On distributive pronouns in the Baltic languages

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This article deals with the origin of the three distributive pronouns of the Baltic languages: Old Prussian erains, Lithuanian kiekvienas, Latvian ikviēns ‘everybody, everyone, each one’. They are all characterised by the numeral ‘one’ (OPr. ains, Lith. vienas, Latvian viēns), originally used as a pronominaliser, but they differ in their first element, which derives from a preposition ‘until’ in Old Prussian (er), from a conjunctive adverb ‘how much’ in Lithuanian (kiek) or from a form that could have been both of them in Latvian (ik ‘as much as’, but Lith. iki ‘until’). The aim of this paper is to explain the formation of these distributive pronouns and to account for their differences. It can be argued that the most ancient formation derives from a conjunction ik ‘as much as’ > ‘as long as’ > ‘until’ reanalysed as a distributive marker (Latvian), whereas Lithuanian kiek- and Old Prussian er- are recent modernisations of ik-.

Keywords: Lithuanian, Latvian, Old Prussian, distributive pronouns, reanalysis, correlation, etymology

1. Introduction

Indo-European comparative morphology has yielded significant results and, even if there are still some grey areas, we are fairly well informed about the prehistory of nominal and verbal formations. By contrast to this, there is much less consensus about the reconstruction of the PIE pronominal system. The reason for this is probably that pronouns are strongly affected by pragmatic parameters, such as the need to express deixis, saliency or emphasis, with the result that there is a pervasive tendency, in the individual languages, to reshape and reform them in order to make them better suited for their grammatical functions. Distributive pronouns, used in reference to individuals picked out separately from a set of persons or things (‘everybody’, ‘everyone’, ‘each one’), can exemplify this process: there is no sufficient formal basis for the reconstruction of a common PIE distributive pronoun, and virtually all the distributive pronouns found in the historical languages are secondary innovations. The Baltic languages are no exceptions. In the three documented Baltic
languages we encounter three different formations: Old Prussian erains, Lithuanian kiekviénas, Latvian ikviēns ‘everybody, everyone, each one’. The question is whether these three forms reflect a common pattern or were created independently from one another. At first sight they seem to derive from the numeral ‘one’ (Old Prussian ains, Lith. vienas, Latv. viēns) preceded by different elements meaning either ‘until’ (Old Prussian er ‘until’), ‘how much, as much as’ (Lith. kiek, interrogative and conjunctive) or both (Latv. ik ‘how much, as much as’, but Lith. iki ‘until’). The aim of this paper is to determine the derivational pathway that gave rise to each of these formations and to explain their distribution.

2. General description

Let us start with a brief description to illustrate the differences between the three languages. In Old Prussian, the distributive pronoun erains ‘everybody, everyone, each one’ corresponds to German jeder, jedermann, ein jeglicher. It is used three times in the Enchiridion (1561) in the nominative:

(1) Old Prussian

\[
\text{Bhe erains} \ \text{fwaian} \ \text{fallūban} \ \text{milijt}
\]
and everyone.nom.sg.m his.acc.sg wife.acc.sg love.inf

\[
bhe \ \text{teiſint.}
\]
and honour.inf

‘And everybody [must] love and honour his wife.’ = German: Vnd ein jeglicher fein gemahel lieben vnd ehren. (Enchiridion, 1561, iii 33₂)

(2) Old Prussian

\[
\text{Erains} \ \text{boūʃey} \ \text{poklusman} \ \text{fteiſei}
\]

\[
everyone.nom.sg.m \ \text{be.cond.3} \ \text{submitted.adv} \ \text{the.gen.sg}
\]

\[
\text{Aucktimmifkan.}
\]

authority.acc.sg

‘Let everybody be submitted to the authority.’ = German: Jeder man fey unterthan der Obrigkeyt. (Enchiridion, 1561, iii 89₁₇)

(3) Old Prussian

\[
\text{Erains} \ \text{mukinʃufin} \ \text{fwaian} \ \text{mukinʃfnan.}
\]

\[
everyone.nom.sg.m \ \text{learn.fut.refl} \ \text{his.acc.sg} \ \text{lesson.acc.sg.}
\]

‘Let everybody learn his lesson.’ = German: Ein jeder lern fein Lection. (Enchiridion, 1561, iii 97₂₀)
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once in the dative:

(4) **Old Prussian**

\[
\begin{align*}
\text{Tīt} & \text{ daiti} \quad \text{teinu} \quad \text{erainesmu} \quad / \quad \text{kai} \quad \text{ioūs} \\
\text{thus} & \quad \text{give.imp.2pl} \quad \text{now} \quad \text{everyone.dat.sg} \quad \text{how} \quad \text{2pl.nom.} \quad \text{f kellānts} \quad \text{aftai.}
\end{align*}
\]

owing.nom.sg \text{ be.prs.2pl}

‘Give thus now everybody what you owe him.’= German: So gebet nu jederman / was jr schuldig feid. (Enchiridion, 1561, iii 91.8,9)

**Erains** has no cognate in East Baltic, with the possible exception of a single adverbial form in Latvian *arviēn, arviēnu, arviēnam, arviēnīm* ‘always, on and on’ (ME 1923–1925, i 142, ‘immer, in einem fort’), which remains completely unmotivated and isolated. The distributive pronoun in Latvian is *ikviēns* ‘everybody’ (ME 1923–1925, i 705, ‘jeder’). It is regularly used from the earliest documents in the 16th century onwards:

(5) **Old Latvian**

\[
\begin{align*}
\text{Ickwens} & \quad \text{gir} \quad \text{tems} \quad \text{wuerßenekems} \\
\text{everyone.nom.sg.m} & \quad \text{be.prs.3} \quad \text{the.dat.pl.m} \quad \text{superior.dat.pl} \quad \text{packloußyx.}
\end{align*}
\]

submitted.nom.sg.m

‘Everbody is submitted to superiors.’ (Enchiridion, 1586, 23.5, ed. Bezzenberger 1875)

(6) **Old Latgalian**

\[
\begin{align*}
\text{Ta} & \quad \text{ir} \quad \text{ik wins,} \quad \text{kotrys} \\
\text{thus} & \quad \text{be.prs.3} \quad \text{everyone.nom.sg.m} \quad \text{who.nom.sg.m} \quad \text{pidzyma} \quad \text{nu} \quad \text{Gora.}
\end{align*}
\]

be.born.pst.3. from hell.gen.sg

‘Such is everybody who is born from hell.’ (Evangelia Toto Anno, 1753, 86.25)

(7) **Latvian (folksong)**

\[
\begin{align*}
\text{Ikweens} & \quad \text{fawu,} \quad \text{ikweens} \quad \text{fawu} \\
\text{everyone.nom.sg.m} & \quad \text{his.acc.sg} \quad \text{everyone.nom.sg.m} \quad \text{his.acc.sg} \quad \text{Wakarâ} \quad \text{gulêt} \quad \text{weda.}
\end{align*}
\]

evening.loc.sg \text{ sleep.inf} \text{ lead.prs.3}

‘Everybody leads, everybody leads in the evening his own [livestock] to sleep.’ (Baron & Wissendorff, Latwju dajnas, bw, 1909, 25118.1,2)
(8) Modern Latvian

\[
\text{Ikviens} \quad \text{to} \quad \text{var} \quad \text{izdarit}.
\]

everyone.nom.sg.m that.acc.sg can.prs.3 do.inf

‘Everybody can do that.’

\text{Ikviens} is used in Latvian not only pronominally, but also as a determiner introducing a noun, as in (9–12):

(9) Old Latvian

\[
\begin{align*}
Pee & \quad \text{i}k\text{weena} & \quad \text{Poi\text{ma}} & \quad \text{leez} & \quad \text{Atstragu} \\
\text{on} & \quad \text{every.gen.sg.m} & \quad \text{level.gen.sg} & \quad \text{put.imp.2sg pole.acc.sg} \\
tad & \quad \text{Seeta} & \quad \text{ne} & \quad \text{ichaubifees}.
\end{align*}
\]

then fence.nom.sg neg shake.fut.3.refl

‘On each level put a pole so that the fence will not shake.’ =

German: \text{bey ieder Schicht setze einen Nebenpfahl so wird der Zaun nicht wackeln} (Manuale Lettico-Germanicum, ca 1690, 573)

(10) Old Latgalian

\[
\begin{align*}
\text{ikwins} & \quad \text{Cylwaks} \\
\text{every.nom.sg.m} & \quad \text{man.nom.sg}
\end{align*}
\]

‘every man’ (Evangelia Toto Anno 1753, 16\textsubscript{14–15})

(11) Latvian (folksong)

\[
\begin{align*}
Peezi & \quad \text{dehli} & \quad \text{tam} & \quad \text{tehwam}, \\
\text{five.nom.pl.m} & \quad \text{son.nom.pl} & \quad \text{the.dat.sg.m} & \quad \text{father.dat.sg} \\
Peezi & \quad \text{fimti} & \quad \text{ofolimu}: \\
\text{five.nom.pl.m} & \quad \text{hundreds.nom.pl} & \quad \text{oak.gen.pl}
\end{align*}
\]

\text{Ikweenam} \quad \text{dehlinam}

each.dat.sg.m \quad \text{son.dat.sg}

\[
\begin{align*}
\text{Pa} & \quad \text{fimtam} & \quad \text{ofolimu}. \\
\text{prep.distr hundred.dat.sg} & \quad \text{oaks.gen.pl}
\end{align*}
\]

‘The father has five sons and five hundred oaks: for each son, a hundred oaks.’ (Baron & Wissendorff, \textit{Latwju dajnas}, \textit{bw}, 1909, 3753)

(12) Modern Latvian

\[
\begin{align*}
To & \quad \text{var} \quad \text{izdarit} \quad \text{ikviens} \quad \text{b\textsubscript{\text{e}rns}}. \\
\text{that.acc.sg} & \quad \text{can.prs.3 do.inf} & \quad \text{every.nom.sg.m} & \quad \text{child.nom.sg}
\end{align*}
\]

‘Every child can do that.’ (Mathiassen 1996, 73)

\text{Ikviens} has no cognate in the other Baltic languages. There is only a handful of occurrences of a corresponding form \text{ikvienas} in Lithuanian,
in the works of Jonas Balvočius-Gerutis (1842–1915) and Adolfas Saba- liauskaš (1873–1950), two authors coming from the border region with Latvia.¹ There is also a brief mention of *ikvienas* in the four-language dictionary by Mykolas Miežinis (1894, 83), who is known, however, to have mixed Latvian with Lithuanian forms.² *Ikvienas* is likely to be a Letticism confined to some regional usages of Lithuanian. A similar form, though with a difference of vocalism, is *iekvienas* or *jiekvienas* ‘everybody, everyone’ attested in the Lithuanian dialect of Skirsnemunė.³

The Lithuanian distributive pronoun is *kiekvienas*. It is documented since the first Lithuanian writings, but in the early stages faced competition from the Slavonic loanword *kõžnas* (< Belorussian *кожны*).⁴ Mažvydas conspicuously prefers *kõžnas* (49x) to *kiekvienas* (8x), but uses the latter with exactly the same meaning, as a pronoun (compare 13 and 14):

(13) Old Lithuanian

```
Tawes  Kofʒnas  tur  bioti.
you.gen.sg everyone.nom.sg have.to.prs.3 fear.inf
```

‘Everybody has to fear you.’ = German: *des mus sich fürchten jederman*. (Martynas Mažvydas, *Gesmes Chrikſcʒonikfas*, 1570, 341₁₀)

(14) Old Lithuanian

```
Kiek wenas  ką  giera  padaris,
everyone.nom.sg  what.acc  good.acc.sg  do.fut.3
```

tatai  nog  Diewa  tur  turieti.
that.acc.sg from  God.gen.sg  have.to.prs.3  have.inf

‘Everybody must have all the good he has done from God.’ = Latin: *unusquisque quod fecerit boni, hoc reportabit à Deo*. (Martynas Mažvydas, *Catechismusa Prasty Sʒadei*, 1547, 37₁)

and as a determiner (compare 15 and 16):

(15) Old Lithuanian

```
dalis  makfla  /  Krikſcžianiu  kurias
part.acc.pl  doctrine.gen.sg  Christian.gen.pl  which.acc.pl.f
```

¹ Data from the *lkž* (1957, iv 35).
³ *lkž* (1957, iv 344).
⁴ Skardžius (1931, 109).
kažnas  krikščianiu  žmagus
every.NOM.SG.m  Christian.GEN.PL  man.NOM.SG.
pawinnas  yr  kaltas  efti  makieti
responsible.NOM.SG.m  and  owing.NOM.SG.m  be.PRS.3  know.INF
bei  permanit
and  understand.INF
‘the parts of the Christian doctrine that every Christian must
learn and understand.’ = Polish: częsci Chrześcjańskiej /
ktores wszelki chrześcijanin powinien wiedzieć i rozumieć.
(Martynas Mažvydas, Catechismus Prasty Sądei, 1547, 17)

(16) Old Lithuanian
Niekniekas  byla  kiekwienas  wiras
stupidity.ACC.PL  tell.PRS.3  every.NOM.SG.m  man.NOM.SG.
su  įsaka  artimuju.
with  his  neighbour.INS.SG.M.DEF
‘Every man says stupid things to his neighbour.’ = Latin: Vana
locuti sunt unusquisque ad proximum suum; German: einer redet mit
dem andern unütze ding. (Martynas Mažvydas, Gesmes Chrikščo-
niškas, 1570, 528)

In more recent sources, the competition has progressively turned in
favour of kiekwienas, with the result that in Modern Lithuanian kūžnas
is now restricted to a minority of marginal dialects. In the modern lan-
guage kiekwienas is the only distributive pronoun and determiner (ex.
17–18):

(17) Modern Lithuanian
Kiekvienas  turi  savo  svajonių.
everyone.NOM.SG.m  have.PRS.3  his  dream.GEN.PL
‘Everybody has his own dreams.’ (Ramonienė & Pribišauskaitė
2008, 157)

(18) Modern Lithuanian
Jis  ateidavo  kiekvieną  dieną.
3.NOM.SG.m  come.IMPF.3  every.ACC.SG  day.ACC.SG
‘He used to come every day.’ (Žindžiūtė Michelini 2007, 73)

What emerges from these data is that no common Baltic form can be
reconstructed for a distributive pronoun. This finding is consistent with
what we have in other Indo-European subgroups.\(^5\) We must always be mindful of the instability of distributive pronouns across languages in investigating the origin of the Baltic forms. As a result, we do not necessarily need to introduce a common Proto-Baltic etymon in our reconstruction.

3. The numeral ‘one’

This synchronic diversity is matched by the diversity of the diachronic sources to which these distributive pronouns can be traced back. The three Baltic forms share the numeral ‘one’ in their structure: Old Prussian -ains (in erains), Lithuanian -viënas (in kiekviënas), Latvian -viëns (in ikviëns). The derivation of a distributive pronoun from the numeral ‘one’ corresponds to a pattern widely attested cross-linguistically [x + one]:

(19) French chacun (< un); Italian ciascuno and ognuno (< uno); Spanish cada uno (< uno); Dutch iedereen (< een); English each one, everyone (< one); Welsh (emphatic) pob un (< un); Breton pep unan (< unan); Modern Greek καθένας (< ἕνας); Hindi praktiek (< ek); Persian har yek ‘each one (of them)’ (< yek).

These languages can be divided at least into two groups. First, there are languages in which the addition of the numeral ‘one’ serves to distinguish a distributive pronoun from a distributive determiner introducing a noun (type 1):

(20) Type 1 (pronoun-one, vs. determiner): French chacun (< un), vs. chaque livre ‘every book’; Spanish cada uno (< uno), vs. cada libro ‘every book’; Dutch iedereen (< een), vs. ieder boek ‘every book’; English each one, everyone (< one), vs. each book, every book; Welsh (emphatic) pob un (< un), vs. pob llyfr ‘every book’; Breton pep unan (< unan), vs. pep levr ‘every book’; Modern Greek καθένας (< ἕνας), vs. κάθε βιβλίο ‘every book’; Persian har yek ‘each one (of them)’ (< yek), vs. har ketāb ‘every book’.

