Non-degree equatives and reanalysis: A case study of doubling patterns in German and Hungarian*

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Abstract. The article examines reanalysis processes underlying doubling patterns in non-degree equatives in German and Hungarian. In German, the combination *als wie* (lit. 'as how') is attested historically and in certain present-day dialects. Traditionally, it is assumed to be a mixed pattern involving the earlier canonical equative complementiser *als* and the later canonical equative complementiser *wie*; however, more recent proposals suggest that als was in fact reanalysed from the matrix clause. While matrix equative markers and equative complementisers are surface-similar in German historically, these elements are distinct in Hungarian throughout its history. Based on the results of a corpus study on Old Hungarian, the paper argues that reanalysis from the matrix clause is indeed possible and starts in non-degree equatives.

Keywords: comparatives, complementiser, degree, doubling, equatives, German, grammaticalisation, matrix equative marker, reanalysis, similatives.

1. Introduction

In present-day Standard German, both degree and non-degree equatives (also called similatives; see Haspelmath & Buchholz 1998) are marked by the element *wie*:

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(1) a. *Maria ist **so** groß **wie** ihre Mutter.*
Mary is so tall as her.F mother
'Mary is as tall as her mother.'

b. *Maria ist **so** **wie** ihre Mutter.*
Mary is so as her.F mother
'Mary is like her mother.'

c. *Maria ist groß **wie** ihre Mutter.*
Mary is tall as her.F mother
'Mary is tall, like her mother.'

The example in (1a) demonstrates degree equatives, while (1b) and (1c) are instances of non-degree equatives. As can be seen, the same complementiser (*wie*) appears in all the constructions in German; by contrast, English has a difference between *as* (degree equatives) and *like* (non-degree equatives), as demonstrated by the translations above.

The element *wie* is an innovation in German; the original equative complementiser was *als* (*(al)so*). This was already present in Old High German equatives, and it came to be replaced by *wie* during Early New High German (from the second half of the 16th century onwards). (See Jäger 2010). This is illustrated in (2) below:

(2) a. *wart aber ie **sô** werder man geborn ... **sô** von Norwege Gâwân*
was.3SG but ever so noble.M man born as from Norway Gawain
'But was there ever born a man as noble as Gawain from Norway?'
(*Parzival* 651, 8ff; Eggs 2006: 22–23)

b. *waer er **sô** milt **als** lanc, er hete tugende vil besezzen*
be.COND.3SG he so generous as tall he have.COND.3SG virtues many possess.INF
'If he were as generous as he is tall, he would have had many virtues.'
(Walther von der Vogelweide, *Werke* Bd. 1, 118f; Eggs 2006: 22)

c. *dochn was dâ nieman **alsô** vrô **alsô** mîn her Gawein*
but was.3SG there noone so glad as my lord Gawain
'but noone was as glad there as my Lord Gawain'
(*Iwein* 2618f; Eggs 2006: 22)

German thus shows a complementiser change in equative constructions, namely from the original *als* to present-day *wie*. Interestingly, the combination *als wie* is attested dialectally and historically (Jäger 2016; see also Eggs 2006, Lipold 1983, Weise 1918). Consider the following:

(3) a. *Dei Schweinsbraan schmeggd genau a* ***so*** *fad* ***ais wia*** *dei Schbinad*
your roast.pork tastes exactly PRT so stale as as you spinach
'Your roast pork tastes just as stale as your spinach.'
(Bavarian; Jäger 2016: 260, citing Merkle 1975: 171)

b. *Das es akkerate* ***su als wie*** *bei eich.*
that.N is accurate so as as by you.PL.DAT
'It is accurate, as is at your place.' (Thuringian; Jäger 2016: 261)

The traditional view (Jäger 2010) is that (3) represents an intermediate stage between (2) and (1), whereby *wie* is an innovation in a lower (CP) projection alongside the original *als* (Conj for Jäger 2010 and another C for Bacskai-Atkari 2014a). However, diachronic evidence by Jäger (2016: 291–298) suggests a different process: patterns like (3) appear after the establishment of pattern like (1), and the frequency of patterns like (3) is relatively low, which is unexpected if it constitutes a significant middle stage. Jäger (2016) therefore hypothesises that there is a different reanalysis process underlying (3): namely, the matrix equative element was reanalysed into a subclause headed by *wie*, resulting in the double heads *als wie*. Such reanalysis can take place in non-degree equatives, since the presence of the matrix equative element not necessary (1c). Later, the combination was analogically extended to degree equatives as well.

Since the element *als(o)* in German is historically and dialectally surface-similar in the matrix clause and in the subordinate clause, as in (2), the proposal of Jäger (2016) relies on the time of appearance of *als wie* patterns and their relative frequency. I examine similar patterns in an unrelated language. There is no surface-similarity between the matrix marker and the equative complementiser in Hungarian, which provides direct evidence for the possibility of reanalysing the matrix equative element into the subclause in non-degree equatives. Further, I argue that surface-similarity was crucial in the spread of *als wie* in German to degree equatives, which is not attested in Hungarian historically.

