionally proceed in a different way in individual languages due to pecularities of the language system (e.g. in certain Romance languages) the general direction of change is that from equality to inequality, more specifically from similatives to equatives to comparatives. Similatives not only stand out as a typical context for innovation of standard markers (cf. fn. 13), but are also the least marked type of comparison constructions, which will help to explain the steps and typical direction of change in the comparative cycle.

4.1. Cyclical language change

The observed changes constitute a stepwise and repeated development into the same direction, i.e. an instance of cyclical language change. Indeed, as we saw above, in several languages we witness repeated shifts of comparison markers from similatives to equatives to comparatives. The fact that language change may proceed in a cyclical fashion (or spiral) has already been noted by von der Gabelentz (1891: 241ff.) and Meillet (1912) in relation to the future cycle in Romance languages, i.e. the repeated development of future markers from synthetic to analytic to synthetic again etc. (cf. also Hopper & Traugott 2003: 9). Another classical instance of cyclical change is the repeated change of negation particles from clitic negator to clitic + free negator to free negator to clitic negator again, described by Jespersen (1917) and investigated in much subsequent work (van Kemenade 1999, 2000; Rowlett 1998; Jäger 2008; van der Auwera 2010; Willis et al. eds. 2013 among others).

In recent years there has been an increased interest in cyclical change (cf. for instance van Gelderen ed. 2009, 2011, ed. 2016; Breitbarth & Jäger in prep.) because this kind of change brings out the systematic, language-independent side of change and thus allows us to investigate general crosslinguistic principles of language change. There have been in-depth studies of various further cycles besides the future cycle and Jespersen's cycle such as the subject-agreement cycle between subject pronouns and verbal agreement morphology (van Gelderen ed. 2009, 2011, ed. 2016), the copula cycle between a demonstrative or a main verb and a copula (cf. Lohndal 2009), the definiteness cycle from demonstratives to definite articles to nominal case or derivation morphemes (van Gelderen 2007, 2011), or the relative cycle from relative pronoun to relative particle to particle + new pronoun, finally simple pronoun again etc. (van Gelderen 2004).

For several instances of cyclical change it has been suggested that phonological reduction of the original marker and subsequent strengthening and finally replacement by another marker drive the development. While phonological reduction can often also be observed in the diachronic development of comparison particles and other standard markers, phonological reduction and subsequent strengthening does not seem to be the main driving force behind the comparative cycle, for instance for the replacement of German *denn* by *als* in comparatives (*denn* is still used in other functions without being perceived as phonologically too weak) or *als* by *wie* in equatives (again *als* survives in other functions, notably as a comparative particle, i.e. cannot be considered phonologically too weak to be used as an equative particle).

However, phonological reduction is not the only possible cause for cyclical change. Another cause may be a recurrent reanalysis of the same kind. This may for instance be due to markedness reversal as in the case of the repeated reanalysis of plural forms as singular forms and formation of a new plural form e.g. with the noun for 'pear' in German (Lat. SG *pirum* – PL *pira* > OHG/MHG SG *bira/bire* – PL *bir*(*e*)*n* > Modern German SG *Birne* – PL *Birnen*). Furthermore, desemanticization of an originally pleonastic, emphatic construction turning the respective expression into the regular, non-emphatic marker, i.e. largely semantic-pragmatic developments have been suggested to be the cause behind certain instances of cyclical change.

With respect to the comparative cycle, semantic and syntactic reanalysis as well as loss of emphasis also play a role especially in relation to the grammaticalization of new standard markers, which typically starts in similatives, contributing to the directionality of the change. The primary explanation, however, will be argued to lie in the markedness relations of comparison constructions in combination with linguistic economy at different levels of the language system.

4.2. Chain shifts or functional overload as causes?

Let us first, however, revise two other causes that have been suggested in the literature specifically with respect to the distributional shift of standard markers in comparisons. The first one is a mechanism of chain shift as it is also assumed in explanations of phonological developments or of semantic changes within so-called word fields. Grimm (DWB 1: 248; 250f.) and Lerch (1942: 349) assume for the development in German that the use of *wie* as a comparison particle caused a push chain of repeated replacement among the comparison particles. However, the

timeline of the developments disproves this hypothesis (for a detailed discussion see Jäger 2018: 401-404). As discussed in sect. 3.1.1, German *als* replaced *denn* in comparatives during the 17th century – well-before it was 'pushed out' of equatives by *wie*, which only took place during the 19th century. Moreover, the extension of *wie* into comparatives since the 18th and especially 19th century cannot be linked to any other element pushing it out of similatives and equatives, as it still constitutes the main pattern in these types of comparisons until today, so that the comparative cycle cannot be explained by chain shifts.

