Indeterminate pronouns in Old English: a compositional semantic analysis

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Abstract Indeterminate pronouns in Old English (expressions like hwa ‘who/what’ and hwelc ‘which’) permit several interpretations in addition to their use as interrogative pronouns, for example readings as universal or existential quantifiers. They combine with morphological prefixes (ge- ‘and, also’ and a- ‘always, ever’), which change the range of possible interpretations. Old English indeterminate pronouns are shown to contribute a crosslinguistically hitherto unattested pattern of available interpretations. In particular, bare indeterminate pronouns have a universal interpretation and ge-indeterminate pronouns can be both universal and existential. This paper offers an alternative semantic analysis in the spirit of Hamblin (Found Lang 10:41–53, 1973) and Shimoyama (Nat Lang Semant 14:139–173, 2006). A compositional semantics is given for the pronouns and the prefixes, which derives the available readings. The paper ends with a proposal for compositional semantic change relating Old English indeterminate pronouns to their modern descendants.

Keywords Old English · Indeterminate pronouns · Alternative semantics · Quantification · Semantic change

1 Introduction

This paper offers a compositional semantic analysis of the interpretations of indeterminate pronouns in Old English (OE).
Indeterminate pronouns, a term I use here in the sense of Shimoyama (2001) and Kratzer and Shimoyama (2002) (going back to Kuroda 1965), are pronominal expressions with typical uses as interrogative \(wh\)-pronouns. Frequently they, or morphological derivations based on them, have other uses, e.g. as indefinites, NPIs or universals. I provide an example from Japanese in (1) (from Shimoyama 2001) and an example from Latvian in (2) (from Kratzer and Shimoyama 2002). The term \textit{indeterminate pronoun}, as opposed to \textit{interrogative pronoun}, highlights that the pronoun can participate in other interpretations besides question interpretations.

(1) a. Yoko-wa dono hon-o yomimasita ka?
\(\text{Yoko-Top which book-Acc read Q}\)
‘Which book did Yoko read?’

b. Yoko-wa dono hon-mo yonda.
\(\text{Yoko-Top which book-MO read}\)
‘Yoko read every book.’ (Shimoyama 2001)

(2) a. kur ‘where’

b. kaut kur ‘somewhere’

c. ne-kur ‘anywhere’ (in the immediate scope of negation)

d. jeb-kur ‘anywhere’ (NPI and FCI) (after Kratzer and Shimoyama 2002)

Present Day English (PDE) \(wh\)-pronouns do not have uses as universal or existential expressions. But PDE’s ancestor Old English (OE)\(^1\) had proper indeterminate pronouns, with derived forms and several possible interpretations. These forms and interpretations make them interesting semantically. I illustrate in (3) the relevant forms of \textit{hwa} ‘who, what’\(^2\): in addition to the bare indeterminate pronoun (3a), there is a form with the prefix \textit{ge}– ‘and, also’ \(\textit{ge-hwa}\) (3b) and a form with the additional prefix \textit{a}– ‘always, ever’ \(\textit{aeghwa}\) (3c) (see, e.g., Bosworth and Toller 1898/1921; Einenkel 1904; Kahlas-Tarkka 1987). (See Sect. 2 for a detailed explanation of the presentation of the examples.) Parallel forms exist for other indeterminate pronouns like \textit{hwelec} ‘which’ and \textit{hwær} ‘where’; I refer to them as the bare series, the \textit{ge}-series, and the \textit{a}-series of OE indeterminate pronouns.

(3) a. To \textit{hwam} ga we
to whom go we
‘To whom do we go?’
(\textit{B&T; ad quem ibimus? Jn. Skt. 6, 68. The Gospel of St. John, edited by Skeat. v. Mk. Skt.})

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\(^1\) Roughly, OE refers to the language spoken in England between the 5th and the late 11th century. See, e.g., Fichte and Kemmler (2005).

\(^2\) The orthography of OE was not standardized and various spellings exist for its indeterminate pronouns. In the text, I stick to \textit{hwa} ‘who/what’, \textit{hwelec} ‘which’, and \textit{hwær} ‘where’, and similarly for the \textit{ge}- and the \textit{a}-series. In the examples, I reproduce the spelling from the source text.
b. He ðeoda gehwam hefonrice forgeaf
he (of) people GE.whom heaven’s kingdom gave
‘he to everyone of the people gave heaven’s kingdom’ (universal)
(B&T; 30; Th. 40. 19; The Anglo-Saxon version of the Holy Gospels, ed. B. Thorpe, London & Oxford 1842; Gen. 641. The Anglo-Saxon version of Genesis)

c. Hæt ic æghwæt swa don swa he us bebead,
ordered I A.GE-what so done so he us asked
‘I ordered that everything be done as he asked us.’ (universal)
(K-T, Alex 41.8: Alexander’s Letter to Aristotle, ed. S. Rypins in Three OE Prose Texts in MS Cotton Vitellius A XV, EETS, 161, 1924)

All three series participate in several different interpretations. For example, the bare series can, in addition to the interrogative interpretation (3a), lead to an existential and a universal interpretation (4a, b). The ge-series has a universal and an existential interpretation (5a, b). The a-series can, in addition to the universal reading in (3c), lead to an NPI interpretation (6a), but not, according to the available evidence, to a question meaning (6b) (see again the literature cited above).

(4) a. (Nellaþ hi gelyfan) ðeah hwa of deaþe arise
though who of death arose
‘(they will not believe,) though one rose from death’ (existential)
(B&T; Homl. Th. i. 334, 21: The Homilies of Ælfric, edited by B. Thorpe for the Ælfric Society, London, 1844-1846. Quoted by volume, page and line. Bt. Met. Fox 10, 53; The Anglo-Saxon version of the Metres of Boethius. Met. 10, 27. The metres of Alfred)
b. Het ða hyssa hwæne hors forlætan
ordered (he) then (of) warriors whom horse leave
‘he then ordered everyone of the warriors to leave his horse behind’
(K-T; The Battle of Maldon)

(5) a. Oft ic sceolde ana uhthna gehwylce mine ceare cwipan
often I shall one morning GE.which my sorrows bewail
‘Often I must bewail my sorrows alone every morning’ (universal)
(UTexas; The Wanderer)
b. (Witodlice on ðære ealdan a,) Loð, and Iosue, and gehwilce oðre
Lot and Joshua, and GE-which others
þe englas gesawon, (hi luton wið heora, and to him gebædon,...)
that angels saw
‘(But in the ancient law,) Lot, and Joshua, and certain others who saw angels, (bowed before them, and prayed to them,...)’ (existential)
(Thorpe 1844, 38)
The data raise interesting questions for semantic composition: What is the semantic contribution of the indeterminate pronoun? How does the sentence come to express a universal or existential statement or a question? What determines the range of possible sentence interpretations for a given indeterminate pronoun? These questions are the focus of the present paper.

The goal is to add to the existing literature on indeterminate pronouns a survey of the data from OE and their compositional semantic analysis, neither of which is available at present. We will see that OE provides an interesting case study, partially at odds with generalizations on indeterminate pronouns (see, e.g., Mitrovic 2014; Szabolcsi 2015 for recent discussion) and hence requires particular analytical tools.

My analysis is based on an alternative semantics for the indeterminate pronoun (e.g. Hamblin 1973; Shimoyama 2001; Kratzer and Shimoyama 2002)—indeterminate pronouns introduce alternatives into the semantics. Since each series of indeterminate pronouns participates in several different types of interpretation, the overt material doesn’t unambiguously determine sentence meaning. Covert operators quantify over the alternatives introduced by the indeterminate pronoun, yielding an overall sentence interpretation as existential, universal, interrogative and so on. Thus the covert existential, universal etc. operators are held responsible for determining the sentence interpretation, potentially yielding sentence level ambiguity.

The paper is structured as follows: In Sect. 2 I provide a detailed empirical discussion of the OE data, based on a systematic corpus search I conducted. The results of this empirical study are the input to the semantic analysis presented in Sect. 3, the alternative semantic analysis anticipated above. Section 4 explores some consequences of the analysis: on the one hand, the case study of OE is compared to what we know about systems of quantification crosslinguistically. On the other hand, my proposal analyses quantification in OE as more similar to (present day) Japanese than PDE; this raises the question of how PDE quantifiers like each and every could develop diachronically from OE indeterminate pronouns. I conclude with a suggestion concerning the diachronic development of universal quantifiers, the Universal Semantic Cycle (Beck 2017, 2018). Section 5 provides a short summary of the paper.
2 OE indeterminate pronouns: an overview of the data

The following sections lay out the possible interpretations for the three series of indeterminate pronouns in OE. In very general terms, the information presented in this section can be found in classical sources such as Bosworth and Toller (1898/1921), Einenkel (1904), Wülfling (1894–1901), Kahlas-Tarkka (1987), and others. But the philological works do not use the concepts of modern linguistic theory or the standards of explicitness in compositional semantics. Hence I proceed in the following way:

I put together a data set by systematically searching the YCOE corpus (Taylor et al. 2003) for occurrences of indeterminate pronouns. What I present in this section is mostly examples extracted by this search from OE1 or OE2 files (that is, early OE) in the YCOE corpus. The data I present below from that sample are presented with the YCOE reference (the file name, the text, and the identification of the token). (See the “Appendix” for more information on the relevant YCOE files.) I concentrate on the indeterminate pronouns hwa, hwelc, gehwa, gehwelc, æghwa, æghwelc, and ælc.

This sample is occasionally supplemented by other data which are particularly telling for the issue at hand. For example, I sometimes add data with the indeterminate pronouns hwær ‘where’ and hwæðer ‘which of the two’ from the same YCOE files. Also, Bosworth and Toller and Kahlas-Tarkka, for instance, present a lot of examples, though they are not glossed and often there is no translation. Where I take an example from Bosworth and Toller, I indicate this in the example, abbreviated as B&T, and include reference to the OE text which they provide as the source of the example, for the convenience of the reader. Similarly, examples from Kahlas-Tarkka, which I abbreviate as K-T in the examples, are also provided with her identification of the original source text. Occasional examples are from University of Texas OE online lessons by Jonathan Slocum and Winfried P. Lehmann, abbreviated UTexas, with reference to the original source text.

I classify the interpretations of the sentences with the indeterminate pronouns according to modern linguistic theory. The interpretations I distinguish are question, free choice relative clause (FCR), free choice item (FCI), negative polarity item (NPI), universal, and existential. The classical works on OE tell us that these are interpretations to look out for. The question is which indeterminate pronouns participate in which interpretations.

For each prospective interpretation, I provide example sentences illustrating this use, as unambiguously as possible. In order to classify an interpretation, I infer the contribution of the indeterminate pronoun to the sentence meaning from the proposition expressed by the sentence. The composition of the propositional

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3 Further distinctions can certainly be made theoretically, for example further types of relative clauses, and subdivisions of indefinites according to licensing conditions and scope preferences (e.g. strong/weak NPI, PPI, modal indefinite). I hope that the readings I identify will prove a useful starting point.
interpretation of the sentence, in turn, is inferred from the syntactic structure (here I am aided very significantly by the YCOE parse tree), the lexicon (here I rely specifically on the Bosworth and Toller dictionary), and the OE text, which provides a context.

Mostly, translations of the OE text passage with the indeterminate pronoun into modern English are available. Where the translation is sentence by sentence, they tell us which propositional interpretation the translator assigned to the sentence with the indeterminate pronoun. Since an adequate translation preserves propositional meaning (see, e.g., Kamp 1978 for an early explicit discussion), this can be an indication of the proposition expressed by the OE sentence. It is not necessarily the case, though, that the translation indicates how the occurrence of the indeterminate pronoun is to be classified semantically; to give a simple example, the indeterminate pronoun is sometimes not literally translated at all (e.g. when an expression contributing ‘every year’ is translated as ‘annually’). In general terms, the existing translations provide a useful context for the example.

In my presentation, I use translations to help indicate to the reader the interpretive contribution of the indeterminate pronouns, i.e., to explain how the example is classified. The translations I provide for this purpose track the semantic analysis; that is, the translation of the pronoun matches the semantic classification. Where such a literal translation is available in the existing literature, I use the existing translation and cite its source. Often, this is the translation from YCOE’s source edition (e.g., Liebermann 1903 for the Laws of Alfred, and Sweet 1958 for the Cura Pastoralis in (7) below). (See the “Appendix” for details on the YCOE files and their source texts.) Where existing translations do not track the semantic analysis, I add my own translation. Where no useful modern English translation is available to me, I provide my own. The glosses of the OE examples (also helpful indicators to the reader of the compositional ingredients of the sentence) are mine.

The collection of data in the following subsections represents all interpretations of the indeterminate pronouns investigated that I found in my sample, which is compatible with the interpretations identified in general terms by the existing descriptive literature.

Section 2.1 presents the data for the bare series, Sect. 2.2 for the ge-series, and Sect. 2.3 for the a-series including ælc. I summarize the empirical results in Sect. 2.4.

### 2.1 The bare series

Let us begin by examining the interpretive options of *hwa* ‘who/what’. The literature mentions a range of interpretations for sentences in which this item occurs, which are reflected in my data sample and which (7) illustrates. In addition to the prominent interrogative (7a) and FCR (7b) uses, we find the existential (7c) and universal (7d) interpretations seen in Sect. 1.
The interpretations in (7a) and (7b) as interrogative pronouns and *wh*-pronouns in FCR are well-known and fully expected. Similarly, the interpretation as an existential indefinite in (7c) is unsurprising and well-documented in OE (see also, e.g., Wülfing 1894–1901 for the time period documented here). The universal interpretation in (7d) is rarer and less expected crosslinguistically (e.g., Szabolcsi 2015), but it is documented in the descriptive literature (e.g., Kahlas-Tarkka, Wülfing, Bosworth and Toller) and it occurs in my sample, as (7d) shows.

There are uses of *hwa* in contexts in which FCIs and NPIs are licensed. Such uses and their translations have attracted attention in the descriptive literature, and so I
discuss them here. (8a) and (8b) provide examples of potential FCI and NPI uses of _hwa_ respectively.

(8) a. ðeah _hwa_ wene ðæt he on hiora anra hwylcum mæge habban  
    though who thinks that he in (of) those ones which may have  
    fulla gesælþa, (ne biþ hit no ðy hræðor swa,…)  
    ‘though anyone thinks that he can have perfect felicity in any one of  
    them, (it is nonetheless not so,…)’ 

    (B&T; Bt. Met. Fox 17; The Anglo-Saxon version of the Metres  
    of Boethius Meter17; Translation: The Old English Boethius,  
    S. Irvine and M.Godden 2012, Harvard University Press)

b. Gif _hwa_ to hwæðrum þissa genied sie on woh,  
    if one to either (of) those forced be wrongfully,  
    oððe to hlafordsearwe oððe to ængum unryhtum  
    either to treason against a lord or to any wrongful  
    fultume, þæt is þonne ryhtre to aleoganne þonne  
    assistance, that is then more right to refuse than  
    to gelæstanne.  
    to render  

    (colawaf,LawAf_1:1.1.3)  
    ‘If anyone was forced into either of those wrongfully, either to treason  
    against a lord or to any wrongful assistance, it is then better to refuse  
    that than to render.’  