The paper is organised as follows. Section 2 describes the basic syntax of equatives in German and Hungarian. Section 3 shows how the model introduced in section 2 can describe the

changes in German. Section 4 discusses the Hungarian data and the results of the corpus study and presents the theoretical conclusions regarding the emergence of doubling patterns.

2. The syntax of equatives

As discussed in section 1, present-day Standard German equatives are marked by the matrix element *so* and the complementiser *wie*, as in (1). Hungarian shows a similar distribution:

(4) a. *Mari* ***olyan*** *magas,* ***mint*** *az anyja.*
Mary so tall as the mother.POSS
'Mary is as tall as her mother.'

b. *Mari* ***olyan***, ***mint*** *az anyja.*
Mary so as the mother.POSS
'Mary is like her mother.'

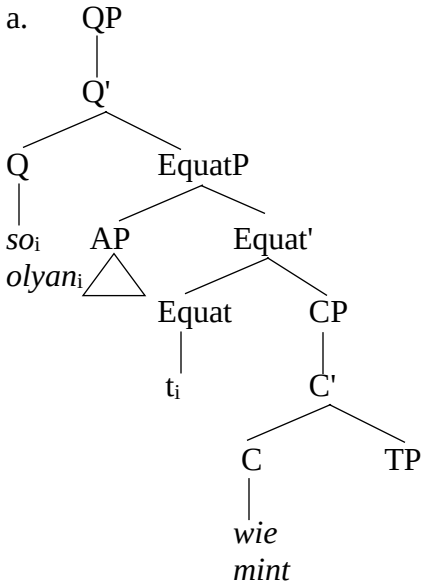
c. *Mari magas,* ***mint*** *az anyja.*
Mary tall as the mother.POSS
'Mary is tall like her mother.'

As can be seen, the equative complementiser is *mint* 'as' in all cases; the matrix equative marker *olyan* is available both in degree equatives and in non-degree equatives. Given the similarities between German and Hungarian, it seems reasonable that they should be similar in their syntax.

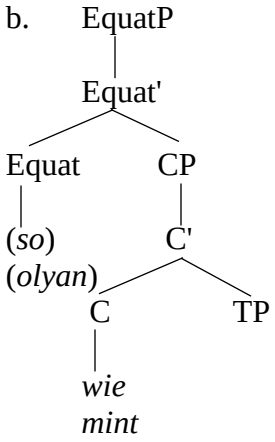
Let us first consider degree equatives. As the matrix equative element – *so* in (1a) and *olyan* in (4a) – imposes selectional restrictions on the comparative standard (the subclause headed by *wie* and *mint*), I follow Lechner (2004: 22) in assuming that it takes the subclause as a complement. I also adopt the view that the AP is in the specifier of the functional projection headed by the matrix equative element (Lechner 2004: 22). This projection is generally referred to as DegP in comparatives (Lechner 2004, Bacskai-Atkari 2018a; see also Corver 1997 for the notion of the DegP); and I will tentatively label it as EquatP (equative phrase) in the present paper, as the projection is not tied to the notion of degree in equatives. There is an additional layer QP, above the DegP (Bacskai-Atkari 2018a: 32, following Lechner 1999: 25). The degree head moves to the Q head, and the specifier of the QP can host degree modifiers; the QP is tied

to the notion of degree.[1] Adopting the view that both *wie* and *mint* are complementisers (cf. arguments put forward by Jäger 2010, 2016 for German, and by Bacskai-Atkari 2014a for German and Hungarian), the structure for degree equatives is given in (5a). As there is no gradable adjective in non-degree equatives like (1b) and (4b), I assume that the structure is simpler, as in (5b).

(5) a.



b.



While German and Hungarian are strikingly similar regarding the basic syntactic pattern found in equatives, the doubling patterns differ in the two languages. In Modern Hungarian, *mint* can be followed by an overt operator (Kenesei 1992, Bacskai-Atkari 2014a, 2014b):

(6) a. *Mari* ***olyan*** *magas,* ***mint*** ***amilyen*** *(magas)* *az* *anyja.*
Mary so tall as how tall the mother.POSS
'Mary is as tall as her mother.'

[1] Modifiers like *extremely*, *exactly* and *far* show agreement with the particular degree, e.g. *far taller* is possible but **exactly taller* is not. For this reason, such modifiers were already located in [Spec,QP] by Corver (1997: 154–161), albeit the relative position of his QP in the entire degree expression differs from that of Lechner (1999: 25) and Bacskai-Atkari (2018a: 32). Another argument in favour of the QP goes back to Bresnan (1973): the Q head is the locus where a dummy *much* is inserted, resulting in *more* in comparatives following the upward movement of *-er*). In sum, there is independent evidence for the existence of a second functional layer (QP).

b. *Mari* ***olyan*** ***mint*** ***amilyen*** *az* *anyja.*
Mary so as how the mother.POSS
'Mary is like her mother.'