The second hypothesis that is occasionally raised in the literature sees the cause of the change within the respective comparison particle itself. It is assumed that a certain item stops to be used as a comparison particle once it develops too many other meanings or functions, i.e. due to 'functional overload'. Thus the replacement of the German comparative particle *denn* by *als* has been linked to the rise of causal *denn* since the 15th century (DWB 29: 1484; Lerch 1942: 355, 359; Dückert 1961: 215) and the replacement of the equative particle *als* by *wie* to the rise of predicative *als* or an increased use of *als* as a temporal complementizer since late MHG, respectively (DWB 29: 1471; Lerch 1942: 349; Dückert 1961: 207).[47]

A close investigation of the developments, however, shows that this hypothesis does not hold, either (for a detailed discussion see Jäger 2018: 404-418). The increase of German *dann/denn*, for instance, which had already been used in various functions (conditional, temporal etc.) during OHG and MHG, as a causal complementizer took place several centuries before it stopped being used as the main comparison particle in comparatives. *Als* on the other hand considerably increased its functions during MHG and ENHG (modal demonstrative adverb, temporal, conditional, causal and concessive complementizer, relative particle, predicative conjunction, coordinating conjunction) and at the same time as well as during the directly ensuing time period it was even increasingly used as a comparison particle, being extended from one type of comparison to the next. Similarly, *wie* took on more and more functions during ENHG and early NHG (interrogative/relative adverb, complementizer 'that', concessive, temporal and causal complementizer, relative particle, coordinating conjunction), yet at the same time it was extended into further types of comparison at the expense of *als*.

[47] Similarly, the replacement of the Dutch comparative particle *dan* by *als* during the 16th and 17th century has been considered as a consequence of the rise of *dan* in the sense of 'but' (van der Horst 2008: 993).

In fact, the comparative cycle regularly leads to an increase of polysemy and functional load of lexemes as they often take over the function of standard marker in further types of comparison at the same time or directly after an increase of other functions. Lexemes with the single function of equative particle, on the other hand, such as the historical German *alsam*, occasionally attested in MHG, or *inmassen*, sometimes found in ENHG, should be expected to gain importance in this exclusive function and be stably used – instead they quickly disappeared in contrast to the highly polysemous *wie*, which was nevertheless very successful diachronically in all types of comparisons. The fact that polysemy and 'high functional load' may even be conducive to an increased use as a comparison particle is also obvious from the increasing use of *que/che* as a comparison particle in various Romance languages (see sect. 3.7). Besides failing with regard to the exact development in concrete cases, these hypotheses fall short of explaining the systematic and crosslinguistic nature of the change by seeking the cause in language-specific and lexeme-specific developments.

4.3. Economy and markedness as the causes of the comparative cycle

An explanation of the comparative cycle that captures its lexeme-independent, crosslinguistic and systematic nature must build on universal principles and mechanisms of language change. I would like to argue that markedness and linguistic economy play a crucial role as causes of the observed developments. The directionality and individual steps of the comparative cycle can be argued to result from the characteristics of the different types of comparison constructions, in particular the markedness hierarchy formulated in (2), in combination with linguistic economy at different levels of the language system.

At the level of the lexicon, economy repeatedly leads to the rise of a uniform standard marker for several types of comparison, as can be observed in the diachronic development of many of the languages discussed above. Since the difference between, for instance, [+ dissimilarity] and [- dissimilarity] comparisons is marked by means of the parameter marker (an inflectional morpheme on the adjective/adverb or a free morpheme accompanying it) in the languages under discussion, it need not be marked

by a different standard marker in addition.[48] This is also reflected in the formal semantic analysis of comparison constructions (von Stechow 1984; Heim 1985, 2000), according to which the equative or comparative semantics resides in the respective parameter marker, whereas the comparison particles themselves are assumed to be semantically empty and are therefore deleted at the level of Logical Form. Against this background a recurrent reduction of the functional lexicon w.r.t. lexical entries for comparison particles for reasons of economy is to be expected.