    Wenn einer [allerdings] böser Weise gezwungen worden ist, zum [Versprechen]  
    eines der beiden [Verbrechen], entweder zum Herrenverrath oder zu irgendeiner  
    widerrechtlichen Beihilfe, das ist dann richtiger zu weigern als zu leisten.  

    (Liebermann p. 48)  

Note, though, that (7c) is an example of an existential interpretation in which the  
indeterminate expression is not in a downward entailing context, hence not in a  
context licensing NPIs (e.g., Ladusaw 1979). Similarly, (4b) is an example of a  
universal interpretation in an episodic sentence without a modal or a generic  
interpretation, hence not a context licensing an FCI (e.g., Menéndez-Benito 2010). Thus I take genuine existential and universal readings to be available  
for _hwa_, in addition to the obvious uses as interrogative and free relative  
pronoun.

But given that universal and existential interpretations outside of FCI and NPI  
contexts are possible, the data in (8a, b) (despite their translations as NPI and FCI  
anyone) do not as such establish the need for FCI and NPI analyses of _hwa_. A  
narrow scope existential is truth conditionally indistinguishable from a (weak)  
NPI, and so (8b) could simply be a plain narrow scope existential. Similarly, (8a)
could be a universal interpretation. The fact that *hwa* is acceptable in contexts that license FCIs (a generic context in (8a)) and NPIs (an *if*-clause in (8b)) merely shows that the data are compatible with such analyses. We will come back to this point in Sect. 3.

Other bare indeterminate pronouns share the interpretive possibilities of *hwa*. I concentrate on *hwelc* ‘which’ and add the occasional example with other indeterminate pronouns (*hwær* ‘where’ and *hwæðer* ‘which of the two’ in the examples below). A note on terminology: the indeterminate pronoun is the lexical item, e.g., *hwelc*. Together with a noun or NP, *hwelc* forms an indeterminate phrase (which can, for instance, be a *wh*-phrase in a question). Both terms are used below, though the distinction doesn’t much matter. (9) illustrates the same range of readings that we have seen for *hwa* for the other indeterminate pronouns.

(9) a. *ac we nyton hwelc hira inneðgon bið beforan*  
*but we neg.know which their thought is before*  
*ðæm ðearlwisan deman on ðæm dieglan edleanum.*  
*the severe judge in the hidden requital*  
(cocura,CP:16.105.8.692)  
‘we know not what their thoughts are before the severe Judge with his hidden requital.’ (Sweet)  

(FCR)

b. *Gif he gewite er ðonne hia, his barna sue hwelc sue*  
*if he die earlier than her, his children whichever*  
*lifes sie agefe ðet feoh ond ate sue hit soelest*  
*alive are give that property and dispose so it best*  
*be for ða hit begetan.*  
(Interrogative)  
(codocu2,Ch_1200_[HarmD_7]:9.20)  
‘If he die before her, whichever of his children is alive is to pay the money and dispose of the estate in whatever way is best for those who have acquired it.’ (Harmer VII p. 45)  

(FCR)

c. *& oft ðeah gebyrð ðæm geðyldgan, ðeah him mon*  
*and often though happens (to) the patient though him one*  
*hwæt wiðerweardes doo, oððe he hwelc sceande geheire*  
*what hurtful do or he which disgrace hear*  
*bi him selfum, ðet he ôonne nawuht æt ðam*  
*concerning him self that he then not at that*  
*cierre ne bið onstyred, ac geberðo saa geðyldelic*  
*concerning him self that he then not at that*  
*time neg be stirred but behaves so patiently*  
*suelce he hit hæbbe mid eare heortan forlæten.*  
*such he it have with all heart dismissed*  
(cocura,CP:33.225.15.1473)  
‘And yet it often happens to the patient man that, although he suffers some wrong or hears some shameful report of himself, he is not agitated at the time, but comports himself patiently, as if he had dismissed it altogether from his heart.’ (Sweet)  

(existential)
Note that the combination of ‘almost’ with the indeterminate pronouns in (9d) identifies a universal interpretation (cf. I talked to almost every girl / *almost some girl). Another such example is given in (9').

(9') (Þa æt sumum cirre þæs ilcan geares comon þær sex scipu to Wiht, ond þær mycel yfel gedydon, ægðer ge on Defenum) ge wel hwær be δæm særiman.
and almost where by the seacoast
(At a certain time of the same year there came six ships to (the Isle of) Wight, and did much mischief there, both in Devonshire)
‘and almost everywhere near the seacoast.’ (universal)
(UTexas, Alfred’s war with the Danes; in: Charles T. Onions, ed. 1959. Sweet’s Anglo-Saxon Reader in Prose and Verse, 14th edition, Oxford: Clarendon, p. 37)

The interesting ambiguity of the bare series in non-wh-contexts between existential and universal interpretation is documented in particular for hwæðer ‘which of the two’ (e.g., Bosworth and Toller). In addition to interrogative and free relative uses, this indeterminate pronoun can contribute ‘one of the two’ or ‘both of the two’. An
example of the first interpretation is given in (10c), an example of the second in (10d). In both examples, only one of the two interpretations makes sense in the context. For completeness, (10a) and (10b) exemplify interrogative and FCR uses, respectively, of this indeterminate pronoun.

(10) a. \textit{Hwæðres} donne ðara yfela is betere ðer to tilianne, \(wh.either\) then \(of\) the evils is better earlier to attend
\begin{itemize}
\item buton swæðres swæðer frecenlicre is? \(unless\) such \(of\) two \(as\) \(of\) two \(more\) dangerous is
\end{itemize}
(cocura,CP:62.457.21.3299) \(\text{ (interrogative)}\)  
\textit{Which} then of the evils ought rather to be attended to, if not the most dangerous?  
(Sweet)

b. Suæ \textit{hueder} \textit{hiora} suæ leng lifes were foe to londe \(so\) \(wh.either\) \(of\) them \(as\) \(long\) life’s be take to land \& \(to\) \(all\) \(property\)
(coducu1.Ch_1500_[Rob_3]:3.82) \(\text{ (FCR)}\)  
\textit{whichever of them} who may be alive longer is to inherit the land and all property  
(Translation: Charles Merritt Carlton 1970. Descriptive syntax of Old English Charters. Mouton, The Hague)

c. \(ðonne\) is micel ðearf, ðonne him mon \textit{ðissa} \textit{uega} \(hwæðer\) \(then\) \(is\) much \(need\) when him \(one\) \(of\) these \(two\) \(wh.either\)
\begin{itemize}
\item onðrætt suiður donne ðörper, \& wið ðæt wienð, ðæt he dreads more than other and against that strives that he
\item suða suiðe wið ðæt winne sua he on ðæt ðörper ne so much against that strive so he in the other not
\item befealle, ðe he him ær læs ondred.
\end{itemize}
(cocura,CP:27.189.9.1260) \(\text{ (existential)}\)  
\textit{And it is very necessary, when a man dreads either of these two more than the other, and strives against it, that he strive not so earnestly against it as to fall into the other, which he formerly dreaded less.}  
(Sweet)

d. \(dæle\) he \textit{hwæðre} ðet, healf cyninge in ða scire \(divide\) he \(of\) \(wh.either\) \(this\), \(half\) the king in the shire \(d\) he ær folgode, healf in þa ðe he oncynd. 
\begin{itemize}
\item that he earlier served, \(half\) in that that he arrives \(that\) \(he\) \(earlier\) served, \(half\) in that that he arrives 
\end{itemize}
(colawaf,LawAf_1:37.1.124) \(\text{ (universal)}\)  
\textit{distribute he this to both, half to the king in the shire in which he served earlier, half in the one in which he now comes.}  
(und zwar vertheile er dies dem Königè halb in die Grafschaft, welcher jener [Mann] bisher untergeben war, und halb in die, in welche derselbe [jetzt] hinkommt. (Liebermann p 71)

Regarding potential FCI and NPI uses of indeterminate pronouns other than \textit{hwæ}, the same comment applies as in the case of (8a, b). Pertinent examples are given in (11) (also (8b) for \textit{hwæðer}). (11a) is a generic context, and the indeterminate phrase could plausibly also have been rendered as ‘any evil’. In (11b) both indeterminate phrases occur in the antecedent of a conditional, an NPI licensing context; context and interpretation are compatible with a use comparable to plain indefinite ‘a’ and NPI ‘any’. Observation cannot decide between the two analyses; see Sect. 3 for theoretical discussion.
a. Se sit, swelce he sitte on ðæm stole ðæs forhwierfdan
b. gif hwelc mon cirican gesece for ðara gylta hwylcum,

‘He sits, as it were, in the chair of the perverse assembly, who exalts himself with
the pride of such unrighteousness that he perpetrates every evil designedly.’

(Sweet) (‘… any evil…’) (FCI context)

b. gif hwelc mon cirican gesece for ðara gylta hwylcum,

‘If a man seeks a church because of any of these crimes which was not
revealed earlier, and confesses it there in God’s name, it be half forgiven.’ (NPI context)

Wenn jemand eine Kirche aufsucht, wegen einer jener Verschuldigungen, die früher nicht
offenbar war, und sie dort in Gottes Namen bekennen, sei es halb vergeben. (Liebermann, p. 53)

To give the reader an impression of some uses of bare indeterminate pronouns in
context, the short text in (12) and its translation illustrate that the bare series is
compatible with several interpretations—in (12) first an FCI or universal
interpretation and then an NPI or existential interpretation. The short text in (13)
illustrates that indeterminate pronouns of different series are able to express the
same meaning, here: universal quantification, expressed by an a-series expression
and a bare indeterminate pronoun.

(12) Boethius Meter 17 (Translation: The Old English Boethius, S. Irvine and
M.Godden):

though anyoneFCI thinks that he can have perfect felicity in any one of
themFCI, it is nonetheless not so, though they desire it, unless they have
all five.” Then I anwered and said: What then ought we to do, now that you
say that we cannot have the highest good and the perfect felicity in any
one of themNPI, and we certainly do not think that any oneNPI of us may
get all five together?”

(11) a. Se sit, swelce he sitte on ðæm stole ðæs forhwierfdan
who sits, as he sits on the chair (of) the perverse
assembly who that him elevates in the arrogance
swelcre unryhtwisnesse sylfe he fullfremme hwelc yfel
such unrighteousness that he fulfills which evil
huru ðurh geðeaht.
certainly by design
(cocura,CP:56.435.24.3093)
(13) Boethius Meter 20 (Translation: The Old English Boethius, S. Irvine and M.Godden):

Habbaþ ðea ða feower frumstol hiora, æghwhilec hiora agenne stede, ðea anra hwilec wið oðer sie miclum gemenged and mid mægne eac fæder ælmihtiges fæste gebunden,…

Yet each of the four have their birthplace, their own station, though each of them may be greatly mingled with the other and by the might of the father almighty also bound fast,…

In sum, we see that bare indeterminate pronouns can be used as interrogatives in questions and in FCR, as existential and universal quantifiers, and that they occur in FCI and NPI contexts.

2.2 The ge-series

Next we turn to indeterminate pronouns of the ge-series. Etymologically, the ge-series consists of a bare indeterminate pronoun with the morpheme ge- as a prefix. As a lexical item, ge is an additive particle meaning ‘and, also’ (e.g., Kahlas-Tarkka 1987). We want to know whether the ge-series has the same range of interpretive possibilities as the bare series or, if not, how it is different. Since the preceding subsection has provided an overview of the relevant interpretations, I sort the examples by interpretive options in this subsection. I look at the indeterminate pronouns ge–hwa and ge–hwelc, supplemented by ge–hwær and ge–hwæðer (glossed as ‘GE-who/what’, ‘GE-which’, ‘GE-where’, and ‘GE-wh-either’).

It is clear from the available literature (e.g., Kahlas-Tarkka 1987) that the ge-series is one of OE’s universal quantifiers and that it also supports existential interpretations. Universal interpretations are illustrated in (14) and existential interpretations in (15). (See once more the “Appendix” for a description of the YCOE files and their source editions.)

(14) universal:

a. Ac gif þu wilt beon heora þegn þonne scealt þu georne geðolian gehwæt þæs þe to heora þenungum & to do GE.what which that to their service and to hiora þeawum & to heora willan belimpet. their obedience and to their will belongs (coboeth,Bo:7.16.21.253)

‘If however thou art desirous to be its servant, thou must needs do cheerfully what belongs to its service, in obedience to its nature and its will;’ (Kiernan, et al. 2002: Alfred the Great’s Boethius: An Electronic Edition; www.uky.edu)

‘But if you want to be their servant then you must willingly do everything that belongs to their service and to their obedience and to their will.’
b. So then here from that impious people though just God's judgement near (of) cities every (pl) and land wasted were.

So then here almost every city and district was wasted by this impious people, though it was by the just judgment of God.’ (Miller)

c. Very rightly the priest’s robe is called the account of judgment, because the priest was bound and still is ever to consider how he can discern good and evil, and then to consider carefully how and when he is to teach each one, and what is most profitable for them, and not desire to appropriate anything to himself only, but reckon the prosperity of his neighbours as his own.’ (Sweet)

d. But if [it] is one of the cattle that breaks hedges and goes everywhere, and he will not hold them who owns them, or he cannot, let him take it who finds it on his field'

Wenn [der Schadenstifter] jedoch eines der Rinder ist, das Gehege [gewaltsam] bricht und überall eindringt, da der Eigentümer es nicht halten wollte oder kann, so nehme [es] wer es auf seinem Acker trifft (Liebermann p. 109)
(15) existential:

a. Ne heold he no þa Eastran, swa swa sume men neg held he not the Easter so as some men wenað, mid Iudeum on feowertynenihte monan think with Jews on fourteenth moon gehwylce daeg on wucan, ac a symle on GE.which day in week but ever always on Sunnandæge fram feowertynenihtum monan oð twentigesnihtne, Sunday from fourteenth moon up to twentieth night for þam geleafan þære Dryhtenlican æriste,… for the belief (of) the lordly resurrection,… (cobede,Bede_3:14.206.27.2104)

‘He did not keep Easter, as some imagine, in agreement with the Jews, on the fourteenth night of the moon on any day of the week, but always on Sunday, from the fourteenth night of the moon up to the twentieth night, from belief in our Lord’s resurrection,…’ (Miller)

b. & brohte of his weorce gehwylce grene & and brought of his work GE.which green and wel stincende wyrtaw. good smelling herbs (cogregdC,GDPref_and_3_[C]:1.181.16.2225) ‘and brought from his work some green and pleasantly smelling herbs.’ (Translation: Des heiligen Papstes und Kirchenlehrers Gregor des Grossen vier Bücher Dialoge/ aus dem Lateinischen übers. von Joseph Funk. Des heiligen Papstes und Kirchenlehrers Gregor des Grossen ausgewählte chriften Bd. 2; Bibliothek der Kirchenväter, 2. Reihe, Band 3) Kempten; München: J. Kösel: F. Pustet, 1933. 3. Buch Kapitel I. http://www.unifr.ch/bkv/kapitel3223.htm)

c. Hwæt: we witon, þæt þæt is læsse, þæt man wite gehwæt what: we know, that that is less, that one know GE.what hwylces, þonne þæt sy, þæt his man wite & eac bodie: (of) which than that be, that of it one know & also declare: (cogregdC,GD_2_[C]:16.138.1.1659) ‘We know that it is less that one knows something of a thing, than it is, that one knows of it and also declares it.’