The second type includes languages in which the addition of the numeral ‘one’ gives a distributive formation with no distinction between

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\(^5\) In Germanic, for example, there exists a similar diversity of distributive pronouns and no common prototype can be established with certainty: Gothic has ƕazuh, Old Norse hvártveggi, Swedish varje, Old High German golih, eogolih, hwelih, eogiwelih, German jeder, Dutch iedereen, Old English ælc, gehwelc, English each, every.
pronoun and determiner (type 2). This is quite uncommon in the Indo-European languages; an example is Modern Italian:


These two types are distinguished from a third and a fourth, in which there is no numeral ‘one’, either with a formal distinction between the pronoun and the determiner realised by other means (type 3) or without any such formal distinction (type 4):


(23) Type 4 (pronoun = determiner): Ancient Greek ἐκαστος ‘everybody’ = ἐκαστος ἰητρὸς ‘every physician’ (Herodotus, ii 84); Romanian *fiecare* ‘everybody’ = *fiecare carte* ‘every book’; Danish *hver* ‘everybody’ = *hver bog* ‘every book’; Polish *każdy* ‘everybody’ = *każda książka* ‘every book’; Hindi *har* ‘everybody’ = *har kitab* ‘each book’.

If we try to model these different configurations in the form of a table, we obtain the following result:

<table>
<thead>
<tr>
<th></th>
<th>Pronoun ≠ determiner</th>
<th>Pronoun = determiner</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Numeral ‘one’</td>
<td>Type 1 (pronoun-one, vs. determiner): French <em>chacun</em>, vs. <em>chaque livre</em></td>
<td>Type 2 (pronoun-one = determiner-one): Ital. <em>ciascuno</em> = <em>ciascuno libro</em></td>
</tr>
<tr>
<td>− Numeral ‘one’</td>
<td>Type 3 (pronoun, vs. determiner): Welsh <em>pawb</em>, vs. <em>pob llyfr</em> ‘every book’</td>
<td>Type 4 (pronoun = determiner): Romanian <em>fiecare</em> = <em>fiecare carte</em> ‘every book’</td>
</tr>
</tbody>
</table>

This presentation does not exhaust the possibilities. Like any tetrachoric table, it focuses on a small number of criteria, but other parameters could be taken into consideration, such as the distinction between
distributive and global quantifiers, which can be relevant in some languages (e.g. Lith. *kiekvíenas* ‘each, every’, vs. *vīsas* ‘all’), irrelevant in others (e.g. Pāli *sabba* ‘every, all’, cf. also Hebrew *kol*), or the distinction between distributives and free-choice indefinites, which can be relevant in some languages (e.g. Latin *quisque* ‘every’, vs. *aliquis*, *quidam* ‘someone, anyone’), irrelevant in others (e.g. Albanian *çdonjëri* ‘everyone, anyone’).

Pronominalisation of a distributive determiner can also be achieved by means of a lexeme, such as ‘man’ (German *jedermann* < *Mann*, Irish *gach duine* < *duine*, Middle Cornish *pup den* < *den*, Albanian *çdonjëri* < *njeri*), ‘person’ (Persian *har kas* or *hame kas* < *kas*) or ‘body’ (Engl. *everybody* < *body*). The use of the numeral ‘one’ is only one of the possibilities. If one goes into the details, the picture is, in fact, much more complicated than this summary presentation. Moreover, it can be the case that different strategies are used within the same language, with different connotations. The goal here is to establish simple and clear selection criteria that may help us understand the position of the Baltic distributive pronouns.

Taken at face value, the Baltic languages belong to our subtype 2, in which the numeral ‘one’ is regularly added to the distributive stem both in the pronoun and in the determiner, cf. Lith. *kiekvíenas* ‘everybody’ = *kiekvíenas žmogûs* ‘every man’ (compare the examples 17 and 18), Latv. *ikviêns* ‘everybody’ = *ikviêns cilvẽks* ‘every man’ (compare the examples 8 and 12). As regards the Old Prussian form *erains*, we have no indisputable data to show whether *erains* was used only as a pronoun or as a determiner as well. Historically, it is likely that our subtype 2 represents a recent evolution of our subtype 1, in which the numeral ‘one’ is restricted to the pronoun: its extension to the determiner and, correlatively, its complete generalisation is probably an innovation.

(24) Type 1 (pronoun-one, vs. determiner) > Type 2 (pronoun-one = determiner-one)

It can be argued, for example, that the use of Italian *ciascuno* both as a pronoun and as a determiner (*ciascuno* ‘everybody’ = *ciascuno libro*...
‘each book’) arose from a previous stage in which it was limited to the pronoun, as is still the case with ognuno, which is invariably a pronoun (ognuno ‘everybody’), contrasting with ogni, invariably a determiner (ogni libro ‘each book’). There is, therefore, good reason to consider that the addition of the numeral ‘one’ first had a pronominalising function in type 2 as in type 1. Distributive pronouns are not the only class of words in which this pronominalising function appears. In English, for example, the minimal pair every book / everyone is reminiscent of this book / this one, where the numeral displays the same function. In Italian, ognuno and ciascuno are parallel to nessuno ‘no one, nobody’ and qualcuno ‘someone’. It is therefore likely that the numeral ‘one’ in the Baltic forms (Lith. kiekvienas, Latv. ikviens, Old Prussian erains) has no distributive value in itself, but was originally used as a pronominaliser, contrasting with determiners that did not have the numeral. The system can thus be reconstructed as follows:

(25) Type 1 (determiner, vs. pronoun-one):
   Lithuanian  *kiek + noun, vs. kiekvienas
   Latvian      *ik + noun, vs. ikviens
   Old Prussian *er + noun, vs. erains

At a later stage, the numeral ‘one’ was generalised to all contexts, exactly as in Italian ciascuno:

(26) Type 2 (determiner-one, vs. pronoun-one):
   Lithuanian   kiekvienas + noun, vs. kiekvienas
   Latvian      ikviens + noun, vs. ikviens
   Old Prussian (probably) erains + noun, vs. erains

In Italian, the extensive use of ciascuno both as a pronoun and as a determiner (type 2) has replaced an older system in which it was used only as a pronoun, contrasting with the determiner ciasche (type 1):

(27) Type 1 (determiner, vs. pronoun-one):
   Old Italian  *ciasche + noun, vs. ciascuno

There are still remnants of this system in Old Italian (ex. 28 with ciasche determiner):

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7 One may also note the complex ciascheduno ‘everybody’ used since Dante (e.g. Inferno, xx 36, Paradiso, xxviii 34).
(28) Old Italian

in ciasche rione de Roma

in every.sg district.sg of Rome.sg

‘in every district of Rome’ (Anonimo Romano, Cronica, vi, ed. G. Porta, 1979 [14th century])

But the modern system was regular already at the time of Dante (ex. 29):

(29) Old Italian

Ciascuna parte, fuor che l’ oro, è rott.

every.sg part.sg except that the gold.sg be.prs.3.sg corrupted.sg.f

‘Every part, except for gold, is corrupted.’

(Dante, Inferno, xiv 112 [14th century])

With this parallel in mind, one may assume for the Baltic languages a similar evolution from type 1 to type 2, which implies the reconstruction of distributive determiners as follows:

(30) *kíek- + NOUN in Lithuanian

*ik- + NOUN in Latvian

*er- + NOUN in Old Prussian

There is powerful evidence in support of this hypothesis. In Old Lithuanian, there are several instances of kíek as a distributive determiner, accompanying a noun, instead of kiekvíenas. This usage has disappeared from the modern dialects. Even in Old Lithuanian it is only marginally documented, most clearly in Mažvydas (ex. 31–33):

(31) Old Lithuanian

Ghyffai atleid grekus tawa /

3.nom.sg.m forgives.prs.3 sin.acc.pl your

Jfʒgida kiekliga tawa.

heal.prs.3 every=disease.acc.sg your

‘He forgives you your sins / and heals all your diseases.’ =

Polish: On odpuszcza grzechy twoje, leczy wselką niemoc twojej;

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* Cf. also Dante: ciascun sentimento (Inferno, iii 135 and xxxiii 101), in ciascuna sua legge (Inferno, x 84), ciascun linguaggio (Inferno, xxxi 80), ciascuna spalla (Inferno xxxiv 41), ciascuna artista (Paradiso, xxx 33). There is no instance of ciasche in Dante.
German: *Hat dir dein Sünd vergeben / unn hait dein Schwachhait groß.* (Martynas Mažvydas, *Catechismusa Prasty Sʒadei*, 1547, 60₄)

(32) Old Lithuanian

*Kiek daikta fawa macʒij walda.*

every thing.acc.sg his strength.loc.sg holds.prs.3

‘He holds everything in his hands.’ = Polish: *wszystkoć on sam w mocy swojej ma*; German: *es stet alles in seiner macht.* (Martynas Mažvydas, *Catechismusa Prasty Sʒadei*, 1547, 70₄)

(33) Old Lithuanian

*Taip apencʒ fʒmogau kiek czefa /*

thus again man.voc.sg every time.acc.sg

*Bůk tu prieg Diewa fʒodʒa.*

be.imp.2sg 2sg.nom near god.gen.sg word.gen.sg

‘Thus, o man, be all the time again near the Word of God.’ = German: *Am Gottes wort man warten sol / des gleichen alle stunden.* (Martynas Mažvydas, *Gesmes Chrikʃcʒoniʃkas*, 1570, 350₁₃)

more limitedly in other works until the 17th century (ex. 34–36):

(34) Old Lithuanian

*Kiek diena fawa tur warga.*

every day.nom.sg its have.prs.3 trouble.acc.sg

‘Each day has enough trouble of its own.’ (Jonas Bretkūnas, *Postilla*, 1591, ii 395₂)

(35) Old Lithuanian

*idą́nṫ kiek dienós źįgi kokiʃ*

so.that every day.gen.sg step.acc.sg some.acc.sg.m

padarîtu…

do.cond.3

‘so that each day he could make one step...’ = Polish: *āby co dzień postępek iáki vcżynił...* (Mikolajus Daukša, *Kathechismas*, 1595, 121₃–₄)

(36) Old Lithuanian

*Ding jedes kiek daikts*

thing every.n.sg every thing.nom.sg

‘everything’ (*Lexicon Lithuanicum*, 24₃ [17th century])
Three observations need to be made. First, the determiner *kiek* was probably proclitic in these archaic instances, as suggested by the spelling *kiekliga* 'each disease' (Mažvydas 1547, 604, for *kiek liga*) and especially *kiewaika* ‘each child’ (Mažvydas 1547, 1125, for *kiek waika*). Second, *kiek* was consistently invariable. The categories of case and gender were conveyed by the following noun alone (ex. *kiek daikts* ‘everything’):

**Table 2. Morphosyntax of *kiek* in Old Lithuanian**

<table>
<thead>
<tr>
<th>Case</th>
<th>Form</th>
<th>Mažvydas (Year, pp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>nominative</td>
<td><em>kiek daikts</em> (†<em>kiek daikts</em>)</td>
<td>1566, 2023</td>
</tr>
<tr>
<td>accusative</td>
<td><em>kiek daikta</em></td>
<td>1547, 704</td>
</tr>
<tr>
<td>genitive</td>
<td><em>kiek daikta</em></td>
<td>1570, 3454</td>
</tr>
<tr>
<td>instrumental</td>
<td><em>kiek daiktu</em></td>
<td>1566, 1823</td>
</tr>
<tr>
<td>locative</td>
<td><em>kiek daiki</em></td>
<td>1566, 1577</td>
</tr>
</tbody>
</table>

Third, the determiner *kiek* was often used by Mažvydas in contexts of temporal quantification,9 but not exclusively: it appears with other substantives as well.10 After Mažvydas, the use of *kiek* with temporal designations clearly outweighs that with other types of nouns. In the modern language, the construction *kiek- + NOUN* has regularly been replaced by *kas + NOUN* both with temporal designations, which is the most frequent case (ex. 37), and with other designations (ex. 38):

(37) Modern Lithuanian

*Kas valanda tamsiau darėsi.*

*every hour.*nom.sg darker.adv become.pst.3.refl

‘Every hour it was getting darker.’ *(Lietuvių kalbos gramatika, 1965, i 703)*

(38) Modern Lithuanian

*Dabar kas žingsnis atsiveria nematyti*

*now every step.*nom.sg open.out.prs.3.refl unseen.nom.pl.m

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9 E.g. *kiek čeſa* ‘all the time’ (Mažvydas 1570, 350, cf. also 366, 412, 524, and 1547, 69), *kiek denas* ‘every day’ (Mažvydas 1547, 121), *kiek nedelias* ‘every Sunday’ (Mažvydas 1547, 111).

10 E.g. with *griekas* ‘sin’ (Mažvydas 1547, 55, 1570, 569), *vaikas* ‘child’ (Mažvydas 1547, 112), *liga* ‘disease’ (Mažvydas 1547, 60, 1570, 352).
vaizdai.
views.NOM.PL
‘Now, at each step, unseen views open out.’ (Lietuvių kalbos gramatika, 1965, i 703)

This construction kas + NOUN, probably calqued from Polish co + NOUN (e.g. co dzień ‘every day’, co krok ‘each step’, mostly adverbal), is already documented in the 16th century. The first example comes from Daukša (1599) and is clearly loan-translated from Polish (ex. 39):

(39) Old Lithuanian
Bęt’ kas’ galwa tatá išzmintis /
but every head.NOM.SG that conscience.NOM.SG
kas Miniftras tai kitá wiera
every minister.NOM.SG that other.NOM.SG. faith.NOM.SG.F
arbá tikéïmas.
or faith.NOM.SG
‘But each head is a conscience, each minister is a different faith.’
= Polish: Ále co głowá to rozum: co minîñer to inîñá wiárá. (Old Lithuanian: Mikolajus Daukša, Postilla Catholicka, 1599, 258,

Other examples are found in Sirvydas’ Dictionarium trium linguarum (³DTL, ca 1643):

(40) co dʒíen’ / In dies. Kas diena ‘every day’
and its derivative
Codʒíenny / Amphemerinus, quotidianus. Kasdienis ‘daily’ (p. 36);
co rok. Quotannis. Kas metay ‘every year’ (p. 37); Káʒ́da ráąa / co raq. Singulis temporibus, ſingulis vicibus. kas kartas ‘every time’
(p. 100)

In the mid-19th century, Simonas Daukantas renders Pol. co dzień ‘every day’ both by kasdiena and kiekdiena.11 In the modern language, kas + NOUN and kiekvíenas + NOUN have completely ousted kíek- + NOUN, and I have not found any dialect in which the ancient structure was preserved.

In Latvian there is evidence for a similar evolution. The reconstructed pattern [ik- + NOUN], vs. [ikviëns] has left a few traces in Old Latvian, but the situation differs from that in Lithuanian in several aspects. The first thing to note is that the ancient texts testify to a quadripartite, not only

11 Daukantas, Didysis lenkų-lietuvių kalbų zodynas (ca 1850, i 143, ed. Subačius 1993, i 118).
a bipartite distinction. In Old Latvian, we find *ikviêns*, *ikkatrs*, *ikkurš* and very rarely *ik* alone. Some of these forms can also be used in a distributive meaning alone without *ik*- (for example *katrs* and *kurš*); in Modern Latvian, this possibility has greatly expanded (e.g. Modern Latvian *katru dienu* ‘every day’).