Relevant bridging contexts that facilitate this process of using one particle in several types of comparison are negated equatives or equatives containing expressions of multiples, thus referring to a relation of dissimilarity as a whole, as well as negated comparatives expressing similarity rather than dissimilarity. This is also evident in several of the languages discussed above. Thus a construction such as the equative [*not* [*as big as*]] may be read as a comparative [[*not as big* = *smaller*] *than*], or [*twice* [*as big as*]] as [[*twice as big* = *bigger*] *than*] giving rise to the use of the comparative particle in equatives. Conversely, a comparative such as [*not* [*bigger than*]] may be taken as [[*not bigger* = *as big*] *as*], giving rise to the use of the equative standard marker in comparatives. This can be analysed as an instance of re-bracketing resulting in narrow scope of the respective operator (negation, multiple) over the parameter rather than wide scope over the entire comparison. Indeed, there is evidence for this phenomenon both synchronically as well as historically in various languages such as the Baltic and Slavic languages discussed in sections 3.3 and 3.8, and partly also English cf. sect. 3.1.2. In the history of German, cf. sect. 3.1.1, too, the first uses of the equative particle *als* in comparatives appear in these kinds of constructions, cf. example (11) with a negated comparative, but also the exceptional use of the comparative particle *thanne/dann* in equatives.[49] While this explains how a shift of

[48] Note that accordingly the comparative cycle is less likely to occur in languages which only mark the difference between the different types of comparison by means of the standard marker without employing a parameter marker.

[49] An early example from OHG of *thanne* in an equative with an expression of multiples ('twice as … as') is the following:

uuánda óuh sélbez taz sáng . nôte stîgen sól […] únz tára sîn hóhi gât . îh méino uuîlôn ióh ze demo áhtodên bûohstábe . dér ***zuíualt*** *líutet .* ***tánne*** *dér bûohstáb . ze démo iz ánafíeng*

'because the melody itself shall necessarily rise up to its high point, I mean sometimes even to the eighth tone which sounds twice as high as the tone at which it startet.' (Notker Mus. IV, 16)

markers from one type of comparison to another is possible in principle and will be favoured due to lexicon economy, the typical directionality and steps of the comparative cycle are not yet explained as, on this basis, a shift in both directions may occur.

A central counterpart of lexicon economy that also partly contributes to the directionality of the change is economy at the syntactic and semantic/pragmatic level, which repeatedly leads to the grammaticalization of new standard markers. In this respect, similatives stand out as a primary context of innovation due to their syntactic and semantic characteristics: the typical lack of a parameter expression leads to a frequent adjacency of elements such as the correlate or an element meaning 'same' etc. in the superordinate clause and the comparison particle, which may give rise to the grammaticalization of new comparison particles by univerbation with different types of preceding elements (cf. fn. 13). Treating the respective expressions as one syntactic item is more economical syntactically than a syntactic structure in which they are two separate items (see also Weiß 2019: 533-537).

This is further enhanced by semantic/pragmatic bleaching. Part of the semantics of similatives (and equatives) is a certain granularity or tolerance range (cf. Umbach & Gust 2014): For x to be like y it is not necessary that it is identical with respect to all contextually salient features but that the respective feature values are close enough. Therefore, a very close or even exact identity is typically expressed by additional emphatic markers such as 'fully' or 'exactly' whose emphatic character may be bleached over time so that they are grammaticalized as part of the usual standard marker (cf. (iii) in fn. 13, among others leading to the grammaticalization of German *als* and English *as*). In this respect loss of emphasis also plays a role in the comparative cycle as it does in other types of cyclical change (see sect. 4.1).

Another syntactic factor that contributes to similatives being a preferred context for the grammaticalization of new comparison particles is the fact that similatives are very close syntactically to wh-constructions, notably to free modal (co-)relatives. In many European languages including several languages discussed in sect. 3 above, one can thus observe the grammaticalization of modal interrogative/relative adverbs

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Similar examples are found in various languages, consider the following example from present-day English:

The symbol from the last position does not appear anymore in the calculation because the last number is ***twice as big than*** *prior, it is the same as having two symbols in the prior position.*

(Chester Litvin: Advance brain stimulation by psychoconduction (2012: 41); after Google Books)

('how') into comparison particles, which is again driven by syntactic economy: A syntactic head such as a comparison particle is more economical than a full syntactic phrase such as a relative/interrogative adverb (for a detailed discussion of the structural syntactic changes involved in the grammaticalization of a modal wh-adverb into a comparison particle as well as those involved in the diachronic development of individual comparison particles during the comparative cycle see Jäger 2018: ch.8.1, 2019: 7-19). The fact that, for these syntactic and semantic reasons, similatives form a primary context for the grammaticalization of new standard markers makes them a typical starting point of the development and thus contributes to the directionality of the comparative cycle. This crucially coincides with the predictions of the markedness hierarchy of comparison constructions given in (2), which not only explains the directionality of the development, starting from similatives, but also explains the individual steps of the change.