The combination *mint amilyen* 'as how' might at first seem to be strikingly similar to German *als wie*, in (3) above, but note that while the element *amilyen* in Hungarian can take a lexical AP in degree equatives, as in (6a), this is not possible with German *wie*, as shown in (7a):

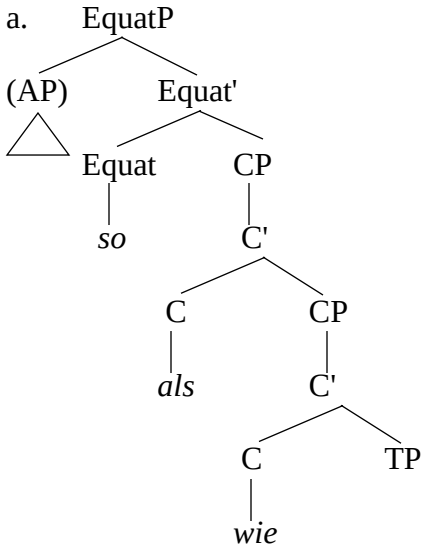
(7) a. **Der* *Tisch* *ist* *so* *lang* ***(als)*** ***wie*** ***breit*** *das* *Büro* *ist.*
the.M desk is so long as as wide the.N office is
'The desk is as long as the office is wide.'

b. *Der* *Tisch* *ist* *so* *lang* ***(als)*** ***wie*** *das* *Büro* ***breit*** *ist.*
the.M desk is so long as as the.N office wide is
'The desk is as long as the office is wide.'

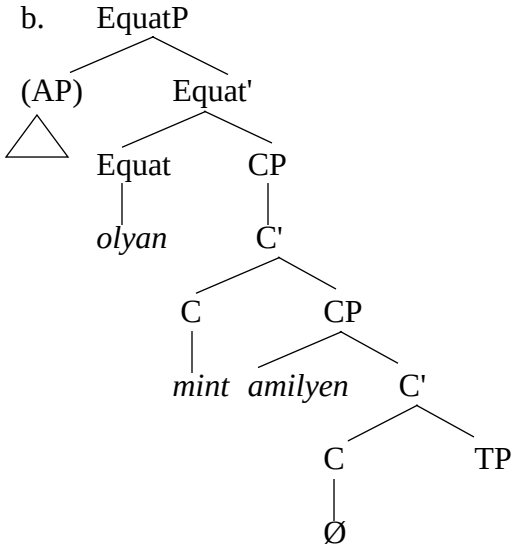
The constraint holds regardless of whether *als* is co-present or not. (7b) shows that the adjective itself is otherwise licensed in its base position, and hence the problem in (7a) stems from the movement of the AP to the left periphery (see Bacskai-Atkari 2014a for German comparatives).

The structure for the doubling patterns (leaving out the QP layer) is shown in (8); the AP in the matrix clause appears in degree equatives:

(8) a.



b.



There are two CPs, following Bacskai-Atkari (2014a). For German, Jäger (2010) proposed a combination of a ConjP (headed by *als*) and a CP (headed by *wie*), but the presence of coordination in comparatives (Lechner 2004) is problematic (Bacskai-Atkari 2018a: 65–70).[2] There are two major differences between German and Hungarian to mention here. First, the overt element in the lowest projection is a complementiser in German and an operator moving to [Spec,CP] in Hungarian (see above). Semantically, *wie* can naturally be treated as an operator (Hohaus & Zimmermann 2014), and in this sense, there is no reason to assume a further operator in the specifier.[3] Second, the canonical equative complementiser is located in different positions.

I suggest that the observed difference follows from different grammaticalisation processes underlying these patterns. In Hungarian, the lower element was introduced as an innovation; in German, the higher element was reanalysed from the subclause (as proposed by Jäger 2016). I show that the latter is attested in non-degree equatives in Hungarian historically, providing cross-linguistic evidence for this kind of change.

3. Equatives in German

The original pattern in German equatives (see section 1) involved the equative complementiser *als* (*(al)so*), in (2). This conforms to the regular West-Germanic pattern, whereby the complementiser is *as*/*so* in degree and non-degree equatives, and the matrix equative element is *as*/*so*. This is partly reflected in the present-day patterns from English, Dutch, and German:

[2] Under this non-cartographic view, multiple CPs are possible if there is multiple clause-typing, but otherwise only a minimum of layers is generated. In doubling patterns in comparatives, the lower CP is associated with the relative nature of the clause, while the higher CP marks the clause as comparative. The model crucially differs from cartographic approaches going back to Rizzi (1997), which assume designated projections for each function. Instead, it is closer to the CP-recursion proposed by Vikner (1995) and Vikner, Christensen & Nyvad (2017), which likewise involves multiple CPs with partly similar functions (e.g. a projection hosting a finite complementiser and another projection hosting the fronted finite verb in Scandinavian embedded V2 patterns).