The existential interpretation is rarer than the universal interpretation. Since the ge-series is infrequent to begin with, I include with (15b, c) two data points from Gregory’s Dialogues, identified in YCOE as OE24, meaning that the text is from OE2 though the manuscript is from OE4. Example (15b) clearly shows an existential ge-pronoun in a non-NPI-context (while (15a) is an NPI licensing context, negation—see below).
I add the data points in (16) and (17). (16) with *gehwar*, though from a period later than OE1/2, is an attractive example because it obviously only makes sense if the indeterminate pronoun is interpreted existentially. (16), like (15b), documents the possibility of existential *ge*-pronouns outside NPI licensing contexts. (17) illustrates both universal and existential interpretations of *gehweðer*.

(16) *Gehwar* hi syn hefige *gehwar* eac medeme

GE.where they are heavy GE.where also moderate

‘in some places they are heavy, in others moderate’ (existential)

an einem Ort sind sie schwer, anderswo auch mässig.

(Liebermann p. 446 (Rectitudines singularum personarum AD 960-1060 c.1025?))

(17) a. *Gif* mon bið on hrif wund, geselle him mon

if one is in body wounded give him one

XXX scillinga to bote. *Gif* he ðurhwund bið, 30 shillings to compensation if he gored through is

at *gehweðerum muðe* XX scillinga.

for GE.where.either mouth 20 shillings

(colawaf,LawAf_1:61.182)

‘If someone is wounded on the body, give him 30 shillings as compensation. If he is gored through, for each wound 20 shillings.’ (universal)

Wenn jemand am Bauch verwundet ist, gebe man ihm 30 Schill. zur Busse. Wenn er durchbohrt ist, [dass die Waffe herausfährt], für jede der beiden Öffnungen 20 Schill.

(Liebermann p. 82)

b. *Gif* þonne sie on *gehweðere* healfe þa ceacan aswollen

if then is on GE.where.either side the cheek swollen

& sio þrotu & þu þa tacn geseo bonne sona læt and the throat and you the sign see then soon let

þu him blod on ædre.

you him blood on vein

(colaece,Lch_II_[1]:4.4.11.488)

‘If then the cheeks are swollen on either side, and the throat, and you see those signs, then immediately you bleed him on a vein,’

(Doyle 2017) (existential)

As we see in (15a) and (17b), the *ge*-series can be used in NPI contexts (here, a negated sentence and the antecedent of a conditional). In (15a), the domain widening component typical of a polarity sensitive item (e.g., Kadmon and Landman 1993; Chierchia 2006) is intuitively the focus of negation. That is, intuitively a translation as ‘ANY day of the week’ is appropriate (with focused *any*, a strong NPI (Krifka 1995)). Thus (15a) is indicative of a genuine NPI use. We return to the issue of possible NPI uses of the *ge*-series in Sect. 3.

The *ge*-series, like the bare series, shows up in contexts appropriate for FCI, as seen, for example, in (14a) (a modal context). (18) provides examples in which *gehwa* was translated, very intuitively, as an FCI into modern English.
(18) a. & ic gehwam wille þæerto tæcan þe hiene his lyst
and I GE.who shall thereto direct that him (of) it like
ma to witanne.
more to know
(coorosiu,Or_3:3.57.13.1105)
‘and I shall direct anyone to it who would like to know more about it’
(The Cambridge History of the English language, Vol. I, ed. Hogg, Richard M. (1992, Cambridge, CUP)
b. þæt is þonne heora biwist: land to bugianne, &
that is then their provisions land to inhabit and
gifta, & wæpnu, & mete, & ealo, & claþas, &
gifts and weapons and meat and ale and clothes and
gehwæt þæs ðe þa þre geferscipas behofiað.
GE.what (of) that that the three classes need
(coboeth,Bo:17.40.21.741)
‘and these means are land to dwell in, gifts, weapons, meat, ale, clothing,
and what else soever the three classes need.’ (Kiernan et al. 2002: Alfred
the Great’s Boethius: An Electronic Edition; www.uky.edu)

Since (14b, c) provide examples of plain universal interpretations, these examples
could be analysed either as FCI or as ordinary universals. See again Sect. 3 for
discussion.

What we have not seen is uses of the ge-series as wh-expressions in questions and
in FCR. The literature (e.g., Bosworth and Toller 1898/1921; Kahlas-Tarkka 1987)
does not describe such uses; an exception is Wülffing (1894–1901), who notes one
potential use of gehwelc and one potential use of aghwelc in an interrogative
function (for aghwelc, see the next section). A global search of all YCOE files (i.e.,
including the files not from OE1 or OE2) for gehwa and gehwelc as wh-expressions
in questions or relative clauses yielded (among 502 hits for the two pronouns
combined) the two hits—(19) and (20) below—and (21) is Wülffing’s example.

(19) Se ðe stalað on Sunnanniht oððe on Gehhol oððe on Eastron
who that steals on Sunday or on Christmas or on Easter
oððe on ðone halgan Þunresdæg on Gangdagas: ðara
or on the holy Thursday on Perambulation days: (of) those
gehwelc we willað sie, twybote swa on lenctenfæsten.
GE.which we want be double compensation as on the fast of Lent.
(colawaf,LawAf_1:5.5.35)
‘Whoever steals on Sunday or at Christmas or at Easter or on the holy Thursday
on Perambulation days: every one of these we want to be double compensation,
and so on the fast of Lent.’
Wer stiehlt am Sonntage oder zu Weihnachten oder zu Ostern oder am heiligen Donnerstag
in den Betfahrtstagen, deren jeder stehe, wollen wir, in Doppelbusse, ebenso wie zu
Frühlingsfasten. (Liebermann p. 53)
(20) Gif hit riht sy þæt we to deoflum us gebiddon
if it right is that we to devils us pray
swiðor þonne to þam ælmihtigan Gode: deme gehwa þæs
rather than to the almighty God judge GE.who (of) the
wurðmyntes wyrþe sy: se þe geworht is: oððe se þe ealle
honour worthy be who that made is or who that all
þing gesceop.
thing created

‘if it be right that we should pray to devils rather than to the almighty God,
then judge who is worthy of that honour, he who is made, or he who created
all things.’ (Thorpe 1844)

(21) Swyðe fela hi me sædon fram gehwylcum biscoipum, &
very much they (to) me said of/about GE.which bishops, and
hwyllum cyninga tidum Eastseaxe & Westseaxe &
which kings’ times East Saxons and West Saxons and
Eastangle & Norðanhumbre þære gife onfengon Cristes geleafan.
East Angles and Northumbrians the gift received (of) Christ’s faith

‘They told me very much as to the bishops and the dates of the kings,
under whom the East Saxons, West Saxons, East Angles and Northumbrians
received the grace of Christ’s faith.’ (Miller)

Let’s examine the three examples in turn. The first example (19) is simply
mislabeled: the occurrence of gehwelc is in a wh-construction (a relative clause), but
the relative pronoun is ðara, and gehwelc is a universal, the combination amounting
to ‘each of which’ (the occurrence was labeled as a wh-pronoun but should have
been labeled as quantifier according to YCOE guidelines). The second example (20)
contains an embedded question, and in the YCOE parse gehwa is the interrogative
wh-pronoun. YCOE is based on Clemoes’s (1997) edition of Ælfric’s Homilies I. In
Thorpe’s (1844) edition, the word boundaries are identified differently, as indicated
in (22):

(22) … deme ge hwa þæs wurðmyntes wyrþe sy
judge you who (of) the honour worthy be

In MS Royal, the oldest surviving manuscript of this text (accessible by the British
Library’s online Manuscript Viewer p148r (MS p. 144), line 3)), the word
boundaries are not indicated. The MS would be equally compatible with both
parses. According to the Thorpe parse, the sentence is an example of an imperative
with an overt second person subject, a construction available in OE (see also Kruger
2012):
Since the Thorpe parse allows us to maintain the otherwise uncontested generalization that *gehwa* is not an interrogative pronoun, it should be preferred.

The Wülfling example (21), finally, contains a coordinate structure with a bare indeterminate phrase *hwylcum cyninga tidum* and a *ge*-indeterminate phrase *gehwylcum biscopum*. Wülfling must have assumed a coordination of two interrogative *wh*-phrases, as in the syntactic structure sketched in (24a). The YCOE parse does not analyse the example in this way; according to their structure, sketched in (24b), the example is a coordination of a quantifier phrase and an embedded question. Finally, the Miller translation invites a third syntactic analysis, sketched in (24c): according to this possibility, both indeterminate phrases are universal quantifiers and the bare indeterminate phrase is modified by a zero relative clause.

As for the Wülfling parse (24a), the status of the dative *gehwylcum biscopum* is not clear to me, in addition to violating the generalization that the *ge*-series is not interrogative. The YCOE parse (24b) needs to assume that the dative *hwylcum cyninga tidum* is an adverbial free dative. This option has been observed by van Kemenade (1987) and is attested, for example, by (25).
(25) hwelcum tidum him gecopust sie to spreccane (CP 274.18)
what time him most profitable is to speak
‘at what time it is most profitable for him to speak’ (van Kemenade 1987, (27b) p. 82)

The Miller parse (24c) relies on the possibility of relative clauses without relative pronoun or complementiser, so-called zero relatives. This possibility is attested for OE in Fischer et al. (2000) and Suarez-Gomez (2008); it is in fact anticipated in Wülffing (§304 pp. 419-421). (9b) above provides an example as shown in (9b’). (Interestingly, (24c) adds another occurrence of a universal interpretation of a bare indeterminate phrase.)

(9b’) … sue hit soelest sie for ða hit begetan.
… so it best be for them it obtained
[them [CP [] [IP t it obtained]]]
‘… so it best be for those who obtained it.’

Given these considerations, the parse in (24a) is the least preferred one, and example (21) doesn’t amount to an interrogative interpretation of gehwelc either. Following common consensus, I conclude that the ge-series, in contrast to the bare series, cannot be used as an interrogative or FCR wh-expression.

**In sum**, the ge-series of indeterminate pronouns can be used as existential and universal quantifiers. They cannot be used as interrogative wh-pronouns in questions and FCR. Ge-indeterminate pronouns occur in NPI and FCI contexts.

### 2.3 The a-series and ælc

Finally, we turn to indeterminate pronouns of the a-series. Indeterminate pronouns like æghwa, æghwelc, æghwar are to be analysed etymologically as derived from the combination of a bare indeterminate pronoun (hwa, hwelc, hwær) with the prefixes a ‘always, ever’ and ge ‘and, also’. The indeterminate pronoun combines first with ge-then with a- (see once more, for example, Einenkel (1904), Bosworth and Toller (1898/1921), and Kahlas-Tarkka (1987)): [A- [GE- indeterminate]]. I gloss them as ‘A-GE-who/what’, ‘A-GE-which’, and ‘A-GE-where’. I include the indeterminate pronoun ælc in the discussion in this subsection. The etymology of ælc is less clear. While Haspelmath (1995) analyses it as ‘a-hwelc’, Kahlas-Tarkka (1987) contemplates derivations from ‘all + body’ and from ‘ever alike’, without clear conclusion. We will see below that no matter its etymology, the interpretive options of ælc track those of the a-series. Thus Haspelmath’s analysis is at least semantically a better fit. I gloss ælc as ‘ÆLC’ but assume that it behaves as an indeterminate pronoun of the a-series in terms of the semantic and formal properties investigated in this paper.

The question is once more to what extent the interpretive options of the a-series match those of the other indeterminate pronouns. I sort the data by interpretation in this subsection as well, and I include ælc under a given interpretation with the other a-series indeterminate pronouns, but provide separate examples.
A universal interpretation is, uncontroversially, the prominent reading of the a-ge-series. The most common OE universal quantifier is ælc (Kahlas-Tarkka 1987), and conversely, the universal reading is the prominent interpretation of ælc, too. (26) and (27) provide examples of universal interpretations of a-ge-indeterminate pronouns and ælc.

(26) universal:

a. & heo hit haebben eghwæs to freon butun agefen
   and she it have A.GE.what to free except giving
   elce gere ðreo mittan hwætes to cirisceatte to Clife.
   each year three measures (of) wheat to church-tax to Cleeve
   (codocu2,Ch_1283_[Rob_16]:22.105)
   ‘and she shall hold it free in every respect except for rendering every year three mittan of wheat as church dues to Cleeve’ (Robertson 1956, 31)

b. Hio gehæt him æghwæs genog,
   it promise him A.GE.what enough
   (cocura,CP:11.71.22.474)
   ‘It promises him enough of everything.’ (Sweet)

c. & suelc mon se ðet lond hebbe eghwylce Sunnandege
   and such man that this land has each Sunday
   XX gesuflra hlafa to ðære cirican for Ealdredes saule & for Ealhburge.
   twenty ‘gesufl’ loaves to the church for Ealdred’s soul and for Ealhburg’s
   (codocu1,Ch_1195_[HarmD_5]:9.75)
   ‘And whoever has this land [is to give] twenty ‘gesufl’ loaves to the Church, every Sunday, for the souls of Ealdred and Ealhburg.’ (Harmer V p. 44)

d. Æt ærestan we lærað, þæt mæst ðearf is, þæt æghwelc mon his að & his wed wærlice healde.
   at earliest we teach, that most need is, that A.GE.which man his oath and his pledge carefully keep
   (colawaf,LawAf_1:1.2)
   ‘First we teach what is most necessary: that each man hold his oath and his pledge carefully.’
   Zuerst lehren wir, was zumeist nötig ist, dass jedermann seinen Eid und sein rechtsförmliches Versprechen sorgfältig halte. (Liebermann p. 47)

(27) universal:

a. & ic bidde & bebede swælec monn se ðæt min
   and I ask and command such man that this my
   lond hebbe ðæt he ælce gere agefe ðem higum æt
   land have that he each year give the community at
   Folkstanse L ambra maltes & […] & VI scep.
   (codocu1,Ch_1482_[HarmD_2:30.34]
   ‘and whosoever may have this land of mine, I pray and command him to give annually to the community at Folkstone fifty ‘ambers’ of malt […] and six sheep.’ (Harmer II p. 41) (‘… give every year to the community…’)

b. Gif mon oðres wudu bærmeð oðde heawed ðe unaliefedne,
   if man other’s wood burn or fell unlawfully
   forgielde ælce great treow mid V scillingum, & siððan
   repay each great tree with 5 shillings, and afterwards
   æghwylce, sie swa fela swa hiora sie, mid V
If a man burns or fells another’s woodland illegally, repay each big tree with 5 shillings, and then each one, as many as there were, with 5 pence; and 30 shillings fine.’