The distribution of these different possibilities is difficult to establish. To judge from the Old Latvian data that are accessible to me, *ikviêns*, *ikkatrs* and *ikkurš* are largely synonymous: they are used predominantly as pronouns, more rarely as determiners, and there is no significant difference between them. Generally speaking, the distinction between pronoun and determiner does not appear to be relevant in Old Latvian. The position of *ik* alone is different: it is overwhelmingly used in combination with temporal designations. The first example comes from the *Cathecismus Catholicorum* (1585): *ick gaddeſkaerdt* ‘every year’ (1585, 18₁₈, ed. Günther 1929, i 260: *gadskārta* ‘year’); the combination *ik gadus* ‘every year’ also appears in the New Testament from 1685 (Ebr. 9, 25; 10, 1; 10, 3: *ik Gaddus*) and in the *Manuale Lettico-Germanicum* (ca 1690, 129: *ikgad-dus*). Most frequent is the combination with the genitive singular *dienas* ‘day’ (GEN.SG) in *ik dienas* or *ikdienas* ‘every day’:

(41) *Jckdenas* (*Undeutsche Psalmen*, 1587, 5₁); *ick = deenas* (Mancels 1637, viii 30); Täglich / *ickdeenas* (Mancels 1638, ed. Günther 1929, ii 386); *ikdeenas* (*Tas Jauns Testaments*, 1685, Mt. 28, 20; Lk. 9, 23, etc.); *ik deenas* (*Tas Jauns Testaments*, 1685, Lk. 22, 53); *ikdeenas täglich* (*Manuale Lettico-Germanicum*, ca 1690, 84, 101, 644); *ik deenas* (*Manuale Lettico-Germanicum*, ca 1690, 396); *alle Tage, ikdeenas* (Elvers 1748, 246); *ik dinas* (*Evangelia toto anno*, 1753, 58₁); *ik=deenas* (*Manuale Lettico-Germanicum*, ca 1690, 396); alle Tage, *ikdeenas* (Elvers 1748, 246); *ik dinas* (*Evangelia toto anno*, 1753, 58₁₁). Note also: *ik fwehdeenas* ‘every festive day, every Sunday’ (*Tas Jauns Testaments*, 1685, Apd. 13, 27; 15, 21); *ik fwatdinias* (*Evangelia toto anno*, 1753, 105₂); *ik swëdienes* (Bezenberger 1885, 43).

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12 See Blinkena *et al.* (ed. 2002, 390–391) for more data. I have also consulted the on-line Old Latvian corpus <www.korpuss.lv/senie>, from which some of my data are drawn.
13 Examples of *ikviêns*, *ikkatrs* and *ikkurš* used as pronouns: *ickwens* ‘everybody’ (*Enchiridion*, 1586, 5₀, ed. Bezenberger 1875, 23), *iek = katram* ‘to everybody’ (Mancels 1637, xx 17, ed. Günther 1929, ii 481), *ikkurſch* ‘everybody, everyone’ (*Tas Jauns Testaments*, 1685, Rm. 15, 2).
14 Examples of *ikviêns*, *ikkatrs* and *ikkurš* used as determiners: *ikweens Augfts-Preeſteris* ‘each High Priest’ (*Tas Jauns Testaments*, 1685, Ebr. 5, 1), *iek = kattra Teeffa* ‘every truth’ (Mancels 1637, xxix 26, ed. Günther 1929, ii 512), *ikkurſch Prettineeks* ‘each opponent’ (Ravensberg 1767, 16₃).
Other collocations are attested. In the Latvian grammar by Adolphi (1685, 227), an extensive list is given, which illustrates the semantic domains in which the distributive determiner *ik* appears:

(42) *ikdeenas / tâglich ‘everyday’; ik gaddâ / jâhrlich ‘every year’; ik rihtâ / alle Morgen ‘every morning’; ik naktâ / alle Nâchte ‘every night’; ik ftundas / alle Stunden ‘every hour’; ik neddeles / alle Wochen ‘every week’; *ik Mehnechu / alle Monat ‘every month’; *ik brihdi / *ik brihẜchu / jťâtliglich ‘every moment’; *ik âz̄umirklî / alle Augenblick ‘every moment’; *ik reif / jedesmahl ‘every time’.

Strikingly enough, the construction of *ik* exhibits some variations. As a rule, *ik* is followed by the genitive (type *ik dienas*), but there seems to be also evidence for the nominative (type *ik diena*, reduced to *ik dien*, *ikdien*) and for the accusative of temporal extension (type *ik gadus*). In the Latvian folksongs collected by Gustav Bergmann at the beginning of the 19th century (1808, ii), both the genitive and the shortened form occur side by side: *ik svēdienas* and *ik svēdien / jeden Sonntag ‘every Sunday’ (Biezais 1967, 42 and 43), *ik vakarôs* and *ik vakar / jeden Abend ‘every evening’ (Biezais 1967, 74 and 79). The two constructions might reflect, in some way, the diverging influence of Polish, which has both *co dnia* (genitive) and *co dzień* (nominative) ‘every day’. An alternative explanation could be that the original genitive construction (*ik dienas*) was reduced to *ik dien* due to the grammaticalisation of the two-word structure as a single adverb. Additionally, in the Latvian folksongs, metrical factors might have played a role in the choice of one or the other of the two forms. In Old Latvian, the genitive construction is predominant. This is a striking difference from Old Lithuanian, where the nominative construction is the most frequent one, whereas the genitive construction is extremely rare: compare, however, the nominative construction *kiek diena* in Bretkūnas (ex. 34) and the genitive construction *kiek dienos* in Daukša (ex. 35).

The majority of the examples presented so far refer to temporal designations, and this semantic limitation seems to be a powerful constraint.

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15 Cf. also *ik mehes ‘every month’* (Manuale Lettico-Germanicum, ca 1690, 304), *ik riht ‘every morning’* (Manuale Lettico-Germanicum, ca 1690, 30), *ikreiz ‘every time’* (Manuale Lettico-Germanicum, ca 1690, 420); *ik ftundas ‘every hour’* (Tas Jauns Testaments, 1685, 1Kor 15, 30).

16 On this variation see Gâters (1993, 241).
both in Old and Modern Latvian. However, the language of the Latvian
folksongs, which is famous for its archaism, displays a broader range of
meanings:

(43) Latvian (folksong)

\[
\begin{align*}
\text{Mans} & \quad \text{wihrins} & \quad \text{juhrinā} \\
\text{my.NOM.SG} & \quad \text{man.NOM.SG} & \quad \text{sea.LOC.SG} \\
\text{Peezi} & \quad \text{menzi} & \quad \text{laiwinā}, \\
\text{five.NOM.PL} & \quad \text{cod.NOM.PL} & \quad \text{boat.LOC.SG} \\
\text{Ik} & \quad \text{behrnina} & \quad \text{menzis bij.} \\
\text{each} & \quad \text{child.GEN.SG} & \quad \text{bet.PST.3} \\
\text{My man on the sea, five cuds in the boat, five cuds in the boat:} \\
\text{there was one cod for each child.’} & \quad \text{(K. Baron & H. Wissendorff,} \\
& \quad \text{Latwju dainas, bw, 1910, 30810)} \\
\end{align*}
\]

(44) Latvian (folksong)

\[
\begin{align*}
\text{Aili, manu} & \quad \text{wezu} \quad \text{tehwu,} \\
\text{eh} & \quad \text{my.ACC.SG} \quad \text{old.ACC.SG} \quad \text{father.ACC.SG} \\
\text{Baltas} & \quad \text{maifes} \quad \text{arajinis;} \\
\text{white.GEN.SG.F} & \quad \text{bread.GEN.SG} \quad \text{plougher.NOM.SG} \\
\text{Ik} & \quad \text{wadfínas} \quad \text{galinā} \\
\text{each} & \quad \text{furrow.GEN.SG} \quad \text{end.LOC.SG} \\
\text{kà} & \quad \text{balodis} \quad \text{nopuhtās.} \\
\text{like} & \quad \text{dove.NOM.SG} \quad \text{sigh.PST.3.REFL} \\
\text{Eh, my old father, the one who ploughed white wheat, at the} \\
\text{end of each furrow he sighed like a dove.’} & \quad \text{(K. Baron & H. Wissendorff,} \\
& \quad \text{Latwju dainas, bw, 1909, 25361, variant 1)} \\
\end{align*}
\]

A modern example is:

(45) Latvian

\[
\begin{align*}
\text{Ik} & \quad \text{māte,} \quad \text{par savu} \quad \text{bērnu} \\
\text{every} & \quad \text{mother.NOM.SG} \quad \text{about her.ACC.SG} \quad \text{child.ACC.SG} \\
\text{domājot, ir} & \quad \text{vērigāka} \quad \text{par visiem} \\
\text{think.GER} & \quad \text{be.PRS.3} \quad \text{more.attentive.NOM.SG.F} \quad \text{over all.DAT.PL.M} \\
\text{doctor.DAT.PL} & \quad \text{dakteriem.} \\
\text{Every mother, thinking about her child, is more attentive than} \\
\end{align*}
\]

At first glance these instances seem to reflect an archaic state of affairs, corresponding to the reconstructed pattern proposed above \([ik- + \text{NOUN}]\). But things are not so simple. One could argue the other way round that they represent the secondary extension of a pattern first limited to temporal referents or, to put it in a different way, the reduction of the complete form \(ikviēns\) to \(ik\) due to the equivalence between \(ik\) and \(ikviēns\) with temporal referents (compare \(ikdienas\) and \(ikviēnas\) \(dienas\)). One of the major features of the Latvian folksongs is their brevity, which could have promoted the choice of the short form \(ik\) instead of the long form \(ikviēns\).

Finally, one may note that, in the Latvian folksongs, \(kas + \text{NOUN}\) is sometimes used as a distributive determiner in the same way as Lithuanian \(kas + \text{NOUN}\), obviously a loan-translation from Polish \(co + \text{NOUN}\).\(^{17}\)

The Old Prussian data are too scanty to allow the reconstruction of a similar distinction between a determiner \([er + \text{NOUN}]\) and a pronoun \([erains]\). We only have evidence for \(erains\) as a pronoun, so that nothing precise can be said about how the function of the distributive determiner was expressed in Old Prussian. But, even without exploitable data, we can assume that the prehistory of Old Prussian was parallel to that of the other Baltic languages, considering that, as a rule, where distributivity is connected with the numeral ‘one’, its original function was generally that of a pronominaliser.

### 4. The origin of Old Prussian \(er\)-, Lithuanian \(kiek\)-, Latvian \(ik\)-

Let us now address the origin of the initial elements of the Baltic distributive pronouns. From what has been said above it should be clear that the distributive meaning of our three Baltic forms (Old Prussian \(erains\), Lithuanian \(kiekvíenas\), Latvian \(ikviēns\)) is not due to the numeral ‘one’ used indefinitely, but is proper to the first element (Old Prussian \(er\)-, Lithuanian \(kiek\)-, Latvian \(ik\)-), since it is—or, in the case of Old Prussian, is likely to have been—able to convey this meaning alone, without the numeral. The question is, first, how these three elements acquired a distributive meaning and, second, how they can be compared to each other. Each

\(^{17}\) Examples of \(kas + \text{NOUN}\) in Latvian are given by Gāters (1993, 241).
of these three elements has an independent existence in Baltic and their meanings are different.

4.1. Old Prussian er-

Old Prussian er corresponds to German bis ‘until’, accompanying a preposition, and appears in two forms, er in er prei ‘until’ (= German bis an) and er en ‘until’ (= German bis in), cf. (46) and (47):

(46) bhe polāiku mans drūktai / en fwiāsmu wīrdan
and hold.prs.3 1pl.acc firm.adv in his.dat.sg word.acc.sg
bhe Druwien / er prei noūſon wangan
and faith.acc.sg until towards 1pl.gen.pl end.acc.sg
‘And he holds us firmly in his word and faith until our death.’ =
German: vnd behelt vns feſt in ſei=nem Wort vnd Glauben / biſ an vnſer ende. (Old Prussian: Enchiridion, 1561, iii 51₃₁)

(47) Stas Rikijs pokūnti twaian
the.nom.sg Lord.nom.sg protect.cond.3 your.acc.sg
Eneifannien bhe ifeisennien efteinu er en
entry.acc.sg and exit.acc.sg from.now until in prābutſkan.
eternity.acc.sg
‘May the Lord protect your entry and exit from now until eternity.’ =
German: Der Herr beware deinen Eingang vnnd Außgang vnn nun an biſ inn Ewigkeit. (Old Prussian: Enchiridion, 1561, iii 123₃)

and ergi in ergi en ‘until’ (= German bis ins), cf. (48):

(48) Old Prussian

ftans grikans ʃteifei tāwans kāimaluke /
the.acc.pl sins.acc.pl the.gen.sg fathers.acc.pl visit.prs.3
ēnstēimans malnijkans / ergi en tīrtin bhe
in=the.dat.pl child.acc.pl until in third.acc.sg and
ketwirtin ʃteipſtan.
fourth.acc.sg generation.acc.sg
‘[God] visits the sins of the fathers on the children until the third and fourth generation.’ =
German: die ſuͤnde der Vaͤter heimſucht an den Kindern bis ins Dritte vnd Vierde gelied. (Enchiridion, 1561, iii 37₁₃)
There does not appear to be any difference between *er* and *ergi*, the latter being an extension of the former by means of a particle -*gi*, which is known to have been added to prepositions, cf. *surgi* ‘around’ (iii 101₁₁ = German *um*), and to various conjunctions, cf. *beggi* ‘therefore’, *digi* ‘also’, *kāigi* ‘how’, *neggi* ‘and not’, *niqueigi* ‘never again’. The same particle was frequent in Old Lithuanian in the formation of prepositions, cf. *ing(i)* ‘into’, *prieg(i)* ‘near, to’, *nuog(i)* ‘from’, more rarely *išg(i)* ‘from’. Stang (1954, 11–18 = 1970, 189–195) has convincingly shown that -*gi* originally had an emphatic value in association with prepositions and that the starting point of its fixation in Old Lithuanian were those prepositions that were parallel to the synthetic local cases (inessive, illative, adessive, allative) and conveyed, in contrast to them, an emphatic meaning. As Stang puts it (1954, 16 = 1970, 193–194):

> Falls nämlich in einer frühen Periode des Litauischen die sekundären Kasus die gewöhnliche, “merkmallose” Bezeichnung dieser örtlichen Verhältnisse geworden waren, so scheint es eine berechtigte Annahme zu sein, dass *į*, *prie* eben in emphatischen Ausdrücken bevorzugt wurden, wo auch die Partikel -*gi* ihren natürlichen Platz hatte.

Owing to the scarcity of the philological data, we are unable to make the same assumption about Old Prussian *er* /*ergi*, but it is likely that Stang’s reconstruction is valid for Old Prussian too, though it appears already in an advanced state of fixation. The important point here is that there is only one exploitable form *er* ‘until’ (corresponding to German *bis*), apparently identical to the first element of the distributive pronoun *erains*. We still have to define the position of *er* in Old Prussian. Like *bis* in German, it is neither a true preposition (since it introduces a preposition), nor a true adverb (since it cannot be used without a following preposition). The only possible way to define it is to call it ‘prepositional adverb’, but this is only a cursory labelling which leaves out certain aspects.

The origin of Old Prussian *er* ‘until’ is quite unclear. Berneker (1896, 289) derives *er* from a coordinating ‘and’ (cf. Lith. *iŗ* ‘and’) and compares its semantic evolution with that of Old High German *unte*, Middle High German *unt*, *uns* ‘until’ < ‘and’. Trautmann (1910, 330) mentions a number of cognates (Lith. *argi* ‘wirklich, etwa’, *arnė* ‘oder nicht’, Old Lith. *er, ergi* interrogative particle, Gr. ἀρα, ἀρ, ὅα) without providing any func-

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18 References in Petit (2010, 264).
Mažiulis (2013, 181) reconstructs an evolution ‘and, also’ > ‘until’, for which he finds a parallel in Lithuanian nėt ‘also, even’ > ‘until’ (Old and dial. Lith.). The same explanation is endorsed by Rosinas (2009, 322). The Indo-European prehistory of this particle er (< *h₁er or directly *Hr̥ = Lith. ėr) remains in the dark, both from a formal and from a functional point of view, but, whatever its ultimate origin, it seems clear that Old Prussian er ‘until’ results from the reanalysis of a particle as preposition (‘and, also, even’ > ‘until’). If it is regarded as the source of the distributive pronoun, it must derive from the prepositional meaning (‘until’ > ‘every’) rather from any other more original meaning (‘and, also, even’, or the like). This scenario has a certain plausibility, but it remains to determine the precise semantic pathway that led from a preposition ‘until’ to a distributive marker.