Similatives represent the least marked type of comparison constructions, being characterized by [- dissimilarity] as well as [- degree]. This is corroborated by the observation that they show the least specific, least grammaticalized markers crosslinguistically.[50] Data from language acquisition indicates that similatives are also the type of comparisons that is acquired earliest (cf. Hohaus 2015). Moreover, similatives constitute the most frequent type of comparisons in corpora (cf. for instance Zeilfelder 2001: 474 for the early IE languages Hittite, Vedic and Ancient Greek, Hahnemann 1999: 29 for a Modern German newspaper corpus, Jäger 2018: 433 for a historical German corpus covering OHG, MHG, ENHG and early NHG). The pattern used in similatives is thus easily transferred onto other types of comparison. This extension or shift takes place gradually from less marked to more marked contexts in line with standard assumptions of markedness theory on language change (cf. Wurzel 1994: 43f.). Being characterized by [- dissimilarity] and [+ degree], equatives take up an intermediate position between similatives and comparatives regarding markedness. The prediction that the shift of standard markers to equatives constitutes an intermediate step in the comparative cycle is borne out as the discussion in section 3 has shown. The final step in the typical development is the distributional shift of standard markers to comparatives, which constitute the most

[50] Similarity also seems cognitively unmarked in contrast to dissimilarity, i.e. similarity comes with less cognitive effort. This fact is employed for instance in perception studies with infants, whose sucking rate is stable if they perceive two items they do not discriminate, i.e. items they perceive as similar/equal, whereas it increases if they perceive an item as different from, i.e. dissimilar to, the previous one.

marked type of comparisons being characterized by [+ dissimilarity] and [+ degree].

5. Conclusion

The syntactic-semantic shift of standard markers from comparisons of similarity/equality to those of dissimilarity/inequality, more specifically from similatives to equatives to comparatives, is found in the history of many languages. In several languages, there is even evidence that this kind of change occurred several times and thus constitutes a cycle: the comparative cycle.

The crosslinguistic and systematic nature of the comparative cycle can be explained as an effect of economy at the level of the lexicon leading to the use of one standard marker for several types of comparison, and economy at the syntactic and semantic/pragmatic level leading to the grammaticalization of new standard markers especially in similatives. Their shift into further types of comparisons, viz. equatives and finally comparatives, can be understood against the background of the markedness hierarchy of comparison constructions as an instance of natural language change. In order to deepen our understanding of the comparative cycle, its characteristics and causes, further detailed diachronic investigations would be useful, covering further languages and including data on all three types comparisons discussed, viz. comparatives, equatives and notably similatives.

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Abbreviations

1 = 1st person	GEN = genitive	PL = plural
2 = 2nd person	IMP = imperative	PRF = perfect

3 = 3rd person
ACC = accusative
ADESS = adessive
ALL = allative
AOR = aorist
ASP = aspect
AUX = auxiliary
CPD = comparative degree
DAT = dative
F = feminine
FUT = future
INF = infinitive
INSTR = instrumental
IPF = imperfect
LOC = locative
M = masculine
MID = middle
N = neuter
NEG = negation
NOM = nominative
OBL = oblique
OPT = optative
PRS = present
PST = past
PTCL = particle
PTCP = participle
Q = question particle
REFL = reflexive
SBJV = subjunctive
SG = singular
SPD = superlative degree
VOC = vocative

Languages

BSD = Belgian Standard Dutch
ENHG = Early Middle High German
MHG = Middle High German
NHG = New High German
OHG = Old High German
PIE = Proto Indo-European

References

Alrenga, Peter. 2007. *Dimensions in the semantics of comparatives*. PhD Dissertation, University of California.

Bacskai-Atkari, Julia. 2014. Cyclical change in Hungarian comparatives. *Diachronica* 31. 465-505.

Breitbarth, Anne & Jäger, Agnes. In prep. Cyclical change. In Bousquette, Joshua & Pickl, Simon (eds.), *The Oxford handbook of the German language*. Oxford : Oxford University Press.

Buridant, Claude. 2000. *Grammaire nouvelle de l'ancien français*. Paris: Sedes.

Camara Mattoso, Joaquim Jr. 1972. *The Portuguese language*. Chicago: Univ. of Chicago Press.

CHEL II = Blake, Norman (ed.). 1992. *The Cambridge history of the English language*. Vol. 2. 1066-1476. Cambridge: Cambridge University Press.

CHEL III = Lass, Roger (ed.). 2006. *The Cambridge history of the English language.* Vol. 3. 1476-1776. Third edition. Cambridge: Cambridge University Press.

de Kreij, Nina. 2021. Ancient Greek. In Keydana, Götz & Hock, Wolfgang & Widmer, Paul (eds.), *Comparison and gradation in Indo-European* (= Mouton Handbooks of Indo-European Typology, 1), 349-384. Berlin: de Gruyter.

Delbrück, Berthold. 1888. *Altindische Syntax*. Halle: Verlag der Buchhandlung des Waisenhauses.