[3] For this reason, which ultimately follows from economy, the co-occurrence of an operator in the specifier and a head (in the same projection) is generally not attested. As Bacskai-Atkari (2018b: 22–26) argues, this may be possible in free relatives, but they have a syntax different from (8).

(9) a. *Ralph is **as** tall **as** Peter.*

b. *Sophie is **zo** groot **als** Lieke.*
Sophie is so tall as Lieke
'Sophie is as tall as Lieke.'

c. *Ralf ist **so** groß **wie** Peter.*
Ralph is so tall as Peter.
'Ralph is as tall as Peter.'

Regarding the etymology, the following can be established. English *as* derives from *eallswa* (*all + so*), and the forms *swelce* (*swilce*, *such*) and *so* (*swa*) were also possible historically in *as*-constructions (Kortmann 1997: 315–317; see also López-Couso & Méndez-Naya 2014: 312–314 and references there). Similarly, German *als* derives from Old High German *also* (*all + so*), and various forms of *so* were possible historically in *as*-constructions (Jäger 2010). Dutch *als* is likewise derived from *also* (*al + so*). Hence, the elements *so* and *as* are essentially the same, either as matrix elements or as complementisers, whereby later differentiation and changes are also naturally possible.

In particular, German *wie* is an innovation. It is the result of a reanalysis from an operator in the specifier into a grammaticalised C head, in line with general economy principles. This change was termed the "comparative cycle" by Jäger (2010; 2016), based on the "relative cycle" of Van Gelderen (2004; 2009); see also the arguments of Bacskai-Atkari (2014a).

As mentioned in section 1, there are two possible scenarios regarding the diachronic relation of single *als,* single *wie* and the combination *als wie* in the subclause. These are schematically represented in (10) below. In either case, the change took place in non-degree equatives earlier and later spread to degree equatives (Jäger 2010, Jäger 2016: 294):

(10) a. *als → als wie → wie*

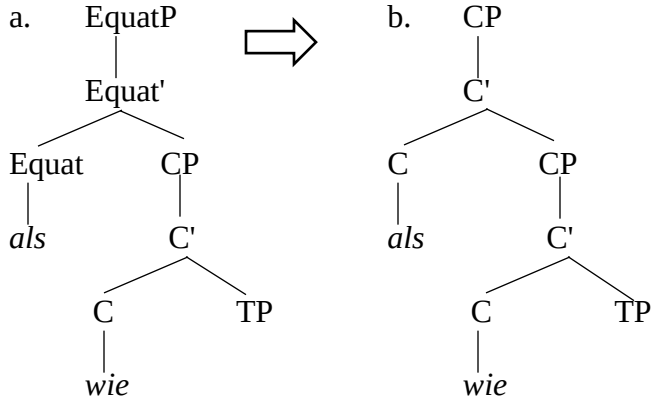
b. *als → wie → als wie*

The scenario in (10a) is represents the traditional view (which was also adopted by Jäger 2010 and Bacskai-Atkari 2014a), involving *als wie* as a middle stage. In this case, it is assumed that *wie* was introduced as a comparative operator in a lower functional projection; once it grammaticalised as a complementiser at a later stage, it eventually came to replace the original

complementiser *als*. This change involves only canonical upward/leftward grammaticalisation, in line with Roberts & Roussou (2003). The option in (10b) is what Jäger (2016: 291–298) argues for, whereby the combination *als wie* is a later result, following the establishment of *wie* as a complementiser and the disappearance of the original *als*. While this is supported by the observed diachronic order and by the relative frequency of doubling patterns (see section 1), the element *als* is surface-ambiguous between the matrix equative element and the original equative complementiser, and it is not clear how such a reanalysis process can take place, as it apparently involves downward reanalysis, seemingly contrary to Roberts & Roussou (2003). This question remains essentially unaddressed by Jäger (2016).

This paper argues for the change given in (10b). Regarding the emergence of the doubling structure, I assume that the following change took place:

(11) a.



b.

The structure in (11a) represents stage 2 in (10b), where single *wie* is a complementiser, and the element *als* is a matrix equative marker. The structure is the same as in Modern Standard German (1b) involving the combination of the matrix equative marker *so* and the complementiser *wie*. The change from (11a) to (11b) involves a change in the label but not the reanalysis to a pre-existing lower position and is not contrary to the grammaticalisation scheme of Roberts & Roussou (2003). Indeed, the change in (11) is not an instance of grammaticalisation from a less functional into a more functional element but of relabelling. This is possible because non-degree equatives do not necessarily contain a matrix equative element, see (1c) above. The double CP in (11b) is not embedded under an Equat head but is interpreted as a construction where *als* is part of the subclause.