4.2. Lithuanian kiek-

The Lithuanian distributive marker kiek- (in kiekvienas) is identical to the quantitative interrogative and conjunctive stem kiek ‘how much, how many’. In Lithuanian, kiek is both interrogative ‘how much, how many, how often’ (ex. 49–50):

(49) Old Lithuanian

*Kiek* daiktu _yra_ / krikšoni

**how.many** things**.gen.pl** be**.prs.3** Christian**.dat.sg

reikalių?

necessary**.gen.pl**

‘How many things are necessary to a Christian?’ (Mikolajus Daukša, *Kathechismas* (1595, 21<sub>17</sub>–22<sub>1</sub>))

(50) Lithuanian

Kiek _buvo_ žmonių?

**how.many** be**.pst.3** people**.gen.pl**

‘How many people were there?’ (Jablonskis 1919, 157, § 223)

and conjunctive ‘as much as, as often as’ (ex. 51–52):

(51) Old Lithuanian

*Tatai* darikiet _kiek_ kartu _gieršťt*

that**.acc.sg** do**.imp.2pl** as**.many** time**.gen.pl** drink**.fut.2pl**

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<sup>19</sup> A further parallel could be Tocharian B <i>emške</i> meaning both ‘up to, until’ and ‘even’.
ant atminima mana.
on memory.GEN.SG my
‘Do this, as often as you drink, in remembrance of me.’ = Polish:
tho czinczie / ile krocz bądźście pyć na pamiętkę moię. (Martynas
Mažvydas, Catechismus Prasty Szadei, 1547, 27₅.₆)

(52) Modern Lithuanian
Čia buvo užveja ir ledo
here be.pst.3 sheltered.place.NOM.SG and ice.GEN.SG
kiek nori.
as.much.as want.PRS.2SG
‘There was here a place sheltered from the wind and some ice,
as much as you want.’ (Lietuvių kalbos gramatika, 1976, iii 902)

In the standard language and in the dialects, there are several distinct
semantic effects produced by kiek, depending of the context: quantity
(‘how much’ / ‘as much as’), durativity (‘how long’ / ‘as long as’), iterativ-
ity (‘how often’ / ‘as often as’). Twenty Another use of kiek is particularly strik-
ing: kiek can be used indefinitely to indicate a certain amount of things, a
certain quantity, as in (53) or adverbially in (54).

(53) Modern Lithuanian
Duok kiek pinigų.
give.IMP.2SG some money.GEN.PL
‘Give me some money’ (LKŽ, 1959, v 743)

(54) Modern Lithuanian
Antrasis leidimas kiek
second.NOM.SG.DEF edition.NOM.SG on.some.points
skiriasi nuo pirmojo.
differs.PRS.3.REFL from first.GEN.SG.DEF
‘The second edition differs on some points from the first one.’
(LKŽ, 1957, v 743)

Several points should be noted. Kiek is typically a multivalent quanti-
ifier: it can be used as an adverb, modifying a verb (as in 51 or 54), or in
an argumental function, subject (as in 49 and 50) or object (in 53). This
diversity of syntactic functions is shared by other multivalent quantifi-
cers, such as Lith. daug ‘much’ or ganà ‘enough’, and there are reasons for

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²⁰ See the references in LKŽ (1959, v 744).
treated in the same way. There are other features common to *kíek and the other multivalent quantifiers: their invariability and their construction with the genitive. If we try to compare the quantifier *kíek and the distributive *kíek, we have to assume that the construction with the case required by the context (e.g. *kiek diena ‘every day’, acc. *kiek dieną, etc.) is secondary to the construction with the genitive (e.g. *kiek dienos), since only the latter construction corresponds to what we find with the quantifier.

Historically, there is no doubt that *kíek belongs to the interrogative stem ka- of kàs ‘who?’, which goes back to PIE *kəo-, and we see that this stem has the same syntactic extension as *kíek: it can be used as an interrogative, as a conjunctive and, in somewhat more limited conditions, as an indefinite stem. The precise etymology of *kíek is an internal matter for Indo-Europeanists and does not need to concern us here. There is a cognate in some Latvian dialects ciêk, beside cik ‘how much, how many?’.

The important thing to note is that the interrogative-conjunctive adverb *kiek ‘how much, how many’ is paralleled in Lithuanian by a demonstrative tíek ‘so much, so many’ and that both forms can be mutually interrelated within a correlative system, as shown by the following example (55):

(55) Modern Lithuanian

Kíek prãšé, tíek daviaũ.

how.much ask.pst.3 so.much gave.pst.1sg

‘I gave him as much as he asked for.’ (lit. ‘As much as he asked for, so much I gave.’) (Smoczyński 2007, 675)

The demonstrative tíek ‘so much, so many’ presents a variant tik specialised in the meaning ‘so much, and not more’ > ‘only’; it corresponds to Latvian tikai ‘only’, a form derived from tik ‘so much’. The formal relationship between tíek and tik is part of a broader issue, involving other forms as well, such as Lith. tíek, vs. Latv. tik, Lith. kíek, vs. Latv. cik, etc. We will come back to this issue later. At this point, there seems to be an unbridgeable difference between Old Prussian, where the distributive pronoun (erains) goes back to a prepositional adverb er (‘until’), and

---

21 On the notion of ‘multivalent quantifiers’ see a presentation in Petit (2012, 227).

22 Cf. Smoczyński (2007, 283), who reconstructs PIE *kʰeːk-o-. Cf. also Rosinas (2009, 278). The acute tone of Lith. kíek and Latv. dial. ciêk can be due to the analogy of the qualitative determiner Lith. kóks, Latv. kâds ‘which’ (< PIE *kʰeːh₂ + different suffixes *-kos or *-kʰos, resp. *-dos, cf. Old Church Slavonic kaks, Lat. quālis).
Lithuanian, where the distributive pronoun \((\text{kiekviėnas})\) goes back to an interrogative-conjunctive adverb \(\text{kiek}\) (‘how much, as much as’).

4.3. Latvian \(\text{ik-}\)

The Latvian data seem to occupy a middle position between Lithuanian and Old Prussian. In the standard language the Latvian distributive marker \(\text{ik-}\) (in \(\text{ikviēns}\)) is isolated, but older lexicographical sources mention the fact that it can be used, particularly in the archaic language of the Latvian folksongs, as a conjunction ‘how much, how often’ (ex. 56):

(56) Latvian (folksong)

\[
\begin{align*}
\text{Ik} & \quad \text{dseetminu} \quad \text{idseedaju} \\
\text{how.many} & \quad \text{song.gen.pl.} \quad \text{sing.pst.1sg} \\
\text{Satin’} & \quad \text{dfeelmu} \quad \text{kamolāi} \\
\text{tangle.pst.1sg} & \quad \text{songs.gen.pl} \quad \text{ball.loc.sg}
\end{align*}
\]

‘Whenever I sang songs, I wound them in the ball of songs.’ (lit. ‘As many songs as I sang...’) (K. Baron & H. Wissendorff, \textit{Latwju dainas}, \textit{bw}, 1894, 47)

It is often associated with a second \(\text{ik}\) ‘so much, so often’ in a correlative system (ex. 57):

(57) Latvian (folksong)

\[
\begin{align*}
\text{Ik} & \quad \text{es} \quad \text{gahju} \quad \text{gar} \quad \text{kapeem}, \\
\text{as.much} & \quad \text{1sg.nom} \quad \text{go.pst.1sg} \quad \text{along} \quad \text{grave.dat.pl} \\
\text{Ik} & \quad \text{es} \quad \text{gaufchi} \quad \text{norauðaju}. \\
\text{as.much} & \quad \text{1sg.nom} \quad \text{bitterly.adv} \quad \text{weep.pst.1sg}
\end{align*}
\]

‘Whenever I went along the graves, I always wept bitterly.’ (lit. ‘As often as I went along the graves, so often I wept bitterly.’) (K. Baron & H. Wissendorff, \textit{Latwju dainas}, \textit{bw}, 1894, 4044)

A striking usage, mentioned by \textit{me} (1923–1925, i 702), is when, in a correlative system, the predicate of the subordinate clause is an appositional participle in -\textit{dams} (ex. 58):

(58) Latvian (folksong)

\[
\begin{align*}
\text{Ik} & \quad \text{kanninu} \quad \text{ifsnefdama}, \\
\text{as.much} & \quad \text{water.jug.acc.sg} \quad \text{carry.away.ptcp.nom.sg.f}
\end{align*}
\]
On distributive pronouns in the Baltic languages

\( \textbf{Ik} \quad d\text{feefminu} \quad \text{padseedaju}. \)

\textbf{as.much} songs.gen.pl. sing.pst.1sg

‘Whenever I carried away the water jug, I always sang songs.’
(lit. ‘As often as I carried away the water jug, so often I sang songs.’) (K. Baron & H. Wissendorff, \textit{Latwju dainas}, bw, 1894, 792)

These usages make it possible to incorporate the form \textit{ik} into the wider category of the adverbial quantifiers ending in -\textit{ik} in Latvian: \textit{cik} ‘how much’ (interrogative and conjunctive) and \textit{tik} ‘so much’ (demonstrative).\(^{23}\)

The two latter forms, \textit{cik} and \textit{tik}, can be combined in a correlative system (ex. 59):

(59) Latvian

\begin{align*}
\text{\textit{Cik} zvaig\text{"n}u \quad debesis, \quad \textit{tik} \quad caurumu} \\
\text{how.many star.gen.pl. heaven.loc.pl. so.many holes.gen.pl} \\
\text{zem\.{e}.} \\
\text{‘As many stars as there are in the heavens, so many holes are there in the earth.’ (\textit{me}, 1923–1925, ii 380)}
\end{align*}

\textit{Cik} can also be used with a temporal meaning (‘how often’), with or without the correlative \textit{tik} (‘so often’). An example without correlative is (60):

(60) Latvian (folksong)

\begin{align*}
\text{\textit{Zik} es \quad gahju \quad maltuw\.{e},} \\
\text{how.often 1sg.nom \quad go.pst.1sg \quad granary.loc.sg} \\
\text{Pa \quad weenai \quad ritinaju.} \\
\text{prep.distr one.dat.sg.f \quad roll.pst.1sg} \\
\text{‘Whenever I went to the granary, I rolled them [the songs].’ (lit. ‘As often as I went to the granary...’) (K. Baron & H. Wissendorff, \textit{Latwju dainas}, bw, 1894, 29, variant)}
\end{align*}

It is striking that \textit{cik} in (59) and (60) has exactly the same meaning as \textit{ik} in (57–58). One of the problems we are facing is the distribution of the different forms. Judging from the evidence provided by the Latvian folksongs, the system presents the following configuration:

Table 3. The distribution of cik, ik

<table>
<thead>
<tr>
<th>Type</th>
<th>Meaning</th>
<th>Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interrogative</td>
<td>‘how much’, ‘how often’</td>
<td>cik</td>
</tr>
<tr>
<td>Conjunctive</td>
<td>‘as much as’, ‘as often as’</td>
<td>cik or ik</td>
</tr>
<tr>
<td>Correlative</td>
<td>‘so much, so often’</td>
<td>tik, rarely ik</td>
</tr>
<tr>
<td>Demonstrative,</td>
<td>‘so much, so often’</td>
<td>tik</td>
</tr>
<tr>
<td>intensive</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ik is chiefly used as a conjunctive adverb (‘as much as’), but also as a correlative (‘so much’), and in both cases it is challenged by another form, the conjunction cik and the correlative tik. We certainly must not conclude from this that there is no systematic rule regarding the distribution of the different forms. Rather, we will assume that this unstable picture is due to the coexistence of archaic and modern forms of correlation, and our task will be to establish their chronological position as precisely as possible.

Before we do that, there are still two important points to mention. The first one is that the adverb ik has dialectal variants, one with an additional ending ikām ‘while, until’ (conjunction, cf. ‘während, solange als’, ‘bis’, in me, 1923–1925, i 704), and another one with a different stem and a different ending iēkām and iēkām ‘before’, ‘until’ (conjunction, cf. ‘bevor, ehe’, ‘solange, bis’, in me, 1925–1927, ii 24 and 26). The addition of -ām is not surprising. The same ending occurs in other adverbs too, cf. Latv. grūžām ‘abundantly’, kuōpām ‘together’, klusām ‘silently, quietly’, pruōjām ‘away, off’. It is probably an old instrumental feminine plural (cf. Latv. kājām ‘by feet’ from kāja ‘foot’), cognate with Lith. -om, which has the same origin (cf. Lith. dovanōm ‘gratuitously, vainly’ from dovanā ‘present, gift’). As regards the stem variation ikek-/ iek-, it is not limited to the conjunctive-correlative stem, but appears more widespread within the correlative system: beside cik ‘how much, how often’, there is a dialectal variant ciēk (ME, 1923–1925, i 392, cf. also ciekām); beside tik ‘so much, so often’ and tikai ‘only’, we have tiek (ME, 1929–1932, iv 209, cf. also tiēkām).

The second point, which derives from the first one, is that the Latvian forms have cognates in Lithuanian and Old Prussian with partly similar,

---

partly diverging meanings. In Old Prussian there is a conjunction *ikai* attested with two meanings, ‘if’ (ex. 61):

(61) Old Prussian

\[
\begin{align*}
Bhe & \textit{ikai} \quad \text{ainonts} \quad \text{ēŋstan} \quad \text{turilai} \\
\text{and if} & \quad \text{somebodynomsgm} \quad \text{in} = \text{thataccsg} \quad \text{haveoptprs3} \\
\text{prewaitiat} & \quad / \quad \text{ftas} \quad \text{seqē} \quad \text{ftan} \quad \text{en kērdan}.
\end{align*}
\]

to = \text{speakinf} \quad \text{3nomsgm} \quad \text{doesprs3} \quad \text{thataccsg} \quad \text{intimeaccsg}

‘And, if anyone has anything to say about that [about that marriage], he should do it in time.’ = German: *Vnd hat jemens darein zu sprechen / der thue es bey zeit.* (Enchiridion, 1561, iii 99\textsuperscript{11})

and ‘though, although’ (ex. 63):

(62) Old Prussian

\[
\begin{align*}
Bhe & \textit{ikai} \quad \text{mes} \quad \text{fenstefmu} \quad \text{ankaitītai} \\
\text{and though} & \quad \text{1plnom} \quad \text{with} = \text{thatdatsg} \quad \text{attackedadv} \\
\text{wirftmai} & \quad / \quad \text{kai} \quad \text{mes} \quad \text{enwagan} \quad \text{augainmai} \quad / \\
\text{becomeprs1pl} & \quad \text{that} \quad \text{1plnom} \quad \text{finallyadv} \quad \text{succeedprs1pl} \\
\text{bhe fтан} & \quad \text{epwarrīfnan} \quad \text{polāikumai}.
\end{align*}
\]

‘and that, though we are attacked by that [the sin], we may finally succeed and win.’ = German: *Vnd ob wir damit angefochten würden / das wir doch endlich gewinnen vnd den sieg behalten.* (Enchiridion, 1561, iii 55\textsuperscript{22})

The concessive meaning ‘though, although’ in (62) is probably due to the polysemy of the German original *ob* ‘if’ and ‘though’; the proper meaning of *ikai* was only ‘if’. One may note that the German conjunction *so* could also have this conditional meaning (‘if’), which could eventually lead the translator to misuse *ikai* as an equivalent to German *so* even as a demonstrative adverb (‘so, this way’): this is obviously the case in iii 93\textsuperscript{15}, where *ikai* incorrectly renders German *so* ‘so, this way’. In spite of these mistakes, we may safely assume that the basic meaning of *ikai* was ‘if’ (conditional conjunction) in Old Prussian. A comparison with Latvian *ik* can only make sense if one assumes for Old Prussian an underlying meaning ‘as far as, to the extent that’ > ‘if’. This is a plausible reconstruction, but the details of the semantic evolution will need to be further elaborated.
There is in Lithuanian a cognate form icrous (or icrous) which presents a basic meaning ‘until’ realised in three different constructions. In the standard language, it is regularly a preposition introducing a noun in the genitive, both in a spatial and in a temporal meaning (ex. 63–64):