Dückert, Joachim. 1961. Das geschichtliche Verhältnis des vergleichenden *als* und *wie*. *PBB* 83. 205-230.

Dunkel, George E. 2014. *Lexikon der indogermanischen Partikeln und Pronominalstämme*. Vol. 1: Einleitung, Terminologie, Lautgesetze, Adverbialendungen, Nominalsuffixe, Anhänge und Indices; Vol. 2: Lexikon. Heidelberg: Winter.

DWB = Grimm, Jabob & Grimm, Wilhelm. 1854–1961. *Deutsches Wörterbuch*. 33 vols. Leipzig: Hirzel (Reprint: Deutscher Taschenbuchverlag, 1984).

Gadet, Françoise. 1992. *Le français populaire*. Paris: PUF.

Gamillscheg, Ernst. 1957. *Historische französische Syntax*. Tübingen: Niemeyer.

Haader, Lea. 2003. Az ómagyar kor. Mondattörténet: Az összetett mondat. In Kiss, Jenö & Pusztai, Ferenc (eds.), *Magyar nyelvtörténet*, 500-560. Budapest: Osiris Kiadó.

Hahnemann, Suzan. 1999. *Vergleiche im Vergleich. Zur Syntax und Semantik ausgewählter Vergleichsstrukturen mit "als“ und "wie“ im Deutschen*. (= Linguistische Arbeiten, 397). Tübingen: Niemeyer.

Haspelmath, Martin & Buchholz, Oda. 1998. Equative and similative constructions in the languages of Europe. In Van der Auwera, Johan & O Baoill, Dónall (eds.), *EUROTYP. Adverbial constructions in the languages of Europe, vol. 3* (= Empirical Approaches to Language Typology, 20-3), 277-334. Berlin: de Gruyter.

Heim, Irene. 1985. *Notes on comparatives and related matters*. Ms. University of Texas, Austin.
(Online:
http://semanticsarchive.net/Archive/zc0ZjY0M/Comparatives%2085.pdf).

Heim, Irene. 2000. Degree operators and scope. In Jackson, Brendan & Tanya Matthews (eds.), *Proceedings of Semantics and Linguistic Theory (SALT) 10*, 40-64. Cornell University Ithaca
(Online:
http://journals.linguisticsociety.org/proceedings/index.php/SALT/article/view/3102/).

Heine, Bernd & Kuteva, Tania. 2002. *World lexicon of grammaticalization*. Cambridge: Cambridge University Press.

Hildebrand, Rudolf. 1871. Rezension zu Ph. Dietz: Wörterbuch zu Dr. Martin Luthers deutschen Schriften. Leipzig: Vogel, 1870. *Zeitschrift für deutsche Philologie* 3. 358-365.

Hohaus, Vera. 2015. A semantics for degree and property equatives. Ms. Paper presented at the conference “Comparison constructions”, 21/12/2015. University of Cologne.

Horodens′ka, Kateryna Hryhorivna (ed.) 2017. *Hramatyka sučasnoï ukraïns′koï literaturnoï movy*. Kyïv: Vydavničyj dim Dmytra Buraho.

Hubers, Ferdy & de Hoop, Helen. 2013. The effect of prescriptivism on comparative markers in spoken Dutch. In Aalberse, Suzanne & Auer, Anita (eds.), *Linguistics in the Netherlands 2013* (= Linguistics in the Netherlands, 30), 89-101. Amsterdam: Benjamins.

Jäger, Agnes. 2008. *History of German negation*. (= Linguistik aktuell, 118). Amsterdam: Benjamins.

Jäger, Agnes. 2010. Der Komparativzyklus und die Position der Vergleichspartikeln. *Linguistische Berichte* 224. 467-493.

Jäger, Agnes. 2018. *Vergleichskonstruktionen im Deutschen: Diachroner Wandel und synchrone Variation* (= Linguistische Arbeiten, 569). Berlin: de Gruyter.

Jäger, Agnes. 2019. The syntax of comparison constructions in diachronic and dialectal perspective. *Glossa* 4(1): 70. 1–51.

Jäger, Agnes & Walkden, George. 2021. West Germanic. In Keydana, Götz & Hock, Wolfgang & Widmer, Paul (eds.), *Comparison and gradation in Indo-European* (= Mouton Handbooks of Indo-European Typology, 1), 281-348. Berlin: de Gruyter.

Jensen, Hans. 1934. Der steigernde Vergleich und sein sprachlicher Ausdruck. *Indogermanische Forschungen* 52. 108-130.

Jespersen, Otto. 1917. *Negation in English and other languages*. (= Historisk-filologiske Meddelelser, 1/5). Copenhagen: A. F. Host.