Wenn jemand das Gehölz eines anderen ohne Erlaubnis abbrennt oder abhaut, so vergelte er jeden grossen Baum mit 5 Schill., und weiterhin jeden, sei es so viele als ihrer seien, mit 5 Pfennigen; und 30 Schill. zur Strafe. (Liebermann p. 57)

c. Forðæm hit bið swiðe geswinicful ðæt mon ælcne mon therefore it be very laborious that one ÆLC man scyle on sundrum læran, should in separated teach (cocura,CP:60.453.10.3266)

‘For while it is very laborious to have to teach each one separately, (it is still more difficult to teach them all together)’ (Sweet)

Similar to the ge-series, question and FCR uses are generally unavailable for the a-series. A global search for æghwa, æghwelc, and ælc as wh-expressions in all YCOE files yielded only one hit, (28) below (among 2314 hits total for the three pronouns). This is at the same time Wülffing’s only prospective example of an interrogative use of æghwelc. The interrogative analysis of the example is reflected in the translation from the literature offered.

(28) & hi witon eac on hwelcum wæterum & on and they know also in which waters and in æghwelcra ea muþum hi sculon secan fiscas A.GE.which river mouths they should seek fish (coboeth,Bo:32.73.32.1370)

‘and they also know in what waters and at what river-mouths to look for fish.’ (Kiernan et al. 2002: Alfred the Great’s Boethius: An Electronic Edition; www.uky.edu)

‘and they also know that they should seek fish in some waters and at all rivers’ mouths.’

I propose that an alternative analysis of this example is possible, which is reflected in my own translation. Two properties of OE go into this alternative understanding of (28): (i) the OE bare series is not necessarily interrogative, and (ii) OE allowed fronting of a constituent past the subject of an embedded clause. Property (i) is well known and illustrated in Sect. 2.1. Property (ii) is discussed in particular in Allen (1995), Heggelund (2007, 2010) and Speyer (2010). Illustrating examples are given in (29). The syntactic structure of (28) with this non-interrogative fronting is sketched in (30). In this
structure, the complement of *witan* ‘know’ has no overt complementiser ‘that’. This option is explicitly noted, for example, in Bosworth and Toller and illustrated in (31).

(29) a. Ac God hine adregnec on þære deopan sæ,
    *but God them drowned in the deep sea*
    \[CP þæt [PP of ealre his fyrde] [NPSubj an mann] ne belaf\]
    that of all their army one man not remained

(Judith 91, Heggelund 2007, (8))

‘But God drowned them in the deep sea, so that not one man remained of all their army.’

b. \[CP þæt [NPObj an luf] [NPSubj he] æteowde mid his deaðe\]
    that one life he manifested with his death

(Ælfric’s Homilies I 224.18 Koopman 2011, (1))

‘that he manifested one life with his death’

(30) (and they also know)
    \[CP [PP on hwelcum wæterum & on æghwelcræ ea muþum] [NPSubj hi]
    sculon secan fiscas\]

(31) Swa ic wat he minne hige cuðe
    *so I knew he my intention perceived*
    ‘So I knew that he perceived my intention.’

(Graves Geoghegan 1975, (61) p. 42)

Thus (30) is possible in terms of OE grammar. The context in the Boethius text is one in which no particular waters or rivers are relevant. Rather, the example occurs in a list with further statements to the effect that men know to look for precious stones in the sand, and to hunt for game in the woods and hills. Allen (1995) includes list contexts among the environments which favour this kind of fronting. This means that (30) is pragmatically plausible as well. Parallel to the point made regarding the *ge*-series, I argue that this analysis is to be preferred over an analysis according to which (28) is the one counterexample to the generalization that *a*-series pronouns are not interrogative.

In contrast to the *ge*-series, existential readings are not attested for the *a*-series (see e.g. Kahlas-Tarkka, Bosworth and Toller), and my search has not found any such examples either. The remaining interpretations to be investigated for *a*-ge-indeterminate pronouns and *ælc*, therefore, are potential NPI and FCI interpretations.

(32) illustrates uses of *a*-ge-indeterminate pronouns in NPI contexts (e.g. *butan* ‘without’, *beorgan* ‘prevent’). Two issues need to be considered when we ask whether an NPI analysis of the *a*-series is called for. The first is the possibility of a plain existential reading instead of an NPI interpretation. Since the *a*-series does not have an existential interpretation in non-NPI-contexts, these examples cannot be analysed thus. The second issue is whether the examples in (32) could be analysed as wide scope universals instead of NPIs. This possibility is not immediately very intuitive: in examples like (32a) the translation ‘and ever, to time without every end’ is intuitively inappropriate. We can trace its oddness to the presuppositional nature
of the universal quantifier: every would presuppose that there be an end (or perhaps more than one end) (cf. (33a)), which is not appropriate in this context. Despite the equivalence in (33b), then, wide scope every is distinguishable from narrow scope any in the context of negation, at least in PDE. However, it is hard to be sure whether OE universal quantification gives rise to the same presupposition. I return to the issue of (33b) and a wide scope universal interpretation below.

(32) NPI context:
   a. And ever to world without A.GE. which end Amen
   ‘And ever, to time without end.’ (‘…without any end…’) (K-T; Ælfred’s Boethius, Sedgefield 1899, 149 (final prayer))
   Note: ‘time without every end’ — PSP: there is at least one end — not intended.
   b. & increase them always with their own lest they be to other men’s struggle kind spectators and do them selves nothing and then later after the struggle be butan aeghwelcum edleane on ðys andweardan life. without A-GE-which reward in this present life (cocura,CP:34.229.15.1504)
   ‘(Let them take an example from their good works,) and always increase them with their own, lest they be sympathizing spectators of other men’s efforts without themselves helping them, and then, when the struggle is over, be without any reward in this present life.’ (Sweet)
   c. & him anything (of) salt guard (colaece,Lch_II_[1]:59.1.4.1744)
   ‘guard him against anything salty’
   Note: B&T beorgan: ‘prevent (the happening of) accusative to dative’
   He him sleep beorge ‘let him take care not to sleep’, Lch. ii. 270, I. Ic me his hete berh ‘I guard myself against his hate’, Bd. 2, 12;
   is taken to be an NPI licenser; it licenses negative concord:
   Beorge he þ he awoh ne befo ‘let him guard against that he wrongly grasp’, Li. Th. i. 290, 7.
   d. Her sindon læcedomas wip aeghwæþerre sidan sare & tacn here are treatments against A.GE. either sides pain & sign hu sio adl toaward sie & hu þæt mon ongitan how the illness come is & how that one recognize mæge & hu hiora mon tilian scyle.
   may & how them one treat should (colaece,Lch_II_[2]:46.1.1.3017)
‘Here are treatments for pain of either side, and signs how the disease comes and how one may recognise it, and how one should treat them’ (Doyle 2017)

(33) a. $[\text{every}] = \exists Q: \text{there is at least one x such that } Q(x). \lambda P. \forall x [Q(x) \rightarrow P(x)]$

b. $\exists x[P(x)] \leftrightarrow \forall x[P(x)]$

The examples in (34) show parallel data for ælc. The word occurs in NPI licensing contexts (‘without’, ‘empty’, ‘deprive’), and here as well it is possible to identify examples (e.g. (34b)) in which a paraphrase with every is not appropriate.

(34) NPI context:

a. (& þrie Scottas comon to Ælfrede cyninge,)
and three Irishmen came to Alfred king
on anum bate butan ælcum gereþrum (of Hibernia,)
in a boat without ÆLC oars
‘And three Irishmen came to King Alfred in a boat without any oars’ (B&T; Chr.891; P.82,19; Two of the Saxon Chronicles, ed. Charles Plummer; Translation: Kahlas-Tarkka, L. 1993: Towards the modern English dichotomy between every and each. In Matti Rissannen, Merja Kitö and Minna Palander-Collin: Early English in the Computer age. Mouton de Gruyter, Berlin, 201–218)

b. Se ilca se monegum yfelum wið hine selfne
the same that many evils against him self
forworhtum ær gearode, he wearð eft sua ungemetlice
sinned earlier spared he became then so immoderately
grædig ðæs godan deaþes, butan ælcre scylde & ælcre
greedy (of) the good death death without ÆLC crime & ÆLC
widerweardnesse wið hine.
hostility against him
(cocura,CP:3.35.24.182)
‘The same one who formerly spared him who had sinned against him with so many evils, became immoderately eager for the death of the virtuous Uriah, without any crime or offence against himself.’ (Sweet)
Note: ‘without every crime’—PSP: there was at least one crime—not intended.

c. Ælces eles æmtig,
(of) ÆLC oil empty
‘empty of any oil’
(B&T Gr. D. 160, 9 Gr. (Greg.) Dial. The Anglo-Saxon version of Gregory’s Dialogues. Quoted from Lye. v. Wanley’s Catalogue, p. 71)
d. Ðæt is ðonne se foreda foot & sio forude hond ðæt mon

that is then the broken foot & the broken hand that one

wite Godes biboda weg, & ðær nylle on gan, ac sie bedæled

know God’s ordered path & there not.want on go but is deprived

& aidlad ælces godes weorces, nals na sua sua healt

& frustrated (of) ÆLC good work not neg so as lame

møn or ill sometimes he goes sometimes he

restað, ac se foreda fot a bið ælces

rests but the broken foot always is (of) ÆLC motion deprived

bedæled.

(cocura,CP:11.67.8.430)

‘The broken hand and foot is when a man knows the path of God’s commands

and will not follow it, but is deprived of every good work and frustrated, not

at all like a lame or diseased man, who is sometimes in motion, sometimes

at rest, while the broken foot is always entirely deprived of motion.’ (Sweet)

(‘… deprived of any good work… entirely deprived of any motion.’)

Example (35) is an illustration of NPI and universal interpretations of ælc simultaneously. We are particularly interested in the second, the putative NPI occurrence of ælc. Let’s consider the simplified version (35’) in detail. In (35’) I have removed the first universal ælc, and then paraphrased the NPI licensing element ‘wipe off’. The example allows us to distinguish a narrow scope existential NPI analysis from a wide scope universal analysis because another scope bearing element occurs between the potential NPI and its licenser, namely wenan ‘supposition’. I take this word to have (roughly) the same semantics as believe. Semantic analyses of an existential NPI analysis and a wide scope universal analysis are given in (35’a) and (35’b) respectively. The more plausible paraphrase for (35) clearly follows (35’a). In the case of the a-series, we therefore take these indeterminate pronouns have an analysis as NPIs.

(35) Forðæm hit is betere, [...] ðætte ælcs mon adryge of

therefore it is better [...] that ÆLC man wipe off of

odøerra mønna mode ðone wenan be him ælcs yfeles,

other men’s minds the supposition near him (of) ÆLC evil,

(cocura,CP:59.451.22.3254)

‘Therefore it is better, [...] for every man to wipe away from the minds of

others the unfavourable opinion of himself,’ (Sweet)

(‘… the supposition of any evil in him…’)

(35’) Voldemort wiped off their minds the supposition of ælc evil in him.

= V brought it about that it is not the case that they suppose that ælc evil

is in V.

(35’’)

a. ¬∀w[weBEL(®)(they)→ ∃x[evil(w)(x) & in(w)(x)(V)]]

‘It is not the case that there is a belief of any evil in V.’

b. ∀x[evil(®)(x) ←¬∀w[weBEL(®)(they)→ in(w)(x)(V)]]

‘Each actual evil is such that they don’t suspect V of it.’

(where ® is the actual world)
Finally, let's ask whether the a-series can occur in FCI contexts. This is certainly the case, for example in (26d) and (27b). I add the following examples which invite an interpretation as FCI (in (36a) and (37a) a generic context would license an FCI and in (36b) and (37b) a possibility modal, so in all four examples a translation as FCI ‘any (one)’ would be possible):

(36) **FCI context:**

a. & æghwelces lareowes lar wihxð ðurh his geðylde, & A.GE. which teacher’s learning grows through his patience (cocura,CP:33.215.23.1441)

‘and the learning of every teacher grows through his patience,’ (Sweet)

b. Ac swa swa we nu ðis reahton be eallum monnum, swa hit mæg æghwelc mon be

him anum geðencean, forðæm ðe æghwelc mon ðe him alone conceive because that A.GE. which man that

his bebob & his forbod ongiet, he bið swelce he his commands & his forbids understands he is such he beforan him stonde, ærðæm þe he gesyngige. before him stands before that he sins (cocura,CP:52.407.1.2793)

‘But as we have now said this of all men, so each man can apply it to himself individually, because every man who understands what he commands and forbids, stands, as it were, before him, before his sins.’ (Sweet)

(37) **FCI context:**

a. Bi ðæm suiðe wel se forma hierde ðære halgan ciricean,

by that very well the first shepherd (of) the holy church

ðæt is Sanctus Petrus, manode oðre hierdas,

that is Saint Peter admonished other shepherds

ða he cuæð: Bioð simle gearwe to læranne & to

when he said be always prepared to teach & to

forgiefanne ælcum ðara ðe iow ryhtlice bidde ymbe

grant AELC (of) those that you rightly ask about

ðone tohopan ðe ge habbað on eow.

the hope that you have in you

(cocura,CP:22.173.6.1172)

‘About which the first sheperd of the holy Church, that is St. Peter, admonished other shepherds very well, saying: “Be ever ready to teach, and grant his request to every one who asks you rightly about the hope ye have in you.”’ (Sweet)

b. Ælc mon mot onsacan frympe & werfæhðe, gif he

AELC man may deny entertainment & slaying if he

mæg oððe dear.

may or dare

(colawine,LawIne:46.2.127)

‘Any man may deny entertainment and slaying, if he is able to or dares.’