(63) Modern Lithuanian

\[ palydėti \quad icrous \quad stotiės \]

accompany.INF until station.GEN.SG

‘to accompany to the station’ (Žindžiūtė Michelini 2007, 141)

(64) Modern Lithuanian

\[ dūrbi \quad icrous \quad vākaros \]

work.INF until evening.GEN.SG

‘to work until the evening’ (Žindžiūtė Michelini 2007, 141)

In Old Lithuanian (e.g. Bretkūnas, Daukša, Sirvydas, but not Mažvydas) and in a handful of modern dialects of the eastern zone, the case of the object of the preposition is not the genitive, but the dative (ex. 65):

(65) Old Lithuanian

\[ bat' \; iškaktú̗ \; / \; nět' \; icrous \; būtái \; tawai \]

but go.COND.PRS.3 even until home.DAT.SG your.DAT.SG

‘But he would go even to your home.’ = Polish: ale doszedł aż do przybytku twego. (Mikolajus Daukša, Kathechismas, 1595, 163,)

More rarely, icrous can be a prepositional adverb, introducing a preposition and its object (ex. 66):

(66) 19th century East Prussian Lithuanian

\[ Ir \; bòba \; dabår \; tolitaús \; éjo \; icrous \]

and old.woman.NOM.SG now further go.PST.3 until

\[ í \; rugiús. \]

to rye.field.ACC.PL

‘And now the old woman went further to a rye field.’ = German: Die Alte gieng nun weiter bis zu einem Kornfelde (cf. Schleicher 1857b, 52)(August Schleicher, Litauisches Lesebuch und Glossar, 1857a, 162)

This usage seems to have been limited to the Lithuanian dialects of East Prussia, which could point to a German model (bis zu, bis nach, etc.).

\[ 25 \text{ Cf. Ambrazas (2006, 295). Note in the example (65) the use of } nět' 'even, until' before icrous, \text{ corresponding to Polish } aż do. \]
Second, īki was used in Old Lithuanian as a conjunction ‘until’ followed by a subordinate clause with the verb in the indicative (ex. 67):

(67) Old Lithuanian

\[ \text{Nėja dar ilgs Pažigys, īki wēl Wafarelę} \]

for still long.NOM.SG.M step.NOM.SG until again summer.ACC.SG fulāukfim’.

reach.FUT.1PL

‘For there is still a long step until we reach the summer again.’
(Kristijonas Donelaitis, Metai, Ziemos rupesčiai, ca 1780, 600)

or introducing a subordinating conjunction kōl and kōlei ‘until how far’ (ex. 68):

(68) 19th century Lithuanian

\[ \text{Tik nieko nepradėk dirbti, īki kol aš ateisiu} \]

only nothing.GEN.SG NEG. = begin.IMP.2SG work.INF

until how.far 1SG.NOM arrive.FUT.1SG.

‘Do not begin to do any work, until I arrive!’ (Jonas Basanavičius, Lietuviszkos pasakos, 1898, i 169, cf. Ĺkž, 1957, iv 29)

Third, īki can be used as an adverb accompanying a gerundive, which can be in an absolute construction (ex. 69):

(69) Old Lithuanian

\[ \text{īki Dienai išžillus} \]

until day.DAT.SG warm.up.GER.PST.

‘until the days warmed up’ = German: biß der Tag heiß ward. (Jacob Brodowski, Lexicon Germanico=Lithuanicum et Lithuanico = Germanicum, i 263 [18th century])

If we try to summarise, the diversity of the functions of īki can be reduced to three main constructions: (1°) introducing a noun phrase (īki preposition); (2°) introducing a subordinate clause (īki conjunction); and (3°) introducing a converbial (gerundive) construction (īki adverb). The question is which one of these three possibilities can be compared with the cognate forms in Latvian (īk ‘how much, as much as’) and Old Prussian (īkai ‘if’). A rather superficial answer would be that the original function of īki was that of a conjunction (‘until + verb’), corresponding to the
Latvian and Old Prussian conjunctions. But this would leave us with three unanswered questions:

1. A first question is how to integrate \( *\text{i}k \) into the correlative system where \( *\text{i}(e)k \) is opposed to \( *\text{ti}(e)k \) and \( *\text{ki}(e)k \).

2. A second question, deriving from the first one, is how to establish the precise meaning of \( *\text{i}k \) and to derive from this meaning the three diverging outcomes: Lith. \( \text{ik}_\text{t} \) ‘until’, Latv. \( \text{ik} \) ‘how much’, Old Prussian \( \text{ik}_\text{a} \) ‘if’.

3. A final question is which meaning is at the basis of the Latvian distributive pronoun \( \text{ik}-\text{viëns} \) and whether we have to assume a similar derivational pathway for Lithuanian \( \text{kiekvïenas} \) and Old Prussian \( \text{eraïns} \).

5. The correlative system: formal problems

Working on the assumption that the original function of \( *\text{ik} \) is conjunctive, we are faced with the problem of its position within the correlative system and of its relationships to the other forms attested in the individual languages. In fact, this problem is much more complex than expected and we are not sure of being able to provide a definitive solution.

Let us start with a rather marginal issue, the ending of \( *\text{ik} \). In Lithuanian there are two variants: \( \text{ik}_\text{i} \) (in the standard language and in older texts) and \( \text{ik} \) (in some older texts and in some dialects). It is not proven, but not impossible, that \( \text{ik} \) is a secondary shortening of \( \text{iki} \). In any case, a prototype \( *\text{iki} \) cannot be the source of the Latvian cognate form \( \text{ik} \), since a final vowel \(-\text{i}\) would have palatalised the preceding consonant in this language (\( *\text{iki} > *\text{ic} \), cf. Latv. \( \text{acs} \) ‘eye’ from \( *\text{akis} \), Lith. \( \text{akis} \)). Latvian \( \text{ik} \) is usually traced back to \( *\text{ik}_\text{a} \), and it is possible that Lithuanian \( \text{ik} \) goes back to the same source, which would imply regarding the ending \(-\text{i}\) of \( \text{iki} \) as an internal innovation in Lithuanian, probably due to the influence of the synonym \( \text{li} \text{gi} \) ‘until’ (cf. Latv. \( \text{lïdz} \) from \( *\text{ligi} \)). In Old Prussian, the ending of \( \text{ik}_\text{ai} \) may admit three different interpretations. It could be a remaking of the original ending \( *\text{ik}_\text{a} \) by analogy to the productive class of adverbs in \(-\text{ai} \).\(^{26}\) A short form \( *\text{ik} \) (from \( *\text{ik}_\text{a} \)) is probably found in the isolated sequence \( \text{iquoitu} \) ‘if you want’ (iii 79\(_3\)), \( \text{iquoi tu} \) (iii 81\(_3\)), which also appears

\(^{26}\) Compare the variant in Latvian \( \text{ciki} \) ‘how much’ (\( \text{më} \), 1923–1925, i 380) from \( *\text{kik}_\text{ai} \) beside \( \text{cik} \) from \( *\text{kik}_\text{a} \). In a different way, Endzelīns (\( \text{di} \), 1980, iii\(_2\), 58 < 1932) interprets OPr. \( \text{ikai} \), \( \text{ickai} \) as \( *\text{ikai} \), which I find rather unconvincing.
in the second line of the Basel epigram: *Eg.koyte.poyte*, interpreted as *ik kwai tu pōtwei* ‘if you want to drink’. According to a second interpretation, Old Prussian *ikai* could reflect a combination *ik + kai* ‘every time when, whenever’ (with the conjunction *kai* ‘when’): this view was first proposed by Berneker (1896, 294). This supposes that *ik* has a distributive meaning; the problem is that this meaning would be confined, in Old Prussian, to the combination with the conjunction *kai*, which seems difficult to motivate. A third possibility would be to compare the ending of *ikai* with that of Lithuanian *taĩ* ‘that’. In any case, the most likely prototype for the three Baltic languages is *ikă*.

The same reconstruction can be proposed for all the cognate forms involved in the correlative system:

**Table 4. Reconstruction of the correlative system**

<table>
<thead>
<tr>
<th></th>
<th>i-vocalism</th>
<th>ie-vocalism</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interrogative and conjunctive</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘how much’, ‘how often’</td>
<td><em>kikă</em></td>
<td><em>kiekă</em></td>
</tr>
<tr>
<td></td>
<td>&gt; Latv. <em>cik</em></td>
<td>&gt; Lith. <em>kiek</em>, Latv. (dial.) <em>ciēk</em></td>
</tr>
<tr>
<td><strong>Conjunctive</strong></td>
<td><em>ikă</em></td>
<td><em>iekă</em></td>
</tr>
<tr>
<td>‘as much as’, ‘as often as’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(&gt; ‘until’)</td>
<td>&gt; Latv. <em>ik</em>, Lith. <em>ik</em></td>
<td>&gt; Lith. (dial.) <em>iēk</em> or <em>jīek</em></td>
</tr>
<tr>
<td></td>
<td>(Lith. <em>iki</em>, Old Pr. <em>ikai</em> with new endings)</td>
<td>(Latv. dial. <em>iēkam</em> with a new ending)</td>
</tr>
<tr>
<td><strong>Demonstrative</strong></td>
<td><em>tikă</em></td>
<td><em>tiekă</em></td>
</tr>
<tr>
<td>‘so much’, ‘so often’</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; Latv. <em>tik</em></td>
<td>&gt; Lith. <em>tiek</em>, Latv. (dial.) <em>tiek</em></td>
</tr>
<tr>
<td></td>
<td>(Lith. <em>tik</em>, Latv. <em>tikai</em> ‘only’)</td>
<td></td>
</tr>
</tbody>
</table>

There appear to be vestiges of the ending -a in some Lithuanian dialects, where we find *kieka* and *tieka* instead of *kiek* and *tiek*,

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27 See the references in *Lkž* (1959, v 745 and 1995, xvi 173). Cf. also Bezzenberger (1877, 71) with instances from Old Lithuanian literature.
ly in combination with a particle, e.g. Old Lith. kiékaţ (Daukša, *Postilla Catholicka*, 1599, 293) and Lith. dial. tiekajatą beside tiekjaţ (with jaţ ‘already’). Historically, this ending -â is likely to reflect the thematic neuter ending -a (< PIE *-od?); neuter forms are frequent among multi-valent quantifiers, as shown by the parallel of Lithuanian māţa, Latvian maz ‘few’ (< substantivised neuter of the adjective Lith. māţas, Latv. mazs ‘small, little’).

A second issue, to which there is no completely satisfactory answer, is the variation of vocalism between -i- and -ie-. Generally speaking, it appears to be the case that the short vowel -i- predominates in Latvian (cik, ik, tik), the diphthong -ie- in Lithuanian (kiék, tīek), but -i- is regular both in Latvian and in Lithuanian for *ik- (Latv. ik, Lith. ikì), and this is corroborated by Old Prussian (ikai). Interestingly, Lithuanian has both tīek ‘so much’ and tik ‘only’ (< ‘so much, not more’). On the other hand, there are Latvian dialects that have traces of -ie- (Latv. dial. ciêk < *kiekâ, tīek < *tiekâ and iêkam < *iekâ + ending -âm). The coexistence of -i- and -ie- is usually explained by assuming that -i- represents a proclitic shortening of -ie-: e.g. *tiekâ > (proclitic) *tikâ. The problem is that such a shortening is not regular in the Baltic languages. Shortening may occur in final position both in Lithuanian (by virtue of Leskien’s law) and in Latvian (by virtue of the moraic shortening law), but not in non-final position. Proclitic shortening has been assumed by some scholars to account for the distinction of prefixes (e.g. Lith. pri- in príedanga ‘cover, screen, shelter’) and preverbs (e.g. Lith. pri- in prideņgti ‘to cover, to shelter’), but this assumption has nothing to recommend it. For one thing, it is not clear why preverbs should be more proclitic than prefixes. Furthermore, it can be shown that the formal distinction of prefixes and preverbs reflects different chronologies of univerbation. To put it simply, I assume that prefixes were associated with the nominal stem before Leskien’s law (as a result, *prîe-noun was not in final position, hence not affected by the law), whereas preverbs were associated with the verbal stem later, after Leskien’s law (as a result, *prîe# > *prî# in final position, then

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On distributive pronouns in the Baltic languages

プリ-VERB): this implies that PIE tmesis survived longer in verbal than in nominal formations, which is exactly what we find in Hittite, Homeric Greek and Vedic.

If this is correct, we cannot apply the same analysis to the contrast between *kíekä, *tékä, *íekä and *kikä, *tikä, *íkä, since the parameter of univerbation cannot have played any role whatsoever to explain the shortening in the forms with -i- in contrast to those with -ie-. My claim is that a purely phonological explanation is unable to account for the variation between -i- and -ie-.

The solution, I think, can be found in the realisation of the correlative system in the Baltic quantifiers, and this brings us to the question of the position of *ik- in this system. From an Indo-European perspective, there is no doubt that the initial consonant *k- in *kikä ( > Latv. cik) and *kiekä ( > Lith. kíek, Latv. dial. ciêk) reflects the PIE interrogative and conjunctive stem *ku̯o- (cf. Lith. kàs), whereas the initial consonant *t- in *tikä ( > Latv. tik and tikai, Lith. tik) and *tiekä ( > Lith. tíek, Latv. dial. tiek) reflects the PIE demonstrative stem *to- (cf. Lith. tàs). Since Minard (1936) and others, it is usually admitted that the regular word order pattern in the correlative system was in Indo-European [SUBORDINATE CLAUSE + MATRIX CLAUSE] (Minard’s diptyque normal). In this case, this leads us to reconstruct the following pattern:

[SUBORDINATE *kikä, *kiekä + DEMONSTRATIVE *tikä, *tiekä]

There is plenty of evidence showing that this pattern is not only inherited, but also still synchronically the most frequent one in the Baltic languages, cf. kíek...tiek in Lithuanian (ex. 55 above) and cik...tik in Latvian (ex. 59 above). In this pattern, the correlative system is characterised by two major features:

1. The two correlative forms differ by their initial consonants (subordinate *k-, vs. demonstrative *t-).
2. Apart from the initial consonants, the two correlative forms have parallel endings (*kikä, vs. *tikä or *kiekä, vs. *tiekä).