There are three important factors to mention here. First, reinterpretation is possible because the element *als* in (11a) is string-adjacent to *wie*; unlike in degree equatives, there is no intervening adjective, see (5a) and (5b). Second, in German elements like *als* (*so, also*) are surface-ambiguous even in dialects where *als* in no longer attested as an equative complementiser on its own. This is the case in all dialects except for Low German varieties, where *als* in equatives is attested even in present-day dialects (Jäger 2016: 262); *als* is possible as a comparative complementiser in comparatives expressing inequality. Therefore, *als* is prone to be assigned a different syntactic label. Third, the semantic role of *als* is to lexicalise the maximality operator, but this semantic function is not tied to the notion of degree and is not associated with a particular syntactic label (Hohaus & Zimmermann 2014; see also von Stechow 1984 on the role of the two operators). This results in some flexibility in the syntax, restricted to the choice between a matrix equative element and an equative complementiser; and hence the relabelling of *als* is possible. Naturally, while this can result in two CPs, the number of CPs is restricted. The higher element lexicalises the maximality operator and the lower one lexicalises the comparative operator, which can syntactically be a complementiser head (see section 2).

Once (11b) was available in non-degree equatives, it could be extended to degree equatives by way of analogy. Degree equatives involve a matrix equative element, which is then present in addition to the double CP in the subclause, as in (8a).

4. Equatives in Old Hungarian

Let us now turn to the discussion of the data from Old Hungarian (10th to 15th centuries). As pointed out by Kántor (2013), there are various elements attested in the subclause in similatives in Old Hungarian, but out of these, only *mint* grammaticalised as a C head.[4] In order to gain some insight into the distribution of these elements, I carried out a corpus study, using the normalised part of the "Old Hungarian Concordance" corpus (Simon 2014).[5] The examples

[4] The reanalysis of *mint* is a standard reanalysis from specifier into head, in line with economy principles, as in the case of German *wie* (see Bacskai-Atkari 2014a).

[5] The corpus is available at: http://omagyarkorpusz.nytud.hu/en-search.html.

given below are from this corpus study. I will first introduce the four individual similative markers, all with a meaning close to 'how', including their etymology.[6]

The element *mint* stems from the combination of *mi* 'what' and the modal suffix *-n* and the locative suffix *-t*. The element *miként* stems from the combination of *mi* 'what' and the modal suffix *-ként*.[7] Two examples are given from Old Hungarian below:

(12) a. *mert vala ǫkèt taneito **mikent** hatalmas & nē mikēt aʒ*
for was they.ACC teaching as great not as the
iraſtudoc & a leualtac
scribes the Levites
'For He taught them as one having authority, and not as the scribes.'
(Munich Codex 36va; Mark 1:22)

b. *mert wg̋ tanoyttya vala hw̋ket, **mynt** kynek hatalma vagyon*
for so taught.3SG be.PST they.ACC as who.DAT power.POSS is
rea, es nem mykeppen az yraſthwdok
it.SUBL and not as the scribes
'For He taught them as one having authority, and not as the scribes.'
(Jordánszky Codex 455; Mark 1:22)

The elements *miként* (in the Munich Codex)[8] and *mint* (in the Jordánszky Codex)[9] appear in the same environment; both correspond to Latin *quasi*.[10]

The element *miképpen* stems from *mi* 'what' and the modal suffix *-képpen* (this suffix in turn consists of the noun base *kép* 'picture, likeness' and the modal suffix *-n*).[11] The element

[6] The etymological data presented here are based on the following etymological dictionary: *Etymologisches Wörterbuch des Ungarischen*, edited by Loránd Benkő.

[7] The suffix *-ként* is still productive in Modern Hungarian, e.g. added to the noun *tanár* 'teacher', it gives *tanár-ként* 'as a teacher'.

[8] The Munich Codex is from 1466 and contains the translation of the 4 gospels.

[9] The Jordánszky Codex is from 1516 and 1519 and contains almost the entire New Testament and 7 books of the Old Testament.

[10] In addition, *miként* in the Munich Codex and *miképpen* in the Jordánszky Codex occur as the equivalents of the Latin *sicut*.

[11] It appears that the suffix *-képpen* is also still productive in Modern Hungarian, e.g. added to the noun *büntetés* 'punishment', it gives *büntetés-képpen* 'as a punishment'.

monnal is of unclear origin and it is a restricted option (see the discussion below). Two examples are given from Old Hungarian below:

(13) a. *meɾt latam a ʒèllètėt lè ʒallatta meńbǫl* ***mōnal***
for saw.1SG the spirit.ACC down flown.3SG heaven.ELA as

galambat & ǫ raita maradot
dove.ACC he upon.him stayed.PTCP

'I saw the Spirit descending from heaven like a dove, and He remained upon Him.' (Munich Codex 85va; John 1:32)

b. *Mert latam yſtennek leelkeet le zalwan menybǫ́l,*
for saw.1SG God.DAT spirit.ACC down flying heaven.ELA

mykeppen *az galamboth, es megh marada hw̋ raytta*
as the dove.ACC and PRT stayed.3SG he upon.him

'I saw the Spirit descending from heaven like a dove, and He remained upon Him.' (Jordánszky Codex 625; John 1:32)

Again, the elements *miképpen* and *monnal* appear in exactly the same environment (the Latin original contains again *quasi*) in the two different translations, and they can be treated as synonymous in non-degree equatives.