Jedermann darf sich frei schwören von [Diebstahls-]Beherberung und Menschen-Tötung, wenn er kann oder wagt. (Liebermann p. 111)
At the same time, uses like (26c), (27a) as ‘every Sunday’, ‘every year’ do not invite
an interpretation as FCI, and (27c) with the adverbial ‘separately’ seems
incompatible with it: The intended reading of (27c) is one in which the events
described (teaching) are distributed over the individual members of the group
described by aelc. This reading does not arise when a known FCI like any is placed
in its position in the sentence (cf. (38)). Thus there are non-FCI universal uses of a-
series indeterminate pronouns. For the moment, therefore, I note merely that the
data are compatible with an FCI analysis, and postpone a detailed discussion to
Sect. 3.5.

(38) # It is laborious to teach any one separately.

**In sum:** a-ge-indeterminate pronouns and aelc can be used as universal quantifiers
and as NPIs. They cannot be used as interrogative pronouns in questions and FCR or
as existentials. They occur in FCI contexts.

### 2.4 Section summary

The table below summarizes the results of the empirical overview given in this
section for the three series of indeterminate pronouns in OE. My own OE1 and OE2
data gathered by searching the YCOE corpus match the examples and generaliza-
tions in the available descriptive literature. A ‘√’ in (39) indicates that an
interpretation is attested, a blank that it isn’t.

| (39) | question | FCR | FCI | NPI | Univ | Exist |
|------|----------|-----|-----|-----|------|-------|
| bare series | √ | √ | √? | √? | √ | √ |
| ge-series | √? | √? | √ | √ | √ |
| a-series | √? | √ | √ | √ | √ |

The notation “√?” for FCI and NPI uses in (39) indicates that the data are
compatible with this interpretation but observation is not sufficient to prove it. To
give the reader a preview of my final stance on these interpretations, I provide the
table in (39’) with the five question marks resolved. The theoretical discussion in
Sect. 3 will lead us to the interpretation of the ‘raw’ data (39) that (39’) summarises.
That is, I will argue that OE indeterminate pronouns do have an analysis as FCI, and
that the ge-series but not the bare series has an analysis as NPI. I also assume that
the unattested uses are in fact unavailable.

| (39’) | question | FCR | FCI | NPI | Univ | Exist |
|-------|----------|-----|-----|-----|------|-------|
| bare series | √ | √ | √ | √ | √ |
| ge-series | √ | √ | √ | √ | √ |
| a-series | √ | √ | √ | √ | √ |

The pattern in (39’) corresponds to the grammatical options of OE indeterminate
pronouns that the analysis in Sect. 3 captures.
3 Semantic analysis

In this section, I develop a compositional semantic analysis of the data from Sect. 2. The analysis answers the questions raised at the beginning of the paper: What is the semantic contribution of the indeterminate pronoun? How does the sentence come to express a universal or existential statement or a question? What determines the range of possible sentence interpretations for a given indeterminate pronoun?

Here is a preview of the answers that I will give: Indeterminate pronouns will be analysed as alternative triggers, in keeping with earlier analyses (e.g., Hamblin 1973; Shimoyama 2001; Kratzer and Shimoyama 2002). This is motivated by the types of sentence interpretations they participate in (e.g., questions and polarity items). The pronoun is linked to sentence interpretation indirectly because each series of indeterminate pronouns participates in different types of sentence interpretation. This motivates an analysis in which covert operators associate with the pronoun and those operators (e.g., the question operator or existential and universal quantifiers) fix the sentence meaning. Nonetheless, the indeterminate pronouns come with restrictions as to possible types of use. I will identify lexical properties of the three series (semantic or at the syntax/semantics interface) which constrain which operators a pronoun can associate with, thus restricting the sentence meanings it can participate in.

In Sect. 3.1, I present the semantic background with which I approach the issue. I introduce an alternative semantics for indeterminate pronouns and embed it in a theory of compositional interpretation with an alternative semantic tier. In Sect. 3.2, I extend and apply this semantics to the bare series of OE indeterminate pronouns and their possible interpretations. Sections 3.3 and 3.4 develop analyses of the ge- and the a-series, respectively. Section 3.5 is dedicated to FCIs in OE, and Sect. 3.6 summarises.

3.1 Background: alternatives and operators

At the core of the constructions discussed above is the bare indeterminate pronoun with an interrogative use. This is my analytical starting point, and hence I begin with an analysis of the semantics of questions. Here, I follow the tradition started by Hamblin (1973), who first proposed an alternative semantics of questions.

The basic idea of a Hamblin semantics for questions is that the denotation of a question is the set of its possible propositional answers. For example, the question in (40a) could, in a given context, have answers like (40b), or in more general terms, (40c). That is, the meaning of a question is a set of propositions. (40d) provides a more formal representation of (40c); the semantic type of a proposition is $<s,t>$, so this is a set of $<s,t>$ alternatives. The semantic contribution of the question is to raise the alternatives, and its pragmatic contribution is mostly a request to state which of these alternatives are true (e.g., Krifka 2011 for recent discussion). (In the semantic discussion, I print linguistic material of the object language in italics, while the metalanguage is in regular print.)
(40) a. Who left?
   b. {that Ælfred left, that Bede left, that Cædmon left,…}
   c. {that x left | x ∈ D}
   d. {λw.x left_w | x ∈ D}

The interrogative pronoun is responsible for introducing alternatives into the composition; we can take it informally to make the contribution in (41a). These alternatives combine with the syntactic environment of the interrogative pronoun to yield the required set of propositions (41b) (see below for formal details).

(41) a. who: {Ælfred, Bede, Cædmon,…}
   b. who left: {p: there is an x ∈ {Ælfred, Bede, Cædmon,…} such
   that p = that x left} =
   {that Ælfred left, that Bede left, that Cædmon left,…}

When we integrate this question semantics into a theory of compositional interpretation for natural language, matters are complicated by the fact that we need to consider simultaneously two tiers of meaning: ordinary semantic values [[.]]_o and alternative semantic values [[.]]_Alt. This is shown particularly clearly by focus (Rooth 1985, 1992). The example in (42a), with focus on the subject DP, introduces alternatives (42b). At the same time, the sentence expresses the proposition in (42c).

(42) a. ÆlfredF left.
   b. {λw.Ælfred left_w, λw.Bede left_w, λw.Cædmon left_w,…}
   c. λw.Ælfred left_w

This means that the subject DP, with its focus feature, serves two semantic functions. Its ordinary semantics is reference to an individual (43a). There is a second tier of meaning (43b), the alternatives triggered by this constituent.

(43) a. [[ÆlfredF]]_o = Ælfred
   b. [[ÆlfredF]]_Alt = {Ælfred, Bede, Cædmon,…}

Semantic composition has to be defined for both tiers of meaning. For the ordinary semantics, function application (45a) yields the proposition expressed in the familiar way, (44a). For the alternative semantic value, pointwise function application (45b) applies, resulting in the set of alternative propositions (44b) (see Rooth 1985, or for a recent version Beck 2016).

(44) a. [[ÆlfredF left]]_o = [[left]]_o([[ÆlfredF]]_o)
   = λw.Ælfred left_w
   b. [[ÆlfredF left]]_Alt = [[[[left]]_o(Ælfred)], [[left]]_o(Bede), [[left]]_o(Cædmon),…]
   = {λw.Ælfred left_w, λw.Bede left_w, λw.Cædmon left_w,…}

(45) a. Function Application FA:
   If [[β]] is a function whose domain includes [[γ]] then [[β]]@[γ] = [[β]]([[γ]]).
b. Pointwise Function Application PFA:
If \([\beta]\) is a set of functions \(\beta'\) and \([\gamma]\) is a set containing elements of the domain of \(\beta'\), then \(\[\beta]\oplus[\gamma] = \{\beta'(\gamma'); \beta'\in[\beta] \text{ and } \gamma'\in[\gamma]\}\)

\((X\oplus Y \text{ stands for the composition of two semantic values } X \text{ and } Y)\)

The same two tiers of meaning need to be taken into account in a more detailed analysis of questions as well. Below I implement this in terms of Beck (2006, 2016) (see also Kotek 2014, 2019).\(^4\)\(^5\) The sole semantic role of the interrogative pronoun is to introduce alternatives. Accordingly, we define the lexical entry in (46): the wh-word introduces alternatives at the level of alternative semantic values (46b), while its ordinary semantic value is undefined (46a). As before, both semantic values enter into further composition, (47).

\[
\begin{align*}
(46) & \quad \text{a. } [[who]]_o \text{ is undefined.} \\
& \quad \text{b. } [[who]]_{\text{Alt}} = \{x | x \in D\} \\
& \qquad = \{Ælfred, Bede, Cædmon,\ldots\}
\end{align*}
\]

\[
\begin{align*}
(47) & \quad \text{a. } [[\text{who left}]]_o \text{ is undefined.} \\
& \quad \text{b. } [[\text{who left}]]_{\text{Alt}} = \{\lambda w. x \text{ left}_w | x \in D\} \\
& \qquad = \{\text{that } Ælfred \text{ left, that Bede left, that Cædmon left,\ldots}\}
\end{align*}
\]

(47) is not the final result. According to the Hamblin question semantics, the ordinary meaning of the question is the set of alternatives. Thus, a further operation has to rescue the structure from an undefined ordinary semantic value, by raising the alternatives to the level of ordinary meaning. This is the contribution of the question operator \(Q\), defined in (48a) (in simple terms; for more refined versions see the literature cited). Applied to the example, we obtain the desired outcome (48b).

\[
\begin{align*}
(48) & \quad \text{a. } [[Q XP]]_o = [[XP]]_{\text{Alt}} \\
& \quad \text{b. } [[Q [who left]]]_o = \{\lambda w. x \text{ left}_w | x \in D\} \\
& \qquad = \{\text{that } Ælfred \text{ left, that Bede left, that Cædmon left,\ldots}\} \\
& \quad \text{c. } \lbrack Q \ldots \text{ indeterminate pronoun}\ldots\rbrack
\end{align*}
\]

The resulting theoretical picture is this: natural language has expressions that trigger the introduction of alternatives into the semantic calculation. Among those

---

\(^4\) Or rather, a simplified version of Beck (2006, 2016). Both papers consider the interaction of several operators that evaluate alternatives. Since this is not a topic in this paper, I do not need a system with distinguished variables and selective such operators, and can use a simpler version with Roothian alternative sets.

\(^5\) In the following, I simplify regarding the restrictor on the alternative trigger. In the case of \(\text{which}\)-phrases, for example, the alternative set must be restricted to entities that meet the NP description that is the sister of \(\text{which}\). In the case of \(\text{who}\), the domain of alternatives must be restricted to people (or animate entities). The mechanisms outlined in Beck (2006) for \(\text{which}\)-phrases would work. See Slade (2011) and Beck and Reis (2018) for recent discussion; also for discussion of focus on \(wh\)-pronouns.
expressions are indeterminate pronouns. In the composition, this necessitates calculation of an alternative semantic value in addition to the ordinary semantic value. In their use as interrogative pronouns, the alternatives that indeterminate pronouns trigger are evaluated at sentence level by the interrogative operator Q. The association of Q and indeterminate pronoun is depicted informally in (48c). The Q operator raises the alternatives to the level of the ordinary semantic value. The result is a question meaning in the sense of Hamblin (1973).

The general properties of this theoretical picture are motivated by more than just questions. We have seen above that focus introduces alternatives as well. Alternatives are also the semantic tool used in the analysis of Free Choice Relative Clauses (FCRs) (e.g., Hirsch 2016), Negative Polarity Items (NPIs) (e.g., Krifka 1995; Lahiri 1998; Chierchia 2006) and Free Choice Items (FCIs) (e.g., Menéndez-Benito 2010; Chierchia 2013). They have been used in the analysis of universal and existential constructions with indeterminate pronouns in Japanese (Shimoyama 2001, 2006; Yatsushiro 2009; Uegaki 2018) and of indefinites in German (Kratzer and Shimoyama 2002). In each case, the alternatives triggered by the item in question (NPI, FCI, or indeterminate pronoun) are passed on compositionally until they encounter an evaluating operator (e.g., the operator EXH in the case of NPIs or a covert existential quantifier in the case of an indefinite interpretation—see below; the evaluating operator for focus is Rooth’s (1992) famous ~ operator). At this point, the alternatives become operative in the ordinary semantics.

Looking back at the data set from OE, the set of interpretations under consideration (interrogative, FCR, FCI, NPI, universal, existential) invites an analysis in terms of an alternative semantics. The next subsection applies the basic theory introduced here to the OE bare series, and extends it to their non-interrogative uses.

3.2 OE bare indeterminate pronouns

In this subsection, the alternative semantics from Sect. 3.1 is applied to OE bare indeterminate pronouns. The core idea to be elaborated below is that the contribution of the indeterminate pronoun is the same throughout the possible sentence interpretations: it is an alternative trigger. The various sentence meanings—repeated in (49) from Sect. 2—come about by way of different operators that evaluate the alternatives triggered by the indeterminate pronoun. (50) indicates this association of operator and indeterminate pronoun. In (48) above, we have seen Q as one example of such an evaluating operator. Q derives the interrogative interpretation. Other operators will derive the other readings in (49).

| (49) | question | FCR | FCI | NPI | Univ | Exist |
|------|----------|-----|-----|-----|------|-------|
| bare series | √ | √ | √? | √? | √ | √ |

| (50) | [OP [... indeterminate pronoun...]] |
|      | ___________________ |
3.2.1 Interrogatives

I propose to apply the analysis of questions from the preceding subsection directly to questions in OE. We have seen examples of OE wh-questions, for example in (3a), (7a), (9a), and (10a); another is given in (51a). For ease of exposition, I discuss an artificial sample structure (51b) in the semantic analysis.

(51) a. Ic wat ge hwæt þu eart ge for hwon þu gnornast.
   I know and what you are and for whom you grieve
   ‘I know both what you are and for whom you grieve.’
   (B&T; Bd. 2, 12; Sch. 156, 14. König Alfreds Übersetzung von Bedas Kirchen-geschichte, ed. Jacob Schipper (Grein’s A.S. Prose Library))

b. Hwa left?
   ‘Who left?’

The analysis from above is applied to the example in (51’). (51’a) is the structure we interpret. The lexical semantics of the OE indeterminate pronoun is defined in (51’b) and is the same as PDE who. The question meaning is calculated with the help of the familiar Q operator, (51’c). This yields the desired question meaning, (51’d). Thus Q is an appropriate evaluating operator for OE bare indeterminate pronouns.

(51’) a. \[Q [XP hwa left]\]
   b. \[[hwa]\]₀ is undefined
      \[[hwa]\]ₐlt = \{x: x ∈ D\}
   c. \[[Q XP]\]₀ = \[[XP]\]ₐlt
   d. \[[Q [hwa left]]\]₀ = \{\{w.x leftw | x ∈ D\}

The analysis can straightforwardly be extended to FCRs if we follow Hirsch (2016). (52a) is an OE example (see also (7b), (9b), (10b)); once more I use the simplified prototype structure in (52b) in the semantic discussion. According to Hirsch’s analysis, FCRs universally quantify over propositions, (53). The set of propositions quantified over is the meaning of the free choice relative clause, which contributes a question meaning. Thus the indeterminate pronoun has the same alternative semantics, and is evaluated in the same way as in the question above, (54), (55).