Both features are so obvious that they are often taken for granted, as indisputable elements of Indo-European reconstruction. But correlation is a much wider issue and cannot be reduced to these formal features. To be-

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32 More details are given in Petit (2011, 259–263).
gin with, there are different forms of correlations, some of which consist in echo-reduplication of the same stem, cf. Italian (ex. 70):

(70) Italian

\[
\begin{align*}
\text{Tale} & \quad \text{padre} & \quad \text{tale} & \quad \text{figlio}. \\
\text{such.sg} & \quad \text{father.sg} & \quad \text{such.sg} & \quad \text{son.sg} \\
\text{‘Like father like son.’}
\end{align*}
\]

contrasting with its Latin source (ex. 71):

(71) \textit{Qualis} \quad \textit{pater} \quad \textit{talis} \quad \textit{filius.}

\[
\begin{align*}
\text{which.sg} & \quad \text{father.sg} & \quad \text{such.sg} & \quad \text{son.sg} \\
\text{‘Like father like son.’ (Late Latin: Athanasian creed)}
\end{align*}
\]

Following Haudry (1973, 179), we will call the first type of correlation (Ital. \textit{tale padre tale figlio}) ‘anaphoric correlation’, the second type (Lat. \textit{qualis pater talis filius}) ‘conjunctive correlation’. Conjunctive correlation predom inates in Baltic, but there are also a few traces of anaphoric correlation, as shown by instances of reduplication of \textit{*ik} in the Latvian folk-songs (ex. 57, repeated below as 72):\footnote{There are very rare examples of anaphoric correlation with Latv. \textit{cik...cik} as well (cf. \textit{mē}, 1923–1925, i 380).}

(72) Latvian (folksong)

\[
\begin{align*}
\text{Ik} & \quad \text{es} & \quad \text{gahju} & \quad \text{gar} & \quad \text{kapecem}, \\
\text{as.much} & \quad \text{1sg.nom} & \quad \text{go.pst.1sg} & \quad \text{along} & \quad \text{grave.dat.pl} \\
\text{Ik} & \quad \text{es} & \quad \text{gauʃchi} & \quad \text{noraudaju}. \\
\text{as.much} & \quad \text{1sg.nom} & \quad \text{bitterly.adv} & \quad \text{weep.pst.1sg} \\
\text{‘Whenever I went along the graves, I always wept bitterly.’ (lit. ‘As often as I went along the graves, so often I wept bitterly.’) (K. Baron & H. Wissendorff, \textit{Latwju dainas}, bw, 1894, 4044)}
\end{align*}
\]

One has the impression that the two systems of correlation coexisted side by side in Baltic, with a clear preference for conjunctive correlation and only a limited representation of anaphoric correlation. At this point, there is no need to transpose this coexistence into chronological terms, for example by assuming that anaphoric correlation is necessarily more ancient than conjunctive correlation, as Haudry (1973) does; the reverse can equally be true. In this matter, no binding directionality can be established with certainty.
As a rule, the two members of the correlative system have parallel endings (cf. Lith. *kiek...tiék*), but there is no necessity there and the system can operate without that. For example, we have parallel endings in Latvian *kur...tur* ‘where...there’, but different endings in Lithuanian *kuř...teņ* ‘where...there’. Formal discrepancy does not represent a real obstacle to the recognition of a correlative system, functioning as a kind of distance syntactic relation. In a recent paper (2013) I have proposed calling ‘balanced correlation’ the type illustrated by Latvian *kur...tur*, ‘unbalanced correlation’ that illustrated by Lithuanian *kuř...teņ*. This terminology must not mislead us into treating unbalanced correlation as fundamentally different from balanced correlation: the essence of the phenomenon is the same, only its surface realisation differs.

With this in mind, one can posit four logical subcategories of correlation:

Table 5. *Types of correlational systems*

<table>
<thead>
<tr>
<th></th>
<th>Conjoint correlation (different stems = <strong>Ds</strong>)</th>
<th>Anaphoric correlation (same stem = <strong>ss</strong>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balanced correlation</td>
<td>Latv. <em>kur...tur</em> (<strong>Ds + sE</strong>)</td>
<td>Latv. <em>ik...ik</em> (<strong>ss + sE</strong>)</td>
</tr>
<tr>
<td>(same ending = <strong>sE</strong>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unbalanced correlation</td>
<td>Lith. <em>kuř...teņ</em> (<strong>Ds + dE</strong>)</td>
<td></td>
</tr>
<tr>
<td>(different endings = <strong>dE</strong>)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As far as I know, there is no example in Baltic of the fourth possibility, with the same stem, but a different ending. This is probably due to the fact that anaphoric correlation is usually realised as a *complete reduplication*. Only typological research could confirm that this pattern *[ss + dE]* is excluded from the system. If this is true, this suggests that anaphoric correlation is fundamentally an echo-reduplication, whereas conjunctive correlation is a different phenomenon, where echo is not the determining factor and may even be completely absent. These preliminary observa-
tions do not make a consistent theory of correlation: they only seek to provide guidance on the different types of formal relationships within this system.\textsuperscript{34}

Balanced conjunctive correlation, with different stems, but the same ending [\textit{ds+s}], is the only regular type in Baltic (Lith. \textit{kiek...tiek}), but there is evidence for diverging realisations of correlation. Recently (2013) I have tried to show that the temporal correlation illustrated by Lith. \textit{kadà...tadà} ‘when...then’ replaced a more archaic correlation \textit{*jadàn...*idàn} ‘when...then’; its second member is the source of Old Lith. \textit{idànt} ‘so that, in order to’, originally a temporal adverb reanalysed as purposive conjunction. Historically, there is ground for assuming that the PIE conjunctive stem \textit{*kêo-} (originally interrogative-indefinite) replaced in the conjunctive functions an older stem \textit{*(H)i̯o-}, which is still preserved as a relative-conjunctive stem in Greek \textit{ός}, Sanskrit \textit{yás} and Old Church Slavonic \textit{u̯jê} (\(<\ *{(H)i̯o} + *\text{ê}) ‘who’. In Baltic, the stem \textit{*ja-} is now rare in conjunctions (cf. however Lith. \textit{jóg} ‘that’, \textit{jéi} ‘if’, Latv. \textit{ja} ‘if’) and was regularly replaced by \textit{*kêo-} (cf. Lith. \textit{kàd} ‘that’, \textit{kadà} ‘when’, \textit{kuēr} ‘where’, etc.). As to the demonstrative stem, it can be argued that \textit{*to-} was competing in Indo-European with other anaphoric stems, notably with \textit{*Hî-}, which is still preserved in Sanskrit \textit{ayám}, Latin \textit{is}, Gothic \textit{is} and, last but not least, Lith. \textit{jis} ‘this one, he’.

On this basis, one could propose the following scenario. The correlative pair \textit{*kiekà...*tiekà} regularly attested in Lithuanian (parallel to \textit{*kadàn...*tadàn}) is likely to be an innovation having replaced an older form of correlation, which I would tentatively reconstruct as \textit{*jiekà...*ikà} (parallel to \textit{*jadàn...*idàn}). The ultimate origin of these forms \textit{*jiekà...*ikà} is still uncertain, but what seems to be clear is that \textit{*jiekà} originally belonged to the PIE conjunctive stem \textit{*(H)i̯o-}, whereas \textit{*ikà} belonged to the PIE anaphoric stem \textit{*Hî-}. It is often said that these two PIE stems merged in Balto-Slavonic and it is true that we are often unable to make a clear distinction between them. For example, in the comparative correlation of the type Latv. \textit{jū[ō vaĩrâk...jū[ō vaĩrâk} ‘the more...the more’, it can be the case that the first form derives from \textit{*(H)i̯o-}, the second from \textit{*Hî-}, but, synchronically, we are dealing with an instance of anaphoric correlation.

\textsuperscript{34} A further complication is that ‘comparative correlation’ is more frequently realised anaphorically (e.g. Latv. \textit{jū[ō vaĩrâk..., \textit{jū[ō vaĩrâk} ‘the more..., the more’) than other kinds of correlation. In many respects, it has to be treated separately.
What is important here is that, whereas this pattern *jiekā...*ikā survived in a fragmentary way in Baltic, the functional distinction of which it was the bearer (*jiekā conjunction / *ikā anaphoric) was lost. The distribution of the vocalism became random and inconsistent, unpredictably scattered in the individual dialects: some dialects tended to generalise -ie- (ie-dialects), others -i- (i-dialects), uniformly for the conjunctive and for the anaphoric functions. In Lithuanian -ie- has prevailed, restricting -i- to a few marginal forms; in Latvian, on the contrary, it is -i- that predominated. From an initial state of affairs, in which *jiekā was conjunctive and *ikā anaphoric, there developed new stages in which the same form, *jiekā in the ie-dialects, *ikā in the i-dialects, is used both as a conjunctive and as its anaphoric correlate. The result was a uniform pattern, either *ikā...*ikā or *jiekā...*jiekā. The final step of this scenario is the restoration of a conjunctive correlation opposing *ka- in the conjunctive function and *ta- in the demonstrative function, with different outcomes depending on the previously acquired generalisation of -i- or -ie- in the individual languages:

Stage I  
* jiekā / *ikā  
( > Lith. dial. jiek-) ( > Lith., Latv. ik)

Stage IIa (i-dialects)  
*ikā / *ikā  
↓  ↓  
*kikā / *tikā  
( > Latv. cik) ( > Latv. tik)

Stage IIb (ie-dialects)  
*jieka / *jiekā  
↓  ↓  
*kieka / *tieka  
( > Lith. kiek, Latv. dial. ciêk) ( > Lith. tiek, Latv. dial. tiêk)

As can be seen, this analysis supposes that the Baltic languages have undergone an intermediate stage of anaphoric correlation (either *ikā...*ikā or *jiekā...*jiekā), resulting from the merging of *jiekā and *ikā. The further evolution of the Baltic languages can be described as a restoration of a conjunctive correlation *kikā...*tikā (Latvian) or *kiekā...*tiekā (Lithuanian).

The advantage of this hypothesis is that it enables us to understand why there are traces of i-vocalism in the ie-dialects: Lith. ik and ikī ‘until’, tik ‘only’ (in contrast to tiek ‘so much’). These traces are vestiges of the former coexistence of the two vocalisms after the loss of their functional distinction. One may assume that, once the conjunctive-anaphoric dis-
tinction was blurred in the correlation of quantifiers, the two forms *jiekā and *ikā came to be used indifferently. Lith. ik and iķi, if they reflect a conjunction ‘as much as’ as in Latvian, can illustrate this stage of indistinction. Likewise, even in the ie-dialects, there existed beside *tiekā a form *tikā. At each stage, a selection was made, which led to the inclusion of one form into the living correlative system and to the marginalisation of the other form to peripheral functions.

There are still many dark areas in this scenario, and it would be easy to dispute its validity. The important point is that, even if we claim an original functional distinction between the i- and the ie-vocalisms, this distinction was early lost: *ikā was originally anaphoric, but came to be used beside *jiekā as a conjunction, before the replacement of both of them by a more canonical form of correlation, *kikā...*tikā or *kiekā...*tiekā. From there, each Baltic dialect went its own way: the formal diversity observed in the individual languages depends on the vagaries of their history.

6. The meanings of *ikā

The foregoing discussion had an unexpected result. Whereas the Baltic evidence points to an originally conjunctive meaning of *ikā ‘as much as’, the formal scenario sketched above led us to reconstruct its original meaning as anaphoric ‘so much’, in contrast to *jiekā ‘as much as’. This should not be surprising for us, since the older form of correlation (*ja-...*i- from PIE *(H)i̯o-...*Hi-) was immediately subject to the overall merger of these two stems in Balto-Slavonic and to the loss of functional distinction between the two vocalisms (-i- and -ie-). There is thus no contradiction between the formal etymology of *ikā, which points to an anaphoric, and its immediate functional prehistory, which points to a conjunction. Now the question is whether the different meanings of *ikā in the Baltic languages are all reducible to a conjunctive meaning (‘as much as’) or some of them may eventually go back to the more ancient anaphoric meaning.

In Latvian, the function of *ikā is conjunctive (‘as much as, as often as’) and it is likely that the same holds true for Old Prussian ikai ‘if’ as well. For Old Prussian, it is only necessary to assume that the conditional meaning ‘if’ arose from a quantitative meaning ‘as much as, to the extent that’:

\[
*ikā \text{ ‘as much as’, ‘inasmuch as’} \quad \text{Latvian } ik \text{ ‘as much as’} \quad \text{Old Prussian } ikāi \text{ ‘inasmuch as’} > \text{ ‘if’}
\]
There are parallels for a semantic link between supposition and quantification, e.g. Old Russian \textit{kolju}, Ukrainian \textit{kolju}, Belorussian \textit{kali} ‘if’ < ‘inasmuch as’ (cf. Serbo-Croatian dial. \textit{koli}, Slovenian \textit{koli} ‘however much’); Polish \textit{o ile} ‘as far as, if’ < ‘inasmuch as’; French \textit{pour autant que} ‘if, as long as’; German \textit{insoweit} ‘as long as, as far as’.

Both Latvian and Old Prussian thus invite us to reconstruct a conjunction \textit{*ikâ} ‘as much as’, in contrast to Lithuanian, where we find a preposition and conjunction \textit{iki} ‘until’. It is crucial for our perspective to account for this semantic divergence, since it resurfaces in the formation of the distributive pronouns, where Old Prussian has \textit{erains} from \textit{er} ‘until’, whereas Lithuanian has \textit{kiekvienas} from \textit{kiek} ‘how much, as much as’. In this respect, as already said, Latvian occupies a middle position between Old Prussian and Lithuanian.

The first thing to note is that there are across languages many function words that can be employed both as prepositions and as clause linkers. In English, for example, \textit{after, before, since, until} and \textit{till} can introduce noun phrases (prepositions) or subordinate clauses (conjunctions) without any formal difference. The meaning ‘until’, describing the access to the most remote position, is particularly liable to this syntactic ambivalence (compare 73 and 74):

(73) English

\textit{He resided there until his death.}

\textit{(until = preposition)}

(74) English

\textit{He resided there until he died.}

\textit{(until = conjunction)}

The same ambivalence is found in other languages as well, often realised as a tripartite distinction: preposition (+ noun phrase); prepositional adverb (+ preposition + noun phrase); conjunction (+ subordinate clause). In Ancient Greek, for example, \textit{μέχρι} displays these three functions, preposition (ex. 75), prepositional adverb (ex. 76), conjunction (ex. 77):

(75) Ancient Greek

\textit{Παρετέτατο δὲ ἡ τάφρος [...]}

\textit{extend.plupf.3sg ptc the.nom.sg.f trench.nom.sg}

\textit{μέχρι τοῦ Μηδίας τείχους.}

\textit{until the.gen.sg.n Media.gen.sg wall.gen.sg}
‘This trench extended up to the wall of Media.’ (Xenophon, *Anabasis*, 1, 7, 15)

(76) Ancient Greek

Ἐδίωξαν μέχρι εἰς τὸ στρατόπεδον.

pursue.aor.3pl until into the.acc.sg.n camp.nom.sg

‘They pursued them up to the camp.’ (Xenophon, *Anabasis*, 6, 4, 26)

(77) Ancient Greek

Ταῦτα ἐποίουν μέχρι σκότος

these.acc.pl.n do.impf.3pl until darkness.nom.sg

ἐγένετο.

come.on.aor.3sg

‘They kept this up until darkness came on.’ (Xenophon, *Anabasis*, 4, 2, 4)

We find the same ambivalence in Greek ἕως ‘until’ and, on its model, in Armenian minč’ew ‘until’. In German bis can be both a conjunction (e.g. bis er kommt ‘until he comes’) and a prepositional adverb (e.g. bis an den Ort ‘up to the place’); as a preposition, bis is sporadically attested until the 19th century (bis + acc., e.g. bis Berlin ‘to Berlin’, bis diesen Augenblick ‘up to that time’), but it is now recessive and limited to a few contexts (e.g. with a temporal meaning bis Sonntag ‘until Sunday’).35

Historically, the direction of change is not unilateral. We have as many examples of prepositions becoming conjunctions (P → C) as of conjunctions becoming prepositions (C → P). In Ancient Greek μέχρι is originally a preposition (grammaticalised from a collocation *με γ’σρι ‘in the hand’, cf. Arm. merj ‘near’), but it came to be used secondarily as a conjunction. On the other hand, ἕως is originally a conjunction (cf. Sanskrit yāvat ‘as far as, as long as’), but it came to be used secondarily as a preposition. The Baltic evidence points to an original conjunction *ikā ‘as much as’, which implies that the prepositional use (‘until’) is secondary. It can therefore be assumed that the conjunction *ikā is the source of the Lithuanian preposition iki ‘until’, and we do not need to look for a different origin, for example by postulating an etymological relationship to Lat. aequus ‘equal’36 or a deformation of *łyki ‘until’ deriving from a

35 See Paul (1920, 54, § 307).

36 Cf. Bezzenberger (1901, 166).
Germanic loanword. But we still have to explain the semantic evolution and to describe the functional process which, from a conjunction, gave rise to a preposition.