Klooster, Willem. 2001. *Grammatica van het hedendaags Nederlands: Een volledig overzicht.* Den Haag: SDU.

Kölligan, Daniel. 2021. Classical Armenian. In Keydana, Götz & Hock, Wolfgang & Widmer, Paul (eds.), *Comparison and gradation in Indo-European* (= Mouton Handbooks of Indo-European Typology, 1), 49-79. Berlin: de Gruyter.

Lerch, Eugen. 1925. *Historische französische Syntax.* Vol. 1: *Definition der Syntax - syntaktische Methoden - Allgemeines über Satzverknüpfung und Konjunktionen -*

Beigeordnete Sätze - »Que«-Sätze, Sätze mit »si«, »quand« und »comme«. Leipzig: Reisland.

Lerch, Eugen. 1942. Ist schöner wie ein Sprachfehler? Zum Streit um die Berechtigung der Sprachregelung. *PBB* 65. 329-372.

LKŽ 5 = Ulvydas, Kazys & Jonikaitė, Zuzana & Vosylytė, Bronė & Kruopas, Jonas & Kabelka, Jonas. 1959. *Lietuvių kalbos žodynas*. 5: *K - klausitys*. Vilnius: Valstybinė politinės ir mokslinės literatūros leidykla.

LKŽ 8 = Kruopas, Jonas & Jonikaitė, Zuzana & Kėzytė, Sofjia & Kučinskaitė, Antanė & Lyberis, Antanas. 1970. *Lietuvių kalbos žodynas*. 8: *Melūda - ožvilnis*. Vilnius: 'Minties' leidykla.

Lohndal, Terje. 2009. The copula cycle. In Gelderen, Elly van (ed.), *Cyclical change*, 209-242. Amsterdam: Benjamins.

Medvedjev, Fedir Pylypovyč. 1962. *Systema spolučnykiv v ukraïns'kij movi*. Charkiv: Univ.

Meillet, Antoine. 1912. L'évolution des forms grammaticales. *Rivista di scienzia* 12. 384-400. (Reprint in: *Linguistique historique et linguistique générale*. Second edition. Paris: Société de Linguistique Paris VIII, 1926. 130-148).

Meyer-Lübke, Wilhelm. 1899. *Grammatik der romanischen Sprachen.* Vol. 3: *Syntax.* Leipzig: Reisland.

Middleton, George. 1892. *An essay on analogy in syntax*. London: Longmans.

Neumann-Holzschuh, Ingrid & Mitko, Julia. 2018. *Grammaire comparée des français d'Acadie et de Louisiane* (GraCoFAL). Berlin: de Gruyter.

Pancheva, Roumyana. 2006. Phrasal and clausal comparatives in Slavic. In Lavine, James & Franks, Steven & Tasseva-Kurktchieva, Mila & Filip, Hana (eds.), *Formal Approaches to Slavic Linguistics 14: The Princeton meeting 2005*, 236–257. Ann Arbor: University of Michigan Slavic Publications.

Pancheva, Roumyana. 2010. More Students Attended FASL than CONSOLE. In Browne, Wayles & Cooper, Adam & Kesici, Esra & Predolac, Nikola (eds.), *Formal approaches to Slavic linguistics 18: The second Cornell meeting 2009*, 383-400. Ann Arbor: University of Michigan Slavic Publications.

Paul, Hermann. 2007. Mittelhochdeutsche Grammatik. 25th edition; revised by Klein, Thomas & Solms, Hans-Joachim & Wegera, Klaus-Peter & Prell, Heinz-Peter. Tübingen: Niemeyer.

Petit, Daniel. 2021. Baltic. In Keydana, Götz & Hock, Wolfgang & Widmer, Paul (eds.), *Comparison and gradation in Indo-European*. (= Mouton Handbooks of Indo-European Typology, 1), 99-147. Berlin: de Gruyter.

Pinault, Georges. 1985. Négation et comparaison en Védique. In *Bulletin de la société de linguistique de Paris*, 103-144. Paris/Louvain: Peeters.

Postma, Gertjan. 2006. Van “groter dan” naar “groter als“. Structurele oorzaken voor het verval van het comparatieve voegwoord “dan”. *Nederlandse Taalkunde*, 11(1). 2-22.

Price, Susan. 1990. *Comparative constructions in Spanish and French syntax*. London/New York: Routledge.

Reinarz, Lukas & de Vos, Hugo & de Hoop, Helen. 2016. Conflicting constraints in the comparative cycle. *Journal of Germanic Linguistics* 28. 403-425.