(52) a. On ðæm medwisan is to trymmanne swa hwæt sua
   in the simple is to strengthen so what so
   hie ongietan mægen ðæs godcundan wisdomes, forðon,
   they understand may (of) the divine wisdom because
   ðonne hie nane wuht ne ofermodgiað, ðonne beoð ða heortan
   when they neg.one being not haughty are then are the hearts
   suiðe gearwe wisdomes to anfonne.
   very ready wisdom to receive
   (cocura,CP:30.203.10.1363)
   ‘In the simple is to be strengthened whatever they can understand of the divine wisdom, because, while they are not at all presumptious, their hearts are in a very fit state to receive wisdom.’ (Sweet)

b. I will read hwæt he recommends.
   ‘I will read whatever he recommends.’
(53) For all p, p ∈ [[hwæt he recommends]]₀:
    if p is true, then I will read the thing that he recommends.

(54) a. [[hwæt]]₀ₐₙₜ = {Ælfric’s Homilies, Beowulf, Anglo-Saxon Chronicle} = {A, B, C}
    b. [[hwæt he recommends]]₀ₐₙₜ =
       {that he recommends A, that he recommends B, that he recommends C}
    c. If he recommends A, I will read A. If he recommends B, I will read B.
       If he recommends C, I will read C.

(55) [[Q [hwæt he recommends]]₀]₀ = {w. he recommendsw x ∣ x ∈ D}

I will not go into greater detail concerning the analysis of FCRs here; see Hirsch (2016) for their conditional interpretation and other properties. For our purposes, it is sufficient to note that the analysis of questions can be extended to FCRs. Thus their internal structure and analysis is identical to that of interrogatives. The evaluating operator for the indeterminate pronoun they contain is also Q.

3.2.2 Universal and existential quantification

Next, we turn to the two other interpretations of OE bare indeterminate pronouns that the data unequivocally support: universal and existential readings. It is natural to suppose that the semantic contribution of the indeterminate pronoun is the same across the various sentence interpretations. Hence, the analysis of the universal and existential interpretations is also an alternative semantics. Its most direct theoretical predecessor is Kratzer and Shimoyama (2002) (also Shimoyama 2001, 2006 for Japanese universal and existential quantification with -mo and -ka).

Beginning with universal readings, we have seen examples (4b), (7d), (9d), and (10d) in Sect. 2. I provide another example in (56a). For ease of exposition, I once more use an artificial structure (56b) in the semantic calculation.

(56) a. To manigenne sint ða gesomhiwan, ðeah hira hwæðrum
    to admonish are the married though of them wh.either
    hwæthwugu hwilum mislicige on oðrum, ðæt
    something sometimes displeases in other, that
    hie ðæt geðyldelice forberen;
    they that patiently tolerate

    (cocura,CP:51.395.31.2688)
    ‘The married are to be admonished, although they be sometimes displeased at something in one another, to tolerate it patiently;’ (Sweet)
    ‘… although each of them sometimes dislikes something in the other…’

b. Hwa left.
    ‘Everyone left.’

Following Kratzer and Shimoyama (2002), a covert universal propositional quantifier (58) is part of the structure in which the indeterminate pronoun occurs on the universal reading, (57a). The sister of this operator is interpreted in the same way as before, (57b). Combining this with the operator yields the interpretation in (57c), accounting for the intuitive truth conditions (cf. (59)).
(57) a. [ALL [XP hwa left]]
   ‘Everyone left.’
   b. [[hwa left]]_{\text{Alt}} = \{ \lambda w.x \text{ left}_w \mid x \in D \}
   c. [[ALL \{hwa left\}]]_{\text{o}}(w) = 1 \text{ iff for all } p \in \{ \lambda w.x \text{ left}_w \mid x \in D \}: p(w) = 1

(58) [[ALL XP]]_{\text{o}}(w) = 1 \text{ iff for all } p \in [[XP]]_{\text{Alt}}: p(w) = 1

(59) a. \forall p[p \in \{ \text{that x left } \mid x \in D \} \rightarrow p \text{ is true}]
   b. \forall x[x \in D \rightarrow x \text{ left}]

The derivation of the existential interpretation (60) is entirely parallel and sketched in (61)–(62).

(60) a. Gif hwa òðerne godborges oncunne & tion wille, 
    if one another another (of) God’s pledge accuse and charge want, 
    þæt he hwelcne ne gelæste ðara ðe he him gesealde, 
    that he which not fulfill (of) them that he him granted, 
    agife þone foreað on feower ciricum, 
    give then fore-oath in four churches
    (colawaf, LawAl_1:33.104)
    ‘If someone accuses another of God’s pledge and wants to charge him, that he didn’t fulfill some of that which he had granted, then he gives fore-oath in four churches.’
    Wenn jemand einen anderen anklagt wegen eines bei Gott verbürgten [Versprechens] und 
    bezichtigen will, dass derselbe deren eines nicht erfüllt habe, die jener [Beklagte] ihm gegeben 
    hätte, so leiste er den [Kläger-] Voreid in vier Kirchen; (Liebermann p. 67)
   b. Hwa left.
   ‘Someone left.’

(61) a. [EXIST [XP hwa left]]
   ‘someone left.’
   b. [[EXIST [hwa left]]]_{\text{o}}(w) = 1 \text{ iff there is a } p \in \{ \lambda w.x \text{ left}_w \mid x \in D \}: p(w) = 1

(62) [[EXIST XP]]_{\text{o}}(w) = 1 \text{ iff there is a } p \in [[XP]]_{\text{Alt}}: p(w) = 1

Appropriate evaluating operators for the bare series hence also include the covert propositional quantifiers ALL and EXIST defined in (58) and (62).

3.2.3 Polarity items

To complete the picture, we turn to the analysis of possible uses of OE indeterminate pronouns as polarity items.

We begin with FCI. Remember the difficulty that we face here: It is hard to establish that OE indeterminate pronouns have an analysis as FCIs because they have an analysis as universals. This is clear because they are acceptable and have a universal interpretation in contexts in which FCIs are not licensed (e.g., episodical sentences without a modal). This universal analysis could simply apply in FCI contexts as well. To illustrate, an example corresponding to the abstract structure in (63a) does not absolutely require us to assume an FCI analysis of hwelc ‘which’
akin to (63b (i)), because an analysis in terms of (63b (ii)) as a universal quantifier could apply. Both would yield truth conditions amounting to (63c). Hence, the clearest criterion for identifying an item as an FCI—its licensing conditions—does not give a clear result here.

(63) a. You can pick hwelc of these three cards.
   b. (i) You can pick any of these three cards.
      (ii) You can pick each of these three cards.
   c. \( \forall x[x \text{ is one of these three cards } \rightarrow \text{ you can pick x}] \)

There is another intuition that may help to identify an FCI: the intuition of an exceptionally wide domain (Kadmon and Landman 1993), or that the universal quantification is over possible rather than actual entities of the description in the FCI (Dayal 1998; Alonso-Ovalle and Menéndez-Benito (forthcoming)) (my thanks to Paula Menéndez-Benito for drawing my attention to the importance of this intuition in the present context). (64) illustrates: (64a) intuitively entails (64b), hence seems to make a claim about possible rather than actual diplomats. Thus there seems to be an intensional component involved in FCI quantification. For the sake of concreteness, I represent this as a kind of generic quantification over possible individuals, as the paraphrase (64e) suggests. As far as I can tell, the intensional aspect of the semantics of FCIs is not an issue that semantic theory has resolved. It is my hope that whatever proves to be the right analysis of the phenomenon can be slotted into the sketch in (64c, d, e).

(64) a. Mata Hari can seduce any diplomat.
   b. If you were a diplomat, then Mata Hari could seduce you.
   c. \( \forall p[p \in \{\text{that Mata Hari can seduce } x \mid \exists w[R(w)(@) \& \text{diplomat}_w(x)]\} \rightarrow \forall w[R(w)(@) \rightarrow p(w)] \)
   d. \( R(w)(@) \text{ iff } w \text{ follows the rules of } @ \text{ (where } @ \text{ is the actual world).} \)
   e. All propositions ‘Mata Hari can seduce x’ (where x could be a diplomat), are, if things proceed normally, true.

How can we access this kind of intuition for OE? Here is how I will proceed: in this section, I will assume that OE bare indeterminate pronouns do have a use as FCIs, and present (the sketch of) an FCI compositional semantics. Since I do not present a knock-down argument, my assumption that there is an FCI analysis may be wrong. In that case, the FCI analysis suggested below simply doesn’t apply. The uses in question then ought to be analysed instead as plain universal quantifiers, as discussed in the preceding subsection. But I present evidence that is strongly suggestive of an FCI analysis, based on (64), in Sect. 3.5. Since this evidence concerns all three series of OE indeterminate pronouns equally, the discussion is moved to its own section.

Concretely, I propose that the analysis of FCIs in Menéndez-Benito (2010) applies to OE indeterminate pronouns. As before, instead of an actual example of a (plausible) FCI use like (8a), (11a), or (65a, b), I use the simplified artificial example (65c) in the semantic calculation.
 Unless otherwise noted, text from this document is imported verbatim. 

An analysis based on Menéndez-Benito (2010) (though simplified and adapted to present concerns) is sketched below. The covert operator that evaluates the alternatives introduced by the FCI is called All-Alt. This operator needs to take scope over the licensor of the FCI (a modal or generic operator), and in (67) I hint at the fact that it is modal in nature (it is sensitive to the normal course of events and it ought to quantify over possible rather than actual entities of the description of the FCI (see, e.g., Dayal 1998; Alonso-Ovalle and Menéndez-Benito (forthcoming) for discussion). 

Thus, FCIs introduce Hamblin alternatives which are evaluated by a covert propositional operator All-Alt. All-Alt is a covert universal quantifier over propositions taking scope over the licensor. Under the analysis of Menéndez-Benito (2010), no ordinary semantic value is required for FCIs. Her analysis can straightforwardly apply to OE indeterminate pronouns.

We turn to possible NPI uses next. Remember that we face a difficulty similar to the one that occurs with possible FCI uses: in view of the fact that existential interpretations of OE bare indeterminate pronouns are generally possible, the clearest criterion for NPI-hood—restricted distribution—cannot be observed. In contexts that permit NPIs, ordinary narrow scope existentials are also possible and (at least in the case of weak NPIs) yield indistinguishable truth conditions. (68) illustrates.

---

6 See Sect. 3.4 for a mechanism that can ensure agreement of the two accessibility relations R in (66a).
I didn’t eat hwelc cookie.

(i) I didn’t eat any cookie.

(ii) I didn’t eat a cookie.

\[ \neg \exists x [\text{cookie}(x) \land \text{I ate x}] \]

I proceed as follows: I discuss a version of the standard semantic analysis of NPIs. It will become clear that the analysis of OE bare indeterminate pronouns from above cannot be reconciled with such a standard analysis. I suggest, therefore, that the bare series of OE indeterminate pronouns does not have an analysis as NPIs. The relevant occurrences are instead plain narrow scope indefinites (i.e., they are to be analysed like (68b (ii)) rather than (68b (i)). The semantic discussion will be useful, however, when we turn to the OE ge-series in Sect. 3.3 because I argue that the ge-series differs in an interesting way semantically from the bare series, and does have an analysis as NPIs.

Here is the by now classical analysis of NPIs: NPIs are assumed to have an alternative semantics (Krifka 1995; Lahiri 1998; Chierchia 2006). In ways that vary slightly between analyses, the alternatives are different from Hamblin alternatives; ultimately, they are alternative properties. Moreover—and this is the case for all the various versions of the analysis—the NPI analyses require an ordinary semantic value. I illustrate in (69)–(71). The structure of the acceptable example (69) is (70a). The NPI is an existential quantifier which introduces alternative properties, (70b). Both of its semantic values are combined with their sentence context in the composition (70c), in the familiar way. The evaluating operator EXH is defined in (71). It excludes all alternatives that are more informative than the ordinary semantics. In the case of the acceptable (69), this runs empty and we end up with a negated existential statement (70d).

(69) I didn’t see anyone

(70) a. \[ \text{[EXH [NOT [XP I saw anyone]]]} \]

b. NPI-Alts: \[ \left[ \text{anyone} \right]_o = \lambda Q. \lambda w. \exists x [P(x) \land Q(x)] \]

\[ \left[ \text{anyone} \right]_{\text{Alt}} = \{ \lambda Q. \lambda w. \exists x [P'(x) \land Q(x)] \mid P' \subseteq P \} \]

c. \[ \left[ \text{XP} \right]_o = \lambda w. \exists x [P(x) \land \text{I saw}_w x] \]

\[ \left[ \text{XP} \right]_{\text{Alt}} = \{ \lambda w. \exists x [P'(x) \land \text{I saw}_w x], \lambda w. \exists x [P''(x) \land \text{I saw}_w x], \ldots \} \]

d. It is not the case that \[ \exists x [P(x) \land \text{I saw}_w x] \]

iff It is not the case that \[ \exists x [P(x) \land \text{I saw}_w x] \]

(71) \[ \left[ \text{EXH ZP} \right]_o (w) = 1 \iff \left[ \text{ZP} \right]_o (w) = 1 \]

and

for all q \[ q \in \left[ \text{ZP} \right]_{\text{Alt}}; (\left[ \text{ZP} \right]_o =/= > q) \rightarrow q(w) = 0 \]

The complication introduced by the EXH operator finds its justification in accounting for the distribution of NPIs. The unacceptable (72a) likewise includes this operator, (72b). But in the structure without the negation (or some other downward entailing expression), the operator gives rise to entailments that are
systematically contradictory. Hence the sentence is unacceptable. This analyses Ladusaw’s (1979) generalization about NPI distribution.

(72) a. * I saw anyone.
   b. [EXH [I saw anyone]]
   c. \( \exists x [P(x) \& I \text{ saw } x] \), and
      for all \( q, q = \lambda w. \exists x [P'(x) \& I \text{ saw}_w x] \), for some \( P' \subseteq P \):
      \[ \text{if } [\lambda w. \exists x [P(x) \& I \text{ saw } x]] =/\Rightarrow q, \text{ then } q(w) = 0 \]
      \[ \text{iff } \exists x [P(x) \& I \text{ saw } x], \text{ and there is no particular } x \text{ that I saw.} \]

Here’s what is interesting for present purposes: the analysis of NPIs cannot be reconciled with the Hamblin semantics as defined in Sect. 3.1. The Hamblin alternatives are somewhat different than the property alternatives that the NPI theories would assume—we will return to this point in Sect. 3.3 and it will be revealed to be non-essential. But another crucial property of the analysis in Sect. 3.1 is that the bare indeterminate pronoun has no ordinary semantic value. This is incompatible with the EXH operator, which requires both an ordinary and an alternative semantic value for its sister, as seen in (71). Thus, the bare indeterminate pronoun cannot be evaluated by EXH, which implies that it cannot be analysed as an NPI. (73) illustrates.