To begin with the semantic aspect, it is striking that the telic meaning ‘until’ is often associated with, or even seems to derive from, a durative meaning (‘as long as, while’). The two meanings are very close to each other. ‘Until’ describes a pathway that ends in a final landmark: it supposes the completion of a linear course up to its extreme point. On the other hand, ‘as long as, while’ describes the progress of a course in a similar way, but without considering its final point. These are two different approaches to durativity, taking into consideration its completion or not and therefore connected with the aspectual properties of the verb: ‘until’ usually introduces a telic verb, ‘as long as, while’ a non-telic verb. It is therefore not surprising that the same formal expressions can be used with both meanings. In Ancient Greek, for example, the conjunction ἕως means both ‘until’ in reference to an end point (ex. 78) and ‘as long as’ in reference to a given length of time (ex. 79):

(78) Ancient Greek

Τούτου παρ’ ὀχθας ἔρφ’,
it.GEN.SG along bank.ACC.PL go.IMP.PRS.2SG
ἕως ἂν ἔξικη / καταβασιμόν.
until PTC reach.SBJV.AOR.2SG cataract.ACC.SG
‘Go along its banks until you reach the cataract.’ (Aeschylus, Prometheus Bound, 810)

(79) Ancient Greek

Οὐ μοι φόβου μέλαθρον ἐλπίς
NEG 1SG.DAT fear.GEN.SG hall.ACC.SG hope.NOM.SG
ἔμπατεί, ἕως ἂν αἰθὴ πῦρ
tread.PRS.3SG as.long.as PTC kindle.SBJV.PRS.3SG fire.ACC.SG
ἐφ’ ἐστιας ἐμῆς / Αἰγίσθος.
on hearth.GEN.SG. my.GEN.SG.ʃ Aegisthus.NOM.SG
‘Hope does not tread for me the halls of fear, so long as Aegisthus kindles the fire upon my hearth.’ (Aeschylus, Agamemnon, 1435)

This semantic contrast between telicity (‘until’) and durativity (‘as long as’) can be observed in other languages as well, and in each of these cases

the role of verbal aspect is conspicuous. In Serbo-Croatian, for example, *dok* means ‘as long as, while’ when followed by an imperfective verb (ex. 80), ‘until’ when followed by a perfective verb (ex. 81):^{38}

(80) Serbo-Croatian

I *dok* je *podnosila* *poniženja,*
and *as.long.as* be.PRS.3SG bear.PTCP.F.SG humiliations.ACC.PL
*bila* je *bližu* *onih* *samoubilačkih*
be.PTCP.F.SG be.PRS.3SG near these.GEN.PL suicidal.GEN.PL
*pomisli.*

thought.GEN.PL

‘And as long as she was suffering humiliations, she was near to these suicidal thoughts.’ (Mirko Kovač, 1938–2013, *Vrata od utrobe*, 1978)

(81) Serbo-Croatian

I *čekamo* *dok* *dobijemo.*
and wait(IPFV).PRS.1PL until obtain(PFV).PRS.1PL

‘And we wait until we obtain it [money].’ (Ante Kovačić, 1854–1889, *Idila Kraj Ljubljane*, 1877)

In the latter case, *dok* is regularly, but still optionally, followed in the modern language by the negative particle *ne*; its optionality makes it similar to an expletive negative.

In Latvian, we find the same polysemy with *kamēr* ‘as long as, while’ (ex. 82) and ‘until’ (ex. 83):

(82) Latvian

*Viņš* *lasīja* *grāmatu,* *kamēr* *bērni*
3.NOM.SG.M read.PST.3 book.ACC.SG while child.NOM.PL
*rotaļājās.*

play.PST.3.REFL

‘He was reading a book while the children were playing.’ *(Latviešu valodas vārdnīca, 1987, 356)*

(83) Latvian

*Lasīju,* *kamēr* *atnāca* *māte.*
read.PST.1SG until arrive.PST.3 mother.NOM.SG

‘I read, until my mother arrived.’ *(Latviešu valodas vārdnīca, 1987, 356)*

In a similar way, in the Latvian folksongs, the conjunction *ikām* has the same two meanings ‘as long as’ and ‘until’ (МБ, 1923–1925, i 704, ‘während, solange als’, ‘bis’). In the literature, the coexistence of these two meanings has sometimes been analysed as evidence for the category of aspect outside the verbal system (cf. Alexander 2006, 94), but one could argue the other way round that verbal aspect, either overtly marked or semantically implied, is the basis that makes the polysemy of these conjunctions possible. To put it otherwise, aspect is not an internal property of these conjunctions, but a verbal property indirectly affecting the semantics of these conjunctions.

This analysis would require further discussion, but, as it stands, it can provide us with the missing link to understanding the evolution of a conjunction ‘as much as’ towards a conjunction and preposition ‘until’. The conjunction *ikā*, from a purely quantitative meaning (‘as much as’), developed temporal meanings, iterativity (‘as often as’) or durativity (‘as long as’), and the last of these meanings, when associated with telic verbs, gave rise to a telic meaning (‘until’):

<table>
<thead>
<tr>
<th>QUANTITATIVE MEANING</th>
<th>DURATIVITY</th>
<th>TELICITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘as much as’</td>
<td>‘as long as’</td>
<td>‘until’</td>
</tr>
</tbody>
</table>

The only open question at this stage is how a conjunction ‘until’ can become a preposition ‘until’. The notion of ‘conversion’, first introduced by Sweet (1891, 38) in reference to the shift of a word from one part of speech to another one, is insufficient to account for the process at stake here, because it is too closely connected with ‘zero derivation’ (e.g. English *a bridge* → *to bridge*), which is something completely different from what we have here. Marchand (1969, 360) proposed distinguishing ‘zero derivation’ and ‘conversion’, reserving the latter for functional change. But, even with this restriction, this does not shed light on what actually happened in the shift from *ikā* ‘until’ (conjunction) to *ikā* ‘until’ (preposition).

There are in the typological literature other instances of prepositions that can be traced back to conjunctions. A classical example is provided by the Albanian prepositions *nga* ‘from’ and *te(k)* ‘towards’ originating from the conjunctions *né* ‘from where’ and *te-ku* ‘towards where’.39 The functional shift is traditionally explained by means of an elliptical construction (ex. 84–85):

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39 They are mentioned by Hagège (2010, 143). See Petit for an analysis (2015).
(84) Albanian

\[ \text{Vij nga lumi.} \]
\[ \text{come.prs.1sg. from river.nom.sg = def} \]

‘I come from the river.’ (Newmark 1982, 289)

(85) Albanian

\[ *\text{Vij nga (është) lum-i.} \]
\[ \text{come.prs.1sg from.where be.prs.3sg河 nom.sg = def} \]

‘I come from where the river (is).’

What makes the Albanian examples particularly interesting is that a feature of the original construction was preserved after the reanalysis of nga as a preposition, the extremely unusual construction of the preposition with the nominative (nga + nom. ‘from’). Another well-known example is the reanalysis of the conjunction donde ‘where’ as a preposition ‘at, by’ in South American Spanish (ex. 86):

(86) South American Spanish

\[ \text{Estoy donde tú.} \]
\[ \text{I am where you.sbj} \]

‘I am with you, at your home.’

In both cases, a conjunction was reanalysed as a preposition: ‘from where the river [is]’ > ‘from the river’ and ‘where you [are]’ > ‘with you, at your home’. The role of ellipsis in this process is conspicuous, but this does not necessarily imply that the language preserves the possibility of nominal (non-verbal) sentences, which are ruled out both in Albanian and in South American Spanish. The suppression of the existential verb is not a precondition for the syntactic reanalysis; it is a result, not a cause.

These parallels provide a framework for accounting for the evolution of *ikà ‘until’ (conjunction) > (preposition). But there are still some crucial details to clarify in this scenario. If one assumes that a structure *ikà ‘until [there is] + noun’ was reanalysed as ‘until + noun’, one still has to explain the construction with the dative or with the genitive. An intuitive answer in this case could be that *ikà, once reanalysed as a preposition, adopted by analogy the construction of its synonym *ligi (Lith. ligi). The construction with the dative might thus be analogical in Lith. ikà, whereas the construction with the genitive results from the general elimination of the prepositional dative in favour of the genitive; other prepositions have undergone the same evolution (e.g. Old Lith. prieg + dat > prieg +
On distributive pronouns in the Baltic languages

7. The rise of the distributive pronouns

What has been said so far leads to a clear-cut result. Regardless of its ultimate etymology, the particle *ìkâ was a quantitative conjunction ‘as much as, as long as’ in the prehistory of the Baltic languages. It is as such directly reflected in Latvian, but was specialised in a conditional meaning ‘if’ in Old Prussian (*ikai) and partly reanalysed as a conjunction and preposition ‘until’ in Lithuanian (*iki). There is thus a common source for the three reflexes attested in the Baltic languages. This reconstruction opens the door to an analysis of the function of *ik- in the Latvian distributive pronoun *ikviêns. Correlatively, this makes it possible to approach the issue of the position of the other distributive markers in Lithuanian (*kiek- in *kiekvíenas) and Old Prussian (er- in *erains).

The first step is the working assumption that *ikâ is the crucial piece in the formation of the distributive pronouns of the three Baltic languages and that *kiek- in Lith. *kiekvíenas and er- in OPr. *erains derive, in one way or another, from this common source. The question is how a distributive pronoun can be traced back to a quantitative conjunction ‘as much as, as long as’.

There are parallels to this evolution. The most striking one is provided by the Latin adverbs quotannis ‘every year’ (Cicero +) and quotidiē ‘every day’ (Cicero +) with its derivative quotidiānus ‘daily’, cf. also quot mensibus ‘every month’ (Cato, De Re Rustica, 43, 2) and quot kalendis ‘on each returning Calends’ (Plautus, Stichus, 60). These adverbs derive from the quantitative adverb quot ‘how much, as much’ (< PIE *k’oti) in a way very similar to Latvian *ikdien ‘every day’ from *ik ‘how much, as much as’:

\[
\begin{align*}
(87) \text{Latin } & \text{quotidiē ‘every day’ } \leftarrow \text{ quot ‘how much, as much as’} \\
\text{Latvian } & \text{*ikdien ‘every day’ } \leftarrow \text{ *ik ‘how much, as much as’}
\end{align*}
\]

Interestingly enough, these formations are limited to temporal quantification, as in Latvian. The Latin distributive pronoun is quisque ‘every’, based

\[^{40}\text{More data in Šukys (1978, 82).}\]
on an indefinite (cf. Lat. *quisquis* ‘whoever’, Hitt. *kuš kuš*), and the use of *quot* with a distributive meaning is restricted to these temporal adverbs.

We find a fairly similar situation in Ancient Greek. Whereas the distributive pronoun is usually ἐκαστός (probably from the adverb ἐκάς ‘afar, far off’, ‘separately’), there is a handful of temporal adverbs built on the quantifier ὅσος ‘as much as’ (adverbial ὅσον): ὅσημέραι ‘daily, day by day’ (Thucydides, Platon), ὅσετη ‘every year’ (Aristophanes), ὅσοι μῆνες ‘every month’ (Demosthenes), ὅσαι ὡραι ‘every hour’ (Themistius). Either these formations combine two independent words (Xenophon: ὅσα ἔτη ‘every year’) or they merge them into a single form (Aristophanes: ὅσετη). The formal derivation is exactly the same as in Latvian:

(88) Greek ὅσημέραι ‘every day’ ← ὅσον ‘as much as’
Latvian *ikdien* ‘every day’ ← *ik* ‘how much, as much as’

A third parallel is even more instructive. In the Celtic languages the distributive pronoun can be traced back to an indefinite adjective *kʰʷākʰʷo-ː*:

Old Irish *cách*, Middle Welsh *pawb*, Middle Cornish *pup*, *pop*, *pep*, Middle Breton *pep* ‘every, everyone’.41 In Breton, this distributive pronoun and determiner is regular (e.g. Bret. *pep ti* ‘every house’, *pep tra* ‘everything’, *pep unan* ‘everyone’), but, in the modern language, it can be replaced by another form *kement* with exactly the same meaning (e.g. *kement ti*, *kement tra*, *kement unan*, etc.). An example from the Breton dialect of Plozévet (Finistère) is given in (89):

(89) Breton dialect of Plozévet

\begin{verbatim}
Anavezoud a ree kement den er
know.inf PTC do.pst.3sg every man.sg in = the
barrez.

village.sg

‘S/he knew everybody in the village.’ = French *Il / elle connaissa-
sait tout le monde dans la commune.* (Goyard 2012, 237)
\end{verbatim}

The distributive marker *kement* is identical to the quantitative adverb *kement* ‘as much as’ (cf. Welsh *cymmaint*), which is a compound formed from the stem *ke-* (< PIE *kom- ‘together with’) and the noun *ment* ‘dimension, size’ (cf. Middle Welsh *maint*, Cornish *myns*, Old Irish *mét*, from

a PIE root \( *\textit{meh} \), ‘to measure’, Lat. \( \textit{mētior} \) ‘to measure’).\(^{42}\) In the modern language, \textit{kement} can still be used independently as a demonstrative ‘so much, as much’ (ex. 90):

\[(90) \text{Breton dialect of Plozévet}\]

\[\textit{N'euz ked kement mi abaoe n'eau}\]

\[\text{NEG. = be.prs.3sg NEG as.many more since NEG = be.prs.3sg ked bagou}.\]

\[\text{NEG boats.pl}\]

‘There are not as many of them any more since there are no boats.’ = French \textit{Il n'y en a plus autant depuis qu'il n'y a pas de bateaux}. (Goyard 2012, 361)

It also provides by suppletion the equative form of the adjective \textit{meur} ‘big’ (‘as big as’, ex. 91):

\[(91) \text{Breton}\]

\[\textit{kement hag an ti mañ as.big and the house.sg this}\]

‘as big as this house’ = French \textit{de la taille de cette maison} (Fave-reau 1997, 141)

It cannot be used, however, as an interrogative stem (‘how much’). In this function, an interrogative adverb \textit{ped} is used, eventually followed by \textit{kement} with initial mutation: \textit{pegement} (e.g. \textit{pegement eo? ‘how much is it?’}, \textit{pegement a dud? ‘how many people?’}).

Taken at face value, there are common features between the Breton and the Latvian expression of distributivity. In both cases, we observe a semantic link between quantification (‘as much as’) and distributivity (‘every’):

\[(92) \text{Breton kement den ‘every man’} \leftarrow \textit{kement ‘as much as’}\]

\[\text{Latvian ikdien ‘every day’} \leftarrow \textit{ik ‘how much, as much as’}\]

But there are also differences between the two languages. The strong restriction to temporal reference which originally characterised the distributive marker \textit{ik} in Latvian has no parallel in Breton. The most striking difference, however, is that \textit{kement}, in the history of the Breton language,
was subject to an interesting limitation for which there is no equivalent in Latvian: in Middle Breton, *kement* could be used as a distributive marker exclusively when integrated in a relative clause.\(^{43}\) There was thus a complementary distribution between *pep* ‘every’, used as a general distributive pronoun, and *kement* ‘every + rel’, restricted to distributives within relative clauses. This remarkable limitation is abundantly documented in the oldest Breton texts; I have not found in the Old Breton literature any example of *kement* without following relative clause. A few examples from two religious poems of the 16th century, *An Resurrection* and *Tremenuan an Ytron guerchs Maria* (1530, ed. Le Berre 2011) can illustrate the construction of *kement* in Middle Breton (ex. 93–96):

(93) Middle Breton

\[ \text{Quement} \text{ planet } so \text{ en } aer \]
\[ \text{as.much} \text{ planet.sg be.prs.3sg in sky.sg} \]
‘every planet that is in the sky’ (*Tremenuan an Ytron guerchs Maria*, 1530, line 5268, ed. Le Berre 2011, 544)

(94) Middle Breton

\[ \text{Quement} \text{ den } so \text{ vndro a allo prouf’.} \]
\[ \text{as.much} \text{ man.sg be.prs.3sg one.day ptc can prove} \]
‘Every man will clearly be able to observe [it].’ (*An Resurrection*, 1530, line 3579)

(95) Middle Breton

\[ Oar \text{ quement vnan } so \text{ ganet} \]
\[ \text{over as.much} \text{ one.sg be.prs.3sg begotten} \]
‘over all who are begotten’
(*Tremenuan an Ytron guerchs Maria*, 1530, line 4880, ed. Le Berre 2011, 510)

(96) Middle Breton

\[ \text{Quement} \text{ so } \text{ en fez badezet} \]
\[ \text{as.much} \text{ be.prs.3sg in faith.sg baptised} \]
‘all who are baptised in the faith’ (*Tremenuan an Ytron guerchs Maria*, 1530, line 5494, ed. Le Berre 2011, 564)

These examples exhibit the principal characteristics of the Breton construction:

1°. As a distributive marker, *kement* can be used with a substantive (*planet* ‘planet’ in 93, *den* ‘man’ in 94), with the pronominalising numeral *unan* ‘one’ (in 95) or even alone (in 96).