SAND = Babiers, Sjef & van der Auwera, Johan & Bennis, Hans & Boef, Eefje & de Vogelaer, Gunther & van der Ham, Margreet. 2005ff. *Syntactische Atlas van de Nederlandse Dialecten*. Amsterdam: Amsterdam University Press.

Schwyzer, Eduard. 1950. *Griechische Grammatik*. Vol. 2: *Syntax und syntaktische Stilistik*. München: C.H. Beck.

Seuren, Pieter A. M. 1984. The comparative revisited. *Journal of Semantics* 3. 109-141.

Small, George William. 1924. *The comparison of inequality. The semantics and syntax of the comparative particle in English*. Greifswald: Abel.

Small, George William. 1929. *The Germanic case of comparison. With a special study of English* (= Language Monographs, 5). Philadelphia: Linguistic society of America.

Stassen, Leon. 1985. *Comparison and universal grammar*. Oxford/New York: Blackwell.

Stassen, Leon. 2005. Comparative constructions. In Haspelmath, Martin & Dryer, Matthew S. & Gil, David & Comrie, Bernard (eds.), *The world atlas of language structures*, 490-493. Oxford: Oxford University Press.

Sun, Chaofen. 1996. *Word-order change and grammaticalization in the history of Chinese*. Stanford, California: Stanford University Press.

Tarriño, Eusebia. 2009. Comparative clauses. In Cuzzolin, Pierluigi & Baldi, Philip (eds.), *New perspectives on historical Latin syntax*. Vol. 4: *Complex sentences, grammaticalization, typology*, 373-426. Berlin: de Gruyter.

Thurmair, Maria. 2001. *Vergleiche und Vergleichen. Eine Studie zu Form und Funktion der Vergleichsstrukturen im Deutschen* (= Linguistische Arbeiten, 433). Tübingen: Niemeyer.

Umbach, Carla & Helmar, Gust. 2014. Similarity demonstratives. *Lingua* 149, 73-93.

van der Auwera, Johan. 2010. On the diachrony of negation. In Horn, Larry (ed.), *The expression of negation*, 73-101. Berlin: de Gruyter.

van der Horst, Joop. 2008. *Geschiedenis van de Nederlandse syntaxis, vol. 1*. Leuven: Universitaire Pers Leuven.

van Gelderen, Elly. 2004. *Grammaticalization as economy*. Amsterdam: Benjamins.

van Gelderen, Elly. 2007. The definiteness cycle in Germanic. *Journal of Germanic Linguistics* 19. 275-305.

van Gelderen, Elly (ed.). 2009. *Cyclical change*. Amsterdam: Benjamins.

van Gelderen, Elly. 2011. *The linguistic cycle: Language change and the language faculty*. Oxford: Oxford University Press.

van Gelderen, Elly (ed.). 2016. *Cyclical change continued*. Amsterdam: Benjamins.

van Kemenade, Ans. 1999. Sentential negation and clause structure in OE. In Tieken-Boon van Ostade, Ingrid & Tottie, Gunnel & van der Wurff, Wim (eds.), *Negation in the history of English*, 147-165. Berlin: Mouton de Gruyter.

van Kemenade, Ans. 2000. Jespersen's cycle revisited. In Pintzuk, Susan & Tsoulas, George & Warner, Anthony (eds.), *Diachronic syntax*, 51-74. Oxford: Oxford University Press.

von der Gabelentz, Georg. 1891. *Die Sprachwissenschaft: Ihre Aufgaben, Methoden und bisherigen Ergebnisse*. Leipzig: Weigel. (Reprint: Narr, 1972).

von Stechow, Arnim. 1984. Comparing Semantic Theories of Comparison. *Journal of Semantics* 3. 1-77.

Vine, Brent. 1978. On the metrics and origin of Rig-Vedic *ná* 'like, as'. *Indo-Iranian Journal* 20. 171-193.

Viti, Carlotta. 2002. Comparazione e Individuazione: uno studio sugli equativi rigvedici iva e ná. *Archivio Glottologico Italiano* 87. 46-87.

Weiß, Helmut. 2019. Rebracketing (Gliederungsverschiebung) and the Early Merge Principle. *Diachronica* 36. 509-545.

Weiss, Michael. 2009. *Outline of the historical and comparative grammar of Latin*. Ann Arbor: Beech Stave Press.

Willis, David & Lucas, Christopher & Breitbarth, Anne. 2013. Comparing diachronies of negation. In Willis, David & Lucas, Christopher & Breitbarth, Anne (eds.), *The development of negation in the languages of Europe,* Vol. 1: *Case studies*, 1-50. Oxford: Oxford University Press.

Wurzel, Wolfgang Ullrich. 1994. *Grammatisch initiierter Wandel*. Unter Mitarbeit von Andreas und Dagmar Bittner. Bochum: Brockmeyer.