As mentioned above, out of the four similative elements, only *mint* grammaticalised as a complementiser in degree equatives. The question arises why this was the case. Kántor (2013) suggests that this element was more frequent while the other elements gradually disappeared or became marginal. My corpus search based on the "Old Hungarian Concordance" corpus mentioned above gave the number of hits summarised in Table (as of 29th September 2018). The corpus contains results for Old Hungarian[12] and also for selected texts from Middle Hungarian (16th to 18th centuries).[13]

[12] This includes various Old Hungarian codices and some minor texts; as of 29th September 2018, this normalised part of the corpus amounts to about 450 000 tokens, counting the normalised versions without punctuation marks.

[13] As of 29th September 2018, the normalised part of the corpus includes two Bible translations from Middle Hungarian: the translation of Gáspár Károli from 1590 (the translation is available for the whole Bible but the corpus contains only the books of the New Testament) and the translation of János Sylvester from 1541 (this translation includes the New Testament only). This normalised part of the corpus amounts to about 319 402 tokens, counting the normalised versions without punctuation marks.

	Old Hungarian	Middle Hungarian	TOTAL
mint	542	842	1384
miképpen	738	492	1230
miként	478	7	485
monnal	189	–	189

Table 1: Similative markers in the Old Hungarian Concordance corpus

Considering the total number of occurrences, one might at first indeed attribute the grammaticalisation of *mint* to its higher frequency, though *miképpen* is almost as frequent as *mint*. Note, however, that the hits for *mint* also include degree equatives and comparatives expressing inequality, hence the number of non-degree equatives with *mint* is actually lower. Importantly, when considering its distribution in Old Hungarian, *mint* is not even the most frequently occurring element of the four similatives. Its frequency increases in Middle Hungarian, while the relative frequency of the other elements decreases. In other words, it seems that *mint* very probably did not come to be the canonical equative complementiser simply due to its high frequency, as its frequency was not the highest of the similative elements; rather, it came to be the most frequent similative element because it was the only one that grammaticalised as the canonical equative complementiser.

One factor to take into consideration is that *mint* is less transparent than *miképpen* and *miként*, and therefore more suitable for grammaticalisation, especially in degree equatives. The role of transparency can also be detected in English regarding the difference between *as* (non-transparent) occurring in degree equatives and *like* (transparent) occurring in non-degree equatives. Regarding the entire picture, it is also important to mention that *monnal* was restricted in its occurrence; it occurs only in the Munich Codex and in the Vienna Codex (middle of the 15th century) in the normalised part of the corpus. The two codices are related, and they are both

parts of the "Hussite Bible", which also includes the Apor Codex (end of the 15th century – beginning of the 16th century).[14] It seems that the form *monnal* is restricted to this group.[15]

To achieve comparable results, I examined two Bible translations in detail, comparing the same loci in the gospels. The first one is the Munich Codex from 1466, which contains the translation of the 4 gospels. The second one is the Jordánszky Codex from 1516 and 1519, which contains almost the entire New Testament and 7 books of the Old Testament. I searched for the equivalents of the Latin non-degree equative markers *quasi* and *tamquam*. The element *quasi* derives from *quam si* 'as if' but it was no longer transparent in late classical Latin either (see Tarriño 2011). The element *tamquam* derives from *tam* 'so' and *quam* 'as'.

The search results for the Munich Codex and the Jordánszky Codex are given in Table 2:[16]

	Munich Codex	**Jordánszky Codex**	**TOTAL**
monnal	21	–	21
miként	4	–	4
miképpen	–	7	7
mint	2	5	7
oly-mint	–	16	16
ugy-mint	–	1	1

Table 2: Non-degree equative markers in the Munich Codex and the Jordánszky Codex

There are very few instances of *mint* in the Munich Codex; the most prominent equivalent is *monnal*. The proportion of *mint* is higher in the Jordánszky Codex, where it appears on its own and in combination with *oly* 'so' and *ugy* 'so.ADV'. An example for *oly-mint* is shown in (14):[17]

[14] A search in the Apor Codex (not yet normalised) gives 8 hits for the form *monnnal* (note that this is the original spelling, and other orthographic variants may occur in the text, too).

[15] According to Adrienne Dömötör (p.c.), *monnal* is not attested in other Old (or Middle) Hungarian texts than the three codices belonging to the Hussite Bible.

[16] There is apparently no one-to-one correspondence between a Latin element (*quasi*/*tamquam*) and its Hungarian translation. Note that the total number of occurrences differs in the two texts. This is because a similative meaning can be expressed in other ways (such as coordination), which cannot be considered as proper similatives.