(73) a. * [EXH [XP NOT [I saw hwa]]]
   b. Hamblin alternatives: \([hwa]_o \) is undefined.
      \([hwa]_{\text{Alt}} = \{x : x \in D\} = \{A, B, C, \ldots \}\)
   c. \([XP]_o \) is undefined. <= unsuitable as input for EXH
      \([XP]_{\text{Alt}} = \{\lambda w. \text{I didn’t see}_w A, \lambda w. \text{I didn’t see}_w B, \ldots \}\)

In consequence, I suggest that OE bare indeterminate pronouns are plain existentials, which may occur in NPI environments, taking narrow scope (e.g. in (8b), (11b) from Sect. 2). They are to be analysed with EXIST. We know that EXIST is an available evaluating operator because of existential readings in non-NPI contexts (e.g., (4a), (7c), (9c)). We come back to the NPI analysis and EXH when we analyse the ge-series in the next subsection.

3.2.4 Interim summary

I have applied a classical alternative semantics to OE bare indeterminate pronouns, taking their use in questions as the starting point for the analysis. Accordingly, they introduce Hamblin alternatives into the calculation. The alternatives are evaluated by an associated operator, OP in (50). Alternative evaluating operators OP for OE bare indeterminate phrases include Q, ALL, EXIST, and (as I will argue) All-Alt, but not EXH.

Bare indeterminates must be in the scope of one of these operators because of their undefined ordinary semantic value. This follows from the principle of interpretability: a sentence must have an ordinary semantics (Heim and Kratzer 1998, version in (74) from Beck 2006, (52)).
Principle of Interpretability:
An LF must have an ordinary semantic interpretation.

Next, we look at how the morphologically derived forms of the indeterminate pronouns fit into the picture.

### 3.3 The GE-series

The prefix ge- removes from the interpretive options of OE indeterminate pronouns the interrogative and FCR uses. The ge-series has universal and existential interpretations and potentially FCI and NPI uses (cf. Sect. 2, summary repeated below).

| question | FCR | FCI | NPI | Univ | Exist |
|----------|-----|-----|-----|------|-------|
| ge-series | √? | √? | √   |       | √    |

It would be attractive to derive the difference to the bare series from the semantic contribution of ge-. In a nutshell, I argue in this section that the prefix ge- creates an ordinary semantic value for the indeterminate pronoun. This makes the pronoun unable to combine with Q (predicting unavailability of question and FCR uses), but able to combine with EXH (predicting genuine NPI uses). I motivate a proposal to this effect in Sect. 3.3.1, and then apply it to the different readings of indeterminate pronouns of the ge-series in Sect. 3.3.2.

#### 3.3.1 The semantic contribution of ge-

I propose (76) as the semantic contribution of prefix ge-:

(a) \([ge-\text{XP}]_o = \cup [\text{XP}]_{\text{Alt}}\) (if the elements of \([\text{XP}]_{\text{Alt}}\) are not of type \(<e>\))

\[\lambda P. \lambda w. \exists x (x \in [\text{XP}]_{\text{Alt}} \& P(w)(x))\]

(b) \([ge-\text{XP}]_{\text{Alt}} = [\text{XP}]_{\text{Alt}}\) (if the elements of \([\text{XP}]_{\text{Alt}}\) are type \(<e>\))

This semantic contribution of the prefix can be motivated by (though not directly derived from) the semantic contribution of the prefix’s likely source, the lexical item ge. Let’s take a look at the lexical item.

Translations offered for lexical ge (i.e. the free morpheme, not the prefix) in, for example, B&T are ‘and, also’. (77) provides some examples. (77a, b) are typical uses, with ge as a conjunctive marker preceding both conjuncts.
Let’s consider the conjunctive use. Following Mitrovic and Sauerland (2014), I call conjunctive markers marking both conjuncts polysyndetic conjunctions. According to Mitrovic and Sauerland (2014), the structure of a polysyndetic conjunction like ‘ge A ge B’ is as in (78). The morpheme ge marks each conjunct; it is not itself the logical conjunction ‘and’. To indicate that ‘and’ is semantically present but not pronounced, I use strike-through ‘and’ in (78).

(78) \[[\text{ge } A \text{ and } \text{ge } B]\]

It has been observed (Breindl 2008) that such polysyndetic conjunctions impose particular requirements on the context. A good context is one in which both conjuncts are given and are understood as complementary and exhausting the relevant possibilities. I illustrate with some examples from German, which has the polysyndetic conjunction sowohl A als auch B (‘both A and B’) (examples inspired by Breindl 2008):

(79) a. context: A and B live together. A is coming home from the store.
   B: What did you buy?
   A: # Ich habe sowohl Milch als auch Socken gekauft.
   ‘I have bought both milk and socks.’

b. context: A wants to buy a new pair of pants. He has chosen a type of pants, but cannot make up his mind whether he wants them in blue or in red. B is well aware of the dilemma. A is coming home from the store.
   B: So what did you buy?
   A: Ich habe sowohl die blau als auch die rote Hose gekauft
   ‘I have bought both the blue and the red pants.’

---

7 Breindl (2008, p. 269): ‘Sie [conjunctions of the form sowohl A als auch B; SB] sind umso akzeptabler, je eher es dem Hörer gelingt, die verknüpften Entitäten als komplementäre Teilmengen zu interpretieren und daraus eine abgeschlossene Vereinigungsmenge zu bilden.’ (They are the more acceptable, the more the hearer succeeds in understanding the entities A and B as complementary subsets and forming a closed union of them.).
Thus, the truth conditional impact of a polysyndetic conjunction is logical conjunction, and it makes available an alternative semantic value amounting to the corresponding (exclusive) disjunction. The disjunction has to be ‘around’ in the context. The question is how to derive the meaning and the context requirement. I consider the simplified prototype in (81) instead of actual examples like (77a, b) and (79), (80). We have seen that (82) is the desired interpretive result. We have also seen that appropriate contexts provide the alternatives sketched in (83). This can be understood as a mutual contrast requirement for the two conjuncts, (84) (cf. Rooth 1992): ‘rain’ contrasts with ‘snow’ and vice versa.

(81) a. It is ge raining ge snowing
   b. [[ge [α it is raining]] and [ge [β it is snowing]]]

(82) a. [[[ge it is raining] and [ge it is snowing]]]₀ =  λw.(rain(w) & snow(w))
   b. [[[ge it is raining] and [ge it is snowing]]]ₐₚₜ = \{ λw.(rain(w) ∨ snow(w)) & ~ (rain(w) & snow(w)) \}

(83) a. [[it is raining]]₀ =  λw.rain(w)    [[it is raining]]ₐₚₜ = \{ λw.rain(w), λw.snow(w) \}
   b. [[it is snowing]]₀ =  λw.snow(w)    [[it is snowing]]ₐₚₜ = \{ λw.rain(w), λw.snow(w) \}

(84) A constituent α contrasts with a constituent β iff [[β]]₀ ∈ [[α]]ₐₚₜ and
    [[β]]₀ ≠ [[α]]₀.

In order to derive (82)—that is, in order to predict the right overall semantics and pragmatics of polysyndetic conjunction—the morpheme ge needs to negotiate the ordinary and alternative semantic values of the conjuncts. The semantics in (85) will accomplish this. The idea is that ge leaves the ordinary semantics unchanged (an identity function), but forms the union over the alternatives, which amounts to their disjunction. I further assume that an alternative to the disjunction is conjunction, and that a disjunction can be pragmatically strengthened to an
exclusive disjunction (e.g., Sauerland 2004; Fox 2007). The crucial steps in the calculation are given in (86).

(85)  
\[
\begin{align*}
\text{a. } & [\text{ge } \text{XP}]_o = [\text{XP}]_o \\
\text{b. } & [\text{ge } \text{XP}]_{\text{Alt}} = \cup [\text{XP}]_{\text{Alt}} \\
& \text{(if the elements of } [\text{XP}]_{\text{Alt}} \text{ are not of type } <e>) \\
& = \lambda P. \lambda w. \exists x \in [\text{XP}]_{\text{Alt}} \land P(w)(x) \\
& \text{(if the elements of } [\text{XP}]_{\text{Alt}} \text{ are type } <e>)
\end{align*}
\]

(86)  
\[
\begin{align*}
\text{a. } & [\text{ge it is raining}]_o = \lambda w. \text{rain}(w) \\
& [\text{ge it is raining}]_{\text{Alt}} = \cup \{\lambda w. \text{rain}(w), \lambda w. \text{snow}(w)\} \\
& = \{\lambda w. \text{rain}(w) \lor \text{snow}(w)\} \\
\text{b. } & [\text{ge it is snowing}]_o = \lambda w. \text{snow}(w) \\
& [\text{ge it is snowing}]_{\text{Alt}} = \cup \{\lambda w. \text{rain}(w), \lambda w. \text{snow}(w)\} \\
& = \{\lambda w. \text{rain}(w) \lor \text{snow}(w)\} \\
\text{c. } & [\text{ge it is raining} \text{ and } \text{ge it is snowing}]_o = \lambda w. \text{rain}(w) \land \text{snow}(w) \\
& [\text{ge it is raining} \text{ and } \text{ge it is snowing}]_{\text{Alt}} \\
& = \{\lambda w. (\text{rain}(w) \lor \text{snow}(w)) \land (\text{rain}(w) \lor \text{snow}(w)), \lambda w. (\text{rain}(w) \lor \text{snow}(w)) \lor (\text{rain}(w) \lor \text{snow}(w))\} \\
& = \{\lambda w. \text{rain}(w) \lor \text{snow}(w)\}
\end{align*}
\]

For present purposes, the core proposal is that ge performs the two semantic operations in (85), identity and union. With some plausibility, both are also at work in its other potential use as ‘also’ (77c). I illustrate informally in (87).

(87)  
\[
\begin{align*}
\text{a. } & \text{I also met Chris}_F. \\
& [\text{also } \text{XP I met Chris}_F]\ \\
\text{b (i) } & \text{Assertion: I met Chris.} \\
& \text{(ii) Presupposition: I met someone.} \\
\text{c. } & [\text{also XP}]_o = [\text{XP}]_o \\
& [\text{also XP}]_o \text{ presupposes } \cup [\text{XP}]_{\text{Alt}}
\end{align*}
\]

Now, we turn to the prefix ge- as it occurs in indeterminate pronouns of the ge-series. We can assume that prefix ge- developed from the additive particle ge. The lexical entry in (85) cannot be used without modification, given the Hamblin semantics of the bare indeterminate pronoun, because the ordinary semantic value of the bare indeterminate pronoun is undefined. I propose (88) = (76) as the semantic contribution of prefix ge-:

(88)  
\[
\begin{align*}
\text{a. } & [\text{ge-XP}]_o = \cup [\text{XP}]_{\text{Alt}} \\
& \text{(if the elements of } [\text{XP}]_{\text{Alt}} \text{ are not of type } <e>) \\
& = \lambda P. \lambda w. \exists x \in [\text{XP}]_{\text{Alt}} \land P(w)(x) \\
& \text{(if the elements of } [\text{XP}]_{\text{Alt}} \text{ are type } <e>) \\
\text{b. } & [\text{ge-XP}]_{\text{Alt}} = [\text{XP}]_{\text{Alt}}
\end{align*}
\]

That is, the same two semantic operations are performed (identity and union), but they are distributed over alternative and ordinary semantics differently, using the
alternative semantics twice and outputting two different values. This makes it possible for prefix ge- to combine with bare indeterminate phrases.

The operator in (88) has independently been suggested by Erlewine (2017) in the analysis of Toba Batak manang. This morpheme similarly negotiates between ordinary and alternative semantic values, although the specific data set to be accounted for is not the same, and hence manang’s combination with other operators is not the same either. But the analytical parallels will come up in the discussion below; see especially Sect. 4.

In (89), we see prefix ge- in combination with the indeterminate pronoun hwa ‘who’. The prefix does not affect the alternative semantic value; but it adds an ordinary semantic value, which is an existential quantifier/disjunction over the alternatives.

(89) a. \([ge-hwa]\) = \(\lambda P.\lambda w.\exists x[\text{Alt}\{[hwa]\}_\text{Alt} \& P(w)(x)]\)
   e.g., \([\lambda P.\lambda w.P(w)(A) \lor P(w)(B) \lor P(w)(C)]\)

   b. \([ge-hwa]\) = \([hwa]\) = \(\{z: z \in D\}\)
   e.g., \(\{A, B, C\}\)

Next, we examine how the ge-series combines with its compositional context to yield the sentence interpretations available for this type of indeterminate pronoun in OE.

3.3.2 Indeterminate pronouns of the ge-series in their sentence contexts

Below I repeat (75), the summary of the interpretive possibilities for the ge-series from Sect. 2:

(75) question FCR FCI NPI Univ Exist

ge-series \(\sqrt{2}\) \(\sqrt{3}\) \(\checkmark\) \(\checkmark\)

The first observation that the analysis needs to capture is that interrogative and FCR uses are not possible for the ge-series. I propose to refine the definition of the Q operator as in (90), which I take from Erlewine (2017). (90) will yield a well-defined question semantics when its scope contains an indeterminate pronoun with an undefined ordinary semantic value, like the OE bare series, for example (51 b). (90) will yield undefinedness when the pronoun has the semantic properties of the ge-series, for example (89). This is illustrated in (91).\(^8\) Under the analysis of Hirsch

---

\(^8\) Here is an alternative proposal: It seems reasonable to suppose that if an expression makes available an ordinary meaning, this meaning cannot be ignored in the further semantic computation. This excludes composing a question semantics in a hypothetical structure like (91), without resorting to (90). While the alternatives would provide the necessary input for the Q operator, at the level of the ordinary semantics we would calculate ‘someone’ and ‘someone left’, which are never used. We can conjecture that this is inappropriate. (i) might be a principle of the semantic component of the grammar.

(i) Principle of Full Interpretive Use (PFIU):
An ordinary semantic value must be used in the composition.

The PFIU is more general and, if correct, might make a stipulation like (90) unnecessary. I leave this issue to further research.
(2016), (90) also correctly predicts that the ge-series cannot be used in FCRs, whose internal composition is the same as that of questions.