Zeilfelder, Susanne. 1996. Zur Syntax des Komparativs im Altarmenischen. *Historische Sprachforschung* 109. 175–198.

Zeilfelder, Susanne. 2001. *Steigern und Vergleichen in indogermanischen Sprachen*. Ms. Habilitation Dissertation, University of Jena.

Zifonun, Gisela & Hoffmann, Ludger & Strecker, Bruno. 1997. Grammatik der deutschen Sprache. (= Schriften des Instituts für Deutsche Sprache 7). Berlin: de Gruyter.

Sources

Brian Holton: *The Mossflow*. [= Scottish corpus of texts & speech: document 1628].

JBang = *Thüringische Chronick oder Geschichtbuch (…) anfenglich auss einem alten geschriebenen (…) Exemplar colligirt (…) vnd ferner durch weiland Ern Friderichen Schmidt Pfarherrn zu Grossen Beruingen reuidiert vnd vermehret / dann (…) von andern (…) continuirt. Jetzo aber (…) in Druck geben / durch Johan Bangen*. Mühlhausen, 1599. Druck: Andreas Hantzsch. [= Bonner Frühneuhochdeutschkorpus: text 255].

JMath = *Passionale Mathesij, das ist / christliche vnd andechtige Erklerung vnd Außlegung des zwey und zwantzigsten Psalms / vnd drey vnd funffzigsten Capitels des Propheten Esaia geprediget durch M. Johannem Mathesium / weyland Pfarrer in S. Joachimsthal*. Leipzig 1587. Druck: Johann Beyer. [= Bonner Frühneuhochdeutschkorpus: text 145].

Lil = *Die Lilie*. Hrsg. von Paul Wüst. Berlin: Weidmann 1909. [= Referenzkorpus Mittelhochdeutsch: text M327].

Notker Mus. = *Notker* Labeo*: De musica*. Edition, Übersetzung und Kommentar von Martin van Schaik. Utrecht: Galapagos, 1995.

Notker Ps. = *Die Werke Notkers des Deutschen*. Neue Ausgabe. Begonnen von Edward H. Sehrt und Tayler Starck. Fortgesetzt von James C. King und Petrus W. Tax.

Vol. 8: Der Psalter. Psalm 1-50. Hrsg. von Petrus W. Tax. Tübingen: Niemeyer, 1979.

Vol. 9: Der Psalter. Psalm 51-100. Hrsg. von Petrus W. Tax. Tübingen: Niemeyer, 1981.

Pañcatantra = *Panchatantra I*. Edited, with notes, by F. Kielhorn. Sixth Edition. Bombay: Government Central Book Depôt, 1896.

Phys = *Der altdeutsche Physiologus. Die Millstätter Reimfassung und die Wiener Prosa (nebst dem lateinischen Text und dem althochdeutschen Physiologus)*. Hrsg. von Friedrich Maurer. Tübingen: Niemeyer, 1967. [= Referenzkorpus Mittelhochdeutsch: text M157].

RV = *Rig Veda. A metrically restored text with an introduction and notes*. Ed. by Barend A. Van Nooten and Gary B. Holland. Cambridge, Massachusetts and London: Harvard University Press, 1994.

SalH = *Salomonis hûs*. Hrsg. von Johann Valentin Adrian. In: Mittheilungen aus Handschriften und seltenen Druckwerken. Frankfurt a.M.: Sauerländer, 1846, 417-455. [= Referenzkorpus Mittelhochdeutsch: text M337].

Tatian = *Die lateinisch-althochdeutsche Tatianbilingue Stiftsbibliothek St. Gallen Cod. 56*. Achim Masser (ed.) Göttingen: Vandenhoeck & Ruprecht, 1994.

TrHL = *Das St. Trudperter Hohe Lied*. Hrsg. von Hermann Menhardt. (Rheinische Beiträge und Hülfsbücher zur germanischen Philologie und Volkskunde 21). Halle a.d. Saale, 1934. [= Referenzkorpus Mittelhochdeutsch: text M113].

WRal = *Walter Ralegh: Amerika*. Frankfurt am Main 1599. Druck: Matthäus Becker. [Bonner Frühneuhochdeutschkorpus: text 245].

Corpora

Bonner Frühneuhochdeutschkorpus
https://korpora.zim.uni-duisburg-essen.de/Fnhd/

NKRJa = Russian National Corpus/Nacional'nyj korpus russkogo jazyka
http://ruscorpora.ru/

Referenzkorpus Mittelhochdeutsch
https://www.linguistics.rub.de/rem/

Scottish corpus of texts & speech
https://www.scottishcorpus.ac.uk

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