[17] The Latin original contains *tamquam*. Note that the combinations *oly-mint* and *ugy-mint* are not calques based on Latin: most occurrences have *quam* in the original. There are also independent examples in the Kazinczy Codex (from between 1526 and 1541), which is not a translation.

(14) *lataa a' menyorzagot nythvan lenny, es yftennek zent lelkeet*
saw.3SG the heaven.ACC open.PTCP be.INF and god.DAT sacred spirit.ACC

oly mynth *galamb kepeben le zallany*
so as dove picture.POSS.INE down descend.INF

'He saw the heavens parting and the Spirit descending upon Him like a dove.'
(Jordánszky Codex 454; Mark 1:10)

Table 3 shows the results for *oly-mint*[18] in the normalised corpus (as of 29th September 2018).

	Number of occurrences
Old Hungarian	**Σ 64**
Booklet (1521)	1
Kazinczy Codex (between 1526 and 1541)	9
Jordánszky Codex (1516 and 1519)	54
Middle Hungarian	**Σ 17**
Sylvester's Bible translation (1541)	17
TOTAL	**81**

Table 3: The occurrences of *oly-mint* in the Old Hungarian Concordance corpus

The number of occurrences, especially compared to Table 1, is rather low and restricted to just a handful of texts from the first half of the 16th century. The difference is also reflected between the Munich Codex and the Jordánszky Codex (Table 2). This suggests that *oly-mint* emerged quite late in Old Hungarian and did not come to be a dominant pattern in Middle Hungarian

[18] Table 3 does not include results for *ugy-mint*. The corpus search (as of 29th September 2018) gives only 6 hits for *ugy-mint* for Old Hungarian: 5 instances from the Jordánszky Codex and 1 instance from the Czech Codex (from 1513). This seems to have been a very restricted pattern; all the 6 examples are essentially the adverbial counterparts of *oly-mint* as in (14). In other words, the reanalysis affecting *oly* (see below) apparently affected *ugy* only to a limited degree and turned out not to be productive. The Middle Hungarian part of the corpus contains 82 instances of *ugy-mint*, all from Károli's Bible translation (see above), but in these cases *ugy-mint* is used in the sense of 'about, approximately', as in (i). This suggest that *ugy-mint* may have undergone quite different reinterpretation processes, which are different from the ones affecting *oly-mint* and are hence not relevant here.

(i) ***v'gy mint*** *egy óra múluan*
so.ADV as one hour elapsing
'about an hour later' (Károli 76v)

either. This is reminiscent of the emergence of *als wie* in German. It appeared only after *wie* was established as an equative marker, but it did not emerge as a dominant pattern in any German dialect (Jäger 2016: 266–269). The question is what the status of the combination *oly-mint* is. Since the matrix equative marker in Hungarian is generally *oly(an)*, one might think that instances of *oly-mint* also include a matrix equative marker and a complementiser. After all, *oly* was clearly available as a matrix equative marker in Old Hungarian, as shown in (15):[19]

(15) a. *Kÿ* ***olÿ*** *. mÿnt mÿ vronk ÿsten. kÿ magassaagokban lakozÿk:*
who so as our lord.POSS.1PL God who heights.INE lives

ees alaazatosokath meg tekeent menÿben ees fǫldǫn
and meek.PL.ACC PRT regards heaven.INE and eart.SUP

'Who is like our Lord the God, who lives in heaven and regards the meek in heaven and on earth.' (Czech Codex 140)

b. *Mert banya uala mÿkoron valamely egÿhazat nem lewl uala*
for regrets be.PST when some church.ACC not finds be.PST

oly *tÿztan ment ew akarya vala*
so clean.ADV as he wants be.PST

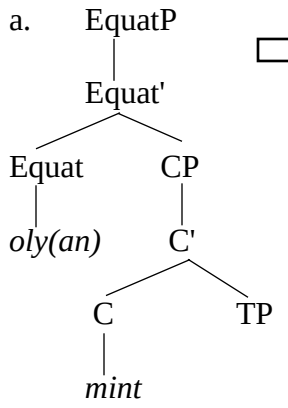
'For he was sorry when he did not find a church as clean as he wanted it to be.' (Jókai Codex 97)

In (15a), *oly* is a predicate in the matrix clause. It cannot be part of the subclause; this structure is analogous to (4b) and German (1b). In (15b), there is a gradable adverb intervening between *oly* and the subclause, again making it impossible for *oly* to be part of the subclause. This is a structure analogous to (4a) and German (1a).

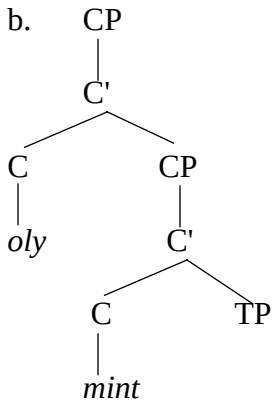
However, (14) is different. The element *oly* is an adjectival equative marker, which, in non-degree equatives, is possible as a predicate, as in (15a), or as an attribute, but not as a verbal modifier. In (14), the similative clause is adverbial (it specifies the manner of flying), and hence *oly* is located in the subclause. As there are several other occurrences of this type in Old (and Middle) Hungarian (Table 3), it can be concluded that the reanalysis of *oly* into the subclause was complete in the relevant grammar. Reanalysis involves a categorical change in the syntactic structure, as in German, involving a change from Equat to C, illustrated in (16):

[19] The Czech Codex is from 1513 and the Jókai Codex is from around 1440.