2°. Its referent is consistently singular, as expected with a distributive.

3°. In Middle Breton, *kement* is always followed by a finite clause with a conjugated verb, usually *so* ‘is’ (ex. 93–96).

4°. The meaning is distributive, but includes a connotation of globality (‘each one, without exception’).

There are two lessons to draw from this parallel. First, the Breton data corroborate the link between quantification (‘as much as’) and distributivity (‘each, every’). From a semantic point of view, distributive-key pronouns do not only describe a plurality of events experienced by a plurality of agents, but, more crucially, they indicate that the calculation of this plurality was carried through to its conclusion unit by unit, separately, without leaving anything out; a quantitative conjunction ‘as much as’ describes the same type of plural calculation, considering each unit one by one, step by step, up to its end. More than general universal quantifiers (‘all’), distributive pronouns (‘each’) imply that the plural calculation reaches its completion and does not omit any single element. This aspectual property of distributivity is so conspicuous that it hardly needs to be further stressed; it was often pointed out in the recent literature on event plurality.\(^{44}\) One might add in passing that this is congruent with the shift from distributive (‘as much as’) to completive calculation (‘until’).

The second lesson that can be drawn from the Breton parallel is that the functional change of a quantitative conjunction (‘as much as’) into a distributive marker (‘every, each’) follows a precise pathway that implies the formation of generalising relative clauses. To make this clear, let us take another Breton example which occurs with some frequency in 16th century literature:

(97) Middle Breton

```
Quement den so en bet
as.many man.sg be.prs.3sg in world.sg
```

\(^{44}\) See especially Maslov’s notion of ‘quantitative aspectuality’ (Maslov 1985). See also Cusic (1981).
‘every man who is in the world’ (*A Passion*, 1530, line 138, ed. Le Berre 2011, 74)\(^{45}\)

The functional change that led to the possibility in Modern Breton of using *kement* as a purely distributive pronoun (*kement den en bet* ‘every man in the world’) supposes two evolutions:

1°. The quantitative adverb *kement* was reanalysed as a generalising indefinite relative pronoun (‘whoever, whichever’).
2°. The existential verb was deleted.

This can be schematised as follows:

(a) *kement den so en bet* ‘as much man as there is in the world’
(b) *kement den so en bet* ‘whichever man is in the world’
(c) *kement den (so) en bet* ‘every man in the world’

The evolution from (a) to (b) is an instance of syntactic reanalysis in its classical definition (change of function without change of surface structure), that from (b) to (c) reflects the ellipsis of the existential verb in a way much similar to what we have described above as the conversion of conjunctions to prepositions (cf. Alb. *nga* ‘from where X [is]’ > ‘from X’). Interestingly enough, the initial syntactic pattern with the existential verb has been preserved in Breton up to the present day, but is likely to have undergone a reanalysis of the verb *so, zo* as part of a bipartite distributive morpheme. In a sentence like (98), there is hardly any possibility of ascribing to *kement* its original quantitative meaning and to *zo* its verbal function:

(98) Modern Breton

\[
\text{e kement ti zo in every house.sg be.prs.3sg}\\
\text{‘in every house’}
\]

We are rather dealing with a distributive pronoun formed of two elements, *kement...zo*, in a construction in which the noun *ti* is embedded between the two parts. This embedding pattern is not unparalleled in Breton; it is reminiscent of what we find in the demonstrative pronoun

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an ti mañ ‘this house’, where the noun ti ‘house’ is embedded between the two parts of the demonstrative an... mañ.

The evolution of ik- in Latvian from a quantitative conjunction (‘as much as’) to a distributive marker can be understood in the light of these parallels. Let us illustrate this by an example (ex. 99, repeated from 56):

(99) Latvian (folksong)

Ik dſee mi u iſdſeedaju
as.many song.gen.pl sing.pst.1sg
Šatin’ dſee mu kamolā
wind.pst.1sg song.gen.pl ball.loc. sg.

‘Whenever I sang songs, I wound them on the ball of songs.’
(lit. ‘as many songs as I sang...’) (K. Baron & H. Wissendorff, Latwju dainas, bw, 1894, 47)

This example shares common features with the Breton example given in (98) and can be subjected to the same analysis:

(a) ik dziesminu izdziedāju, satīnu dziesmu kamuolā ‘as many songs I have sung I have wound them on the ball of songs’
(b) ik dziesminu izdziedāju, satīnu dziesmu kamuolā ‘whichever songs I have sung I have wound them on the ball of songs’ > ‘all the songs I have sung I have wound them on the ball of songs’
(c) ik dziesminu satīnu dziesmu kamuolā ‘I have wound every song on the ball of songs’

The evolution from (a) to (b) illustrates a syntactic reanalysis (quantitative > generalising relative), that from (b) to (c) the ellipsis of the subordinate verb. There are, however, some differences between Breton and Latvian. The first one is the limitation to temporal contexts in Latvian, which supposes an evolution from a purely quantitative (‘as much as’) to a temporal (‘as long as, as often as’) meaning. A second difference is the number of the noun introduced by the distributive marker, singular in Breton (kement den ‘every man’ < ‘as much man’), eventually plural in Latvian (ik dziesminu ‘every song’ < ‘as many songs’). A third difference is that, whereas Breton has preserved a feature of the original construction in the restriction of the distributive kement to contexts with a following relative clause, there is no such constraint in Latvian. In spite of these differences, the process is the same, and the Breton data help us to
understand better the stages of development that gave rise to the Latvian
distributive marker *ik-.

Our final task is to account for the rise of the corresponding distribu-
tive markers in Lithuanian (*kiek- in kiekvienas) and Old Prussian (*er-
in erains). Our starting point was the assumption that both Lith. *kiek-
and Old Prussian *er- are secondary in the formation of distributive pronouns
and that the oldest structure is that reflected in Latv. *ik-. This choice is
not arbitrary, but is based on the archaism of *ikā within the correlative
system. It can be assumed that the system inherited in Lithuanian was ini-
tially fairly similar to the Latvian one and underwent the same syntactic
evolution as in Latvian, but later on the old form *ikā was replaced by
its historical substitute in the correlative system *kiekā and this was also
applied to the distributive use of the same morpheme:

\[
*ikā \text{‘as much as’} \quad \rightarrow \quad *ikā \text{‘every’} \\
\downarrow \\
*kiekā \text{‘as much as’} \quad \rightarrow \quad \text{X (X = *kiekā ‘every’)}
\]

There is obviously a correlation between the modernisation of *ikā into
*kiekā in the correlative system and its parallel replacement in the ex-
pression of distributivity. To put it otherwise: once *ikā came out of the
correlative system in Lithuanian (that is, once it became a conjunction-
preposition ‘until’) and was replaced by *kiekā, the same replacement was
extended to the distributive marker. This evolution can be illustrated by
the following example (ex. 100, repeating 55):

(100) Modern Lithuanian

\[
\begin{align*}
\text{Kiek} & \quad \text{prāšė}, & \text{tiek} & \quad \text{daviaū.} \\
\text{how.much} & \quad \text{ask.pst.3} & \text{so.much} & \quad \text{give. pst.1 sg} \\
\text{‘I gave him as much as he asked for.’} \\
\text{(lit. ‘As much as he asked for, so much I gave.’)} & \quad \text{(Smoczyński} \\
\text{2007, 675)}
\end{align*}
\]

The quantitative subordinate clause can be interpreted here in terms of
distributivity: ‘as much as he asked for’ > ‘everything he asked for’, and
we can clearly see the semantic link between the two domains. It can

\[46\] The existence of the Baltic loanword *kelka in Finnish (kaikki ‘all’), Estonian (kõik ‘all’),
Votic (kõikki ‘all’) and Veps (kaik, kaikuutte ‘every’) does not prove the antiquity of *kiekā
as a distributive marker, since we have no evidence as to the date of the borrowing. See
Thomsen (1890, 101 = 1931, 173) and Toivonen (1955, 141).
therefore be assumed that Lith. *kiek-* (in *kiekvíenas*) reflects fundamentally the same pattern of evolution as Latv. *ik-* (in *ikviëns*), with a minor formal modernisation. Strikingly enough, Latvian preserved *ik-* even in spite of its formal replacement by *cik* in the correlative system.

The Old Prussian evolution is more surprising. From what has been said above about Latv. *ik* and Lith. *kiek* we can make a plausible case for a development ‘as much as’ > ‘every’. On the other hand, we have tried to explain Lith. *iki* ‘until’ as the result of a development ‘as much as’ > ‘as long as’ > ‘until’. But there is no evidence for a development ‘until’ > ‘every’, which is obviously the case in Old Prussian (*er* ‘until’ > *erains* ‘every’).

| ‘as much as’ | ‘every’ |
| ‘as long as’ | ‘until’ |

To tackle this problem, attention should be drawn to another Old Prussian form which presents a certain degree of similarity with *er* ‘until’ and *erains* ‘everyone’: *ter ains* ‘alone’. This form corresponds to German *allein* ‘alone, only’ in positive (ex. 101) and in negative contexts (ex. 102):

(101) Old Prussian

```
Adder pirfdau stefmu Klaufiwingin turrmai
but before the.dat.sg confessor.acc.sg have.to.prs.1pl
mes ter ains stans grijkans posinnat
we.nom.pl only the.acc.pl sin.acc.pl recognise.inf
‘But before the confessor we must only recognise our sins.’ =
German: Aber für dem Beichtiger sollen wir allein die sünden beken-
nen. (Enchiridion, 1561, iii 65,21)
```

(102) Old Prussian

```
Stai Crixtifnai aft ni ter ains
the.nom.sg baptism.nom.sg be.prs.3 neg only
fchklais vnds.
plain.nom.sg water.nom.sg
‘Baptism is not only plain water.’ = German: Die Tauffe iſt
nicht allein fchlecht waſsber. (Enchiridion, 1561, iii 59,7)
```
The precise function of *ter ains* is difficult to determine. In both instances it corresponds to an adverb ( = German *allein*), but the ending of *ains* seems to be that of the masculine singular numeral ‘one’, which is possible in (102) in reference to the masculine singular *unds* ‘water’, but impossible in (101) in reference to the first plural *mes* ‘we’.\(^{47}\) From a semantic point of view, *ter ains* is strongly reminiscent of Lithuanian *tik* and Latvian *tikai* ‘only’, and its position in relation to *erains* is exactly parallel to that of Latvian *tikai* in relation to *ikviēns*:

\[
\begin{align*}
\text{(103) } & \text{Old Prussian } erains \ ‘everyone’ & \leftrightarrow & \text{ *ter ains* ‘only’} \\
& \text{Latvian } ikviēns \ ‘everyone’ & \leftrightarrow & \text{ *tikai* ‘only’}
\end{align*}
\]

On the other hand, in its apparent derivation from the prepositional adverb *er* ‘until’, Old Prussian *erains* reminds us of the relationship of Lithuanian *iki* ‘until’ with the distributive stem *ik-* of Latvian *ikviēns*. The best way to put all the pieces of the puzzle back together is to assume that the morpheme -er-, whatever its origin, is a recent replacement of -ik- in Old Prussian. This assumption enables us to reconstruct a system parallel to that of Latvian and Lithuanian. More precisely, my claim is that Old Prussian reflects basically the same configuration as Latvian, but with a semantics corresponding more to what we find in Lithuanian. What is inherited is, as in Latvian, the opposition of an old form of correlation with *ik-* as conjunctive (‘as much as’) and a new form of correlation with *kik-* as conjunctive (‘as much as’) and *tik-* as demonstrative (‘so much’). The first step was the semantic development of a telic meaning, as in Lithuanian (‘as much as’, ‘as long as’ > ‘until’). At this stage the old forms in *-ik-* were ousted from the correlative system and replaced by new forms with *-er-. One of the old forms survived in a specialised meaning (OPr. *ikai* ‘if’); in its prototypical meaning (‘as long as’, ‘until’) it was replaced by *er*.

The reason for this replacement might have been the following. There is no certainty whatsoever as to the etymology of *er*, but what seems likely is that it was originally a coordinative particle (‘even, and, also’) reanalysed as a telic preposition (‘until’). On this basis one may assume that, in its immediate prehistory, Old Prussian possessed a system opposing a conjunction *ik-* ‘until’ ( < ‘as long as’) and a preposition *er-* ‘until’

\(^{47}\) For the use of the numeral ‘one’ with a limitative adverb one might mention the parallel of Lithuanian *vien tik* ‘only’.
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(< ‘even, and, also’). This system, which appeared to be irregular and unbalanced in particular in comparison to the uniform expression in German bis, was regularised by the extension of *er- at the expense of *ik-: *er- ‘until’ came to be used both as a preposition and as a conjunction. The Old Prussian corpus does not allow us to verify the validity of this hypothesis: by accident we only have evidence for the preposition er and no context corresponding to German bis used as a conjunction. Given this historical substitution, one can understand that *-er- was generalised not only in the conjunctive stem of the ancient correlative system (*ik- replaced by *er-), but also by analogy in all the forms that belonged to the correlative system regardless of their antiquity (*tik- also replaced by *ter-):

*ikā ‘as long as’, ‘until’  *tikā ‘so much, only’
↓
*er- ‘until’ conjunction → X (X = *ter ‘so much, only’)
↑
*er- ‘until’ preposition (< ‘even, and, also’)

This scenario can also explain the extension of er- from the conjunction to the distributive marker. Once *ik- was replaced by *er- in one of its meanings (the conjunction ‘until’), it underwent the same replacement in all its functions, even as a distributive marker:

*işkā ‘as long as’, ‘until’ *išk- distributive marker
↓
*er- ‘until’ → X (X = *er- distributive marker in erains)

The fact that ikai ‘if’ was not replaced by a form in *er- is obviously due to its semantic remoteness, which separated it from the rest of the correlative system. To a certain extent it illustrates one of Kuryłowicz’s famous laws of analogy: ikai ‘if’ is an old form used in a new function, whereas er ‘until’ is a new form used in the old function. Even deformed by this secondary clothing, the Old Prussian data have the same source and illustrate the same historical pathway as the Lithuanian and Latvian ones.

8. Conclusion

According to Gil (1995, 321), distributive quantifiers such as Engl. each
and every are ‘among the most exceptional of quantifiers in their syntactic and semantic behaviour’: unlike global quantifiers such as Engl. all, they express ‘a marked semantic relation’ and occur in a ‘restrictive set of environments’ (1995, 326). This descriptive complexity is also echoed in the diversity of their diachronic sources. Typologically, Haspelmath (1995) identified three possible origins of distributive markers:

(1°) free-choice determiners like ‘any’, often derived from the wh-determiner ‘which’ with a special particle (‘also’, ‘even’, ‘or’, ‘it may be’). Example: Latin quisque ‘every’ from quis ‘who, which’ and -que ‘and, also’.

(2°) distributive prepositions. Example: Hindi prati ‘every’ from Old Indic prati ‘near, against, upon’;

(3°) global quantifiers. Example: Spanish toda casa ‘every house’ compared with todas las casas ‘all the houses’.

Haspelmath (1995, 380) recognises himself that ‘this is an impressionistic statement based to a large extent on Indo-European’ and that ‘other language families and types may take their universal quantifiers from completely different sources’. As a matter of fact, even in the Indo-European languages, the range of possibilities can really be impressive. The aim of this paper was to shed light of the origin of the distributive markers in the three Baltic languages (Old Prussian erains, Lithuanian kiekvičenas, Latvian ikviens). What I tried to show is that, in spite of their outward dissimilarity, the three distributive markers reflect the same historical pattern, deriving from a quantifying conjunction (‘as much as’) specialised in elliptical contexts as a distributive marker (‘every’). The divergences between the three Baltic languages are due to various recompositions of the underlying correlative system and add little to our understanding of distributivity.
ABBREVIATIONS


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