(16) a.



b.



Reanalysis is possible because the two elements are adjacent in non-degree equatives initially as well, and there is no movement to a Q head, as indicated in (5b) above. In Old Hungarian, reanalysis involved only the shorter form *oly* but not the strong form *olyan* (the latter is not a clitic). Note that the form *oly* was much more frequent in Old Hungarian than *olyan*: as of 29th September 2018, a corpus search on the normalised part of the "Old Hungarian Concordance" corpus gave 179 hits for *oly* (79,56%) and 46 hits for *olyan* (20,44%). The Middle Hungarian part of the corpus (containing the two Bible translations mentioned before) gave 144 hits for *oly* (42,40%) and 106 hits for *olyan* (57,60%), indicating a change in the relative frequency of these elements.

The syntactic development is similar to German, see (11), but *oly-mint* (and *ugy-mint*) was not extended to degree equatives, unlike German *als wie*. It is certainly possible that the combination was not well-spread enough in the relevant dialects. In addition, there are certain factors that might have hindered a development similar to German. One factor is the lack of ambiguity regarding the status of *oly* outside constructions like (14). Contrary to German *als*, which is attested in subclauses in other constructions, *oly* occurs otherwise in main clauses only. In degree equatives, a matrix equative marker is necessary, taking the gradable predicate as an argument: *oly(an)* in Hungarian, which is surface-similar to *oly-* appearing in *oly-mint*. This configuration would have been exceptional in the Hungarian syntactic paradigm, since in

Hungarian, unlike in West Germanic, matrix equative markers differ from equative complementisers.[20]

In addition, the comparative operators of the form *amilyen*, (6), started to appear in Middle Hungarian (Bacskai-Atkari 2014a), and these appear in a double CP where *mint* is the higher head, lexicalising the maximality operator. The relative position and function of mint is thus in conflict with doubling patterns involving *oly-mint*, where *mint* is the lower C head (and *oly* lexicalises the maximality operator).[21]

While *oly-mint* had no continuation in later periods, the fact that it existed has important repercussions for syntactic theory and diachronic syntax. It is evident that the combination *oly-mint* involves reanalysis from the matrix equative element into a complementiser and not the simultaneous usage of two already established complementisers, as was traditionally claimed to be the case for German *als wie*. This process involves a change in the syntactic label but no downward grammaticalisation, and is hence congruent with the hypothesis formulated by Roberts & Roussou (2003). In German, the element *als* is ambiguous between a matrix equative marker and a complementiser, while this is clearly not the case for Hungarian. The Old Hungarian data thus provide additional evidence for the label change proposed for German.

4. Conclusion

This article examined equative markers in German and Hungarian, concentrating on doubling patterns synchronically and diachronically. Non-degree equatives are less restrictive than degree equatives in terms of operators in the subclause, and changes/innovations by default start from

[20] A triple combination of this form is possible in German, (3), indicating that while a triple combination involves a certain degree of redundancy, it is not excluded in the grammar. Still, as mentioned above, *als wie* is not the predominant pattern in any German dialect, and it may be the case that redundancy also matters in this respect.

[21] As discussed in section 2, the co-occurrence of an overt comparative operator with a complementiser in the same projection (similarly to a Doubly Filled COMP effect) is not possible, rendering a sequence like **oly amilyen mint* 'so how as' impossible. Further, a triple combination like **oly mint amilyen*, involving three CPs, is not attested and is in fact not expected on theoretical grounds either: as mentioned in section 2, in case there is a double CP, one projection lexicalises the maximality operator and another one the comparative operator, rendering a third CP unmotivated: this is a natural restriction on the number of CPs.

non-degree equatives and may or may not spread to degree equatives. In Old Hungarian, this resulted in the availability of more operator elements in non-degree equatives, which were also more transparent with respect to their similative meaning. In German, the difference can be detected in the diachronic development: *wie* takes over in non-degree equatives earlier than in degree equatives. In both languages, doubling patterns can involve the reanalysis of the matrix equative element into a C head. This is an instance of categorial change, and is attested in German (*als wie*) and in Old Hungarian. The patterns may or may not be extended analogically to degree equatives. This is related to transparency. In German, the reanalysed *als* is identical to the previous canonical equative complementiser, while in Old Hungarian the reanalysed *oly* was idiosyncratic as an equative complementiser and still transparent as a matrix equative element, which hindered its analogical extension to degree equatives. The differences between the two languages can thus be drawn back to more general properties.

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