(90) $[[Q \varphi]]_o$ is only defined if $[[\varphi]]_o$ is undefined. Then, $[[Q \varphi]]_o = [[\varphi]]_{\text{Alt}}$

(91) a. # gehwa left?
    intended: Who left?

b. * $[Q \text{ [gewha left]}]$ 

We consider universal and existential interpretations of the ge-series next. Examples are repeated in (92a) and (93a). I once more discuss simple hypothetical structures (92b) and (93b) in the semantic analysis.

(92) a. Swa þonne her fram þære arleasan ðode, hwæðere rihte
    so then here from that impious people though just
    Godes dome, neh ceastra gehwylc & land
    God’s judgement near (of) cities every (pl) and land
    forheregoede wæron.
    wasted were
    (cobede,Bede_1:12.52.27.487)
    ‘So then here almost every city and district was wasted by this impious people, though it was by the just judgment of God.’ (Miller)

b. Ge-hwa left.
   ‘Everyone left.’

(93) a. & brohte of his weorce gehwylc grene &
    and brought of his work GE.which green and
    wel stincende wyrta.
    good smelling herbs
    (cogregdC,GDPref_and_3_[C]:1.181.16.2225)
    ‘and brought from his work some green and pleasantly smelling herbs.’

b. Ge-hwa left.
   ‘Someone left.’

Basically I propose the same analysis as before, (94) and (95).

9 If we assume the PFIU from the preceding footnote, the question arises how the ordinary semantics of the sister of the operator is used. I suggest that it may go into an existential PSP of the quantifier. A version of ALL that is revised accordingly is given in (i), and an example in (ii). A similar proposal can be found in Uegaki (2018) for Japanese -ka indefinites. For OE, the existence and content of such a presupposition is unfortunately hard to check on the basis of corpus data, as noted in the discussion of NPI uses of the a-series. I will not pursue the matter in more detail.

(i) $[[\text{ALL } ZP]]_o(w)$ is only defined if $[[ZP]]_o(w) = 1$.
    Then, $[[\text{ALL } ZP]]_o(w) = 1$ iff for all $p \in [[ZP]]_{\text{Alt}}$: $p(w) = 1$

(ii) $[[\text{ALL ge-hwa left}]]_o(w)$ is only defined if $\exists x (x \in (z: zeD) \& x \text{ left in w})$. Then,
    $[[\text{ALL ge-hwa left}]]_o(w) = 1$ iff for all $p$, $p \in \langle \lambda w. x \text{ left}_w \mid x \in D \rangle$: $p(w) = 1$
Lastly, we look at uses of ge-indeterminate pronouns as polarity items. In Sect. 3.5, I present evidence suggesting that the ge-series can be used as FCI. The analysis from Sect. 3.2. should thus apply to pronouns of the ge-series as well. Since they do not bring any new feature to the analysis of FCI, I will not repeat the analysis.

Instead, let’s turn to uses of ge-indeterminate pronouns as NPIs. It is here that we see the second benefit of the specific interpretive contribution postulated for ge- in (88): the existential meaning (‘someone left’) is the right ordinary semantic value for the standard analysis of NPIs. I further propose to replace the Krifka/Lahiri/Chierchia-alternatives by Hamblin alternatives, making the analysis of NPIs compatible with a Hamblin semantics of indeterminate phrases. The same step is taken in Erlewine and Kotek (2016) in a semantic analysis of Tibetan NPIs. I repeat an attested example in (96a) and analyse the hypothetical structure in (96b) in (97) (the semantics of the EXH operator (71) is repeated for convenience). (98) demonstrates that the revised analysis preserves the prediction of the original analysis that EXH cannot evaluate an NPI in a non-downward entailing context.

(96) a. Ne heold he no þa Eastran, swa swa sume men  
    neg held he not the Easter so as some men  
    wenað, mid Iudeum on feowertynenihtne monan  
    think with Jews on fourteenth moon  
    gehwylce daeg on wucan, ac a symle on  
    GE.which day in week but ever always on  
    Sunnandæge fram feowertynenihtum monan oð twentigesnihtne,  
    Sunday from fourteenth moon up to twentieth night  
    for þam geleafan þære Dryhtenlican æriste,…
    (cobede,Bede_3:14.206.27.2104)
    ‘He did not keep Easter, as some imagine, in agreement with the Jews, on the fourteenth night of the moon on any day of the week, but always on Sunday, from the fourteenth night of the moon up to the twentieth night, from belief in our Lord’s resurrection,…’ (Miller)

b. If ge-hwa left, it rained.  
   ‘If anyone left, it rained.’
(97) a. \([\text{EXH } [\text{if } [\text{ge-hwa left}][\text{it rained}]]]  \\
\text{‘If anyone left, it rained.’}\)

b. \( [[\text{ge-hwa left}]]_o = \lambda w.\exists x \in \{z: z \in D\} \& x \text{ left in } w \)
\( = \text{ someone from ABC left} \)
\( [[\text{ge-hwa left}]]_{\text{Alt}} = \{[\lambda w.A \text{ left}_w], [\lambda w.B \text{ left}_w], [\lambda w.C \text{ left}_w]\} \)

c. If someone from ABC left, it rained (and no unentailed alternative is true) iff
If someone from ABC left, it rained.

(71) \( [[\text{EXH ZP}]]_o(w) = 1 \iff [[\text{ZP}]]_o(w) = 1 \text{ and} \)
for all \( q \in [[\text{ZP}]]_{\text{Alt}}: ([[\text{ZP}]]_o \neq q) \rightarrow q(w) = 0 \)

(98) \( [[\text{EXH } [\text{ge-hwa left}]] ]_o(w) = 1 \iff \text{someone from ABC left and each proposition in } [[\lambda w.A \text{ left}_w], [\lambda w.B \text{ left}_w], [\lambda w.C \text{ left}_w]] \text{ is false} \quad \text{— contradiction} \)

By this semantic analysis, the \( \text{ge}\)-series can appropriately be evaluated by \text{EXH}. The analysis creates the possibility of genuine NPI uses of \( \text{ge}\)-indeterminate pronouns. The composition is parallel to Erlewine’s (2017) analysis of Toba Batak \textit{manang}, with parallel empirical motivation: the morpheme \textit{manang} together with an indeterminate pronoun is an NPI, hence via association with \text{EXH} (for Erlewine: \textit{even}) requires an existential ordinary semantic value and Hamblin alternatives as alternative semantic value. This motivates a semantics including (88).

Example (96a) in particular is indicative of a use of the \( \text{ge}\)-series as (strong) NPIs (as discussed in Sect. 2). Remember that since the \( \text{ge}\)-series has an existential interpretation, the existential analysis (95) could apply in NPI environments as well (as in the case of the bare series), resulting in a semantics that, for weak NPIs, is indistinguishable. Although I do not provide a finely differentiated analysis of strong versus weak NPIs (see, e.g., Krifka 1995), I take (96a) to provide evidence that an NPI analysis for the \( \text{ge}\)-series is indeed called for. We will see in the next subsection that the basic semantics is inherited by the \( \text{a}\)-series, for which we have seen further evidence for an NPI analysis.

3.3.3 Subsection summary

According to the analysis developed in this subsection, the prefix \( \text{ge}\)- adds an ordinary semantic value to the meaning of an indeterminate phrase. A first consequence is that an interrogative interpretation and an FCR use become impossible. A second consequence is that an analysis as NPIs becomes possible, because the alternative evaluating operator for NPIs requires an ordinary semantic value. Other than that, the \( \text{ge}\)-series shares the interpretive possibilities of the bare series since \( \text{ge}\)- makes no difference for the alternative semantic value. The upshot is that alternative evaluating operators (50) for OE \( \text{ge}\)-indeterminate phrases include
ALL and EXIST, All-Alt and EXH, but not Q. This accounts for their range of interpretive possibilities.

(50) \[\text{OP [... indeterminate pronoun...]}\]

We may ask whether one of these operators must be in the structure. Note that without any alternative evaluating operator, we would end up with a semantics exemplified in (99). This is an existential interpretation which makes available Hamblin alternatives.

(99) a. \[[\text{ge-hwa left}]\]_o = [\hat{\omega}.A \text{ left}_w \lor B \text{ left}_w \lor C \text{ left}_w]
    = someone from ABC left
b. \[[\text{ge-hwa left}]\]_Alt = \{[\hat{\omega}.A \text{ left}_w], [\hat{\omega}.B \text{ left}_w], [\hat{\omega}.C \text{ left}_w]\}

Such a pair of ordinary and alternative semantics turns out to be problematic, for the following reason: We assume that alternative semantic values are used in the evaluation of focus. We further assume that at root level at the latest, focus must be evaluated (i.e. a connection to the sentence’s context must be made). The operator responsible is Rooth’s (1992) \(*\) operator. The \(*\) requires that the ordinary meaning of an expression be one of the alternatives, i.e., that in a structure \[\sim \text{ XP}\], \[[\text{XP}]\]_o \in [[\text{XP}]\]_Alt. (99) violates this requirement. Hence the \(\sim\) would not be able to embed (99) (or any structure containing it in which the ordinary and alternative semantic values are passed on); that is, we predict ungrammaticality, (99’).

(99’) * \[\sim [\text{gehwa left}]\]

But this means that sentence structures with a pronoun of the ge-series without an appropriate evaluating operator (ALL, EXIST, All-Alt or EXH) will not be well-formed. I follow Erlewine (2017) in suggesting that for this reason, the item in question (here: the indeterminate ge-pronoun) needs to be in the scope of one of the evaluating operators. Structures with one of the evaluating operators will be well-formed if we assume, standardly, that the operator resets the alternative semantic value to a singleton set containing the ordinary semantic value, for example:

(100) a. \[[\text{ALL ZP}]\]_o(w) = 1 iff for all p \in [[\text{ZP}]\]_Alt: p(w) = 1
b. \[[\text{ALL ZP}]\]_Alt = \{[[\text{ALL ZP}]\]_o\}

In conclusion, then, the ge-series must be in the scope of an appropriate operator because (88) creates structures that violate Rooth’s (1992) constraint that [[\text{XP}]\]_o \in [[\text{XP}]\]_Alt.

OE ge- offers a window into the role of operators negotiating the ordinary semantics/alternative semantics distinction. There is a set of items in language that seem to fluctuate between an alternative and an ordinary semantics (for example disjunction, indeterminate phrases, and possibly others like Toba Batak manang.
(see also the literature on so-called Q-particles, e.g., Hagstrom 1998; Cable 2010; Slade 2011; and Sect. 4); an early reference is Ramchand 1997). These items raise the question how their alternative semantic contribution and their ordinary semantics interact. (88) is my proposal for the issue at hand, and it is identical to Erlewine’s (2017) proposal developed for a somewhat different data set. Thus (88) may be the (or one of the) operator(s) in language that allows an alternative trigger to also enter into ordinary semantic composition.

This issue only becomes apparent in a two-tier system with ordinary and alternative semantics, which is the kind of general theory that is needed. This requires transforming Alonso-Ovalle’s (2006) analysis of disjunction, Shimoyama (2001), Kratzer and Shimoyama (2002), or other analyses in terms of an alternative semantic tier only, into a two-tier semantic system (see Uegaki 2018 for recent discussion). Let me also emphasize that the issue with ge- is about operators that negotiate the two tiers which are not the evaluating operators. This is clear because of the pervasive ambiguity of OE indeterminate ge-phrases and similarly the ambiguity in Toba Batak analysed by Erlewine.

3.4 The A-series

Remember from Sect. 2 that the interpretive possibilities of the a-series of indeterminate phrases are a proper subset of those of the ge-series: existential interpretations are not attested. Recall also that the a-series must have a genuine NPI use, because of the lack of existential interpretations outside of NPI licensing contexts, and the inappropriate interpretation a wide scope universal would yield. An NPI use in turn implies that the indeterminate phrase has an ordinary semantic value, adding to the motivation of the semantic step suggested in the analysis of ge-.

Once more, it would be attractive to derive the reduction of readings we see in (101) from the presence of the prefix a-, which is added on top of ge- to the indeterminate pronoun morphologically. Thus we will take the analysis of the ge-series from the preceding subsection as the starting point and ask how a- changes the picture.

Interestingly, the surviving readings (FCI, NPI, universal) are all interpretations in which the alternative evaluating operator (All-Alt, EXH, ALL) is a universal quantifier. This corresponds to the meaning of OE lexical a, which is the universal quantifier ‘always’. (102) sketches a semantics for always, a universal quantifier over times.

\[ \text{[always}_{C}] = \lambda p_{<,\text{st}>} \cdot \lambda w. \text{ for all } t \text{ in } C, p(t)(w) = 1 \]

I suggest that the contribution of the prefix a-, which is derived from lexical a, is to impose the requirement that an evaluating operator should have universal quantificational force. I call this ‘universal agreement’ and illustrate with (104). (Here, as well, the structure interpreted in the semantics, (103b), is a sample
structure used to simplify realistic data in which an *a*-indeterminate pronoun is interpreted universally, e.g., (103a) and the data from Sect. 2.)

(103) a. Gif mon oðres wudu bærneð oððe heaweð unaliefedne, if man other's wood burn or fell unlawfully
forgielde ælc great treow mid V scillingum, & siððan repay ÆLC great tree with 5 shillings, and afterwards
æghwylec, A.GE. which, be so many so (of) them be, with 5 pence;
& XXX scillinga to wite.
and 30 shillings to punishment.
(30.2.62)

‘If a man burns or fells another’s woodland illegally, repay each big tree
with 5 shillings, and then each one, as many as there were, with 5 pence;
and 30 shillings fine.’

Wenn jemand das Gehölz eines anderen ohne Erlaubnis abbricht oder abhaut, so vergelte er jeden
grossen Baum mit 5 Schill., und weiterhin jeden, sei es so viele als ihrer seien, mit 5 Pfennigen;
und 30 Schilling zur Strafe. (Liebermann p. 57)

b. Æghwa left.
‘Everyone left.’

(104) a. [ALL [a-ge-hwa left]]

universal agreement

‘Everyone left.’

b. [\[a-ge-hwa left\]] = \(\lambda w.\exists x[x \in \{z: z \in \text{D}\} \& x \text{ left in } w]\)
e.g., \(\lambda w.A \text{ left}_w \vee B \text{ left}_w \vee C \text{ left}_w\)

\([a-ge-hwa left]_{\text{Alt}} = \{\lambda w.x \text{ left}_w \mid x \in \text{D}\}\)
e.g., \(\lambda w.A \text{ left}_w, \lambda w.B \text{ left}_w, \lambda w.C \text{ left}_w\)

c. All propositions ‘x left’ (x \(\in \text{D}\)) are true.

A model for universal agreement is negative concord. In the analysis of negative
concord, I follow Penka (2011): the semantically interpreted element (negation),
which may be silent, stands in an agreement relation to an element which does not
contribute to the composition (i.e., does not express negation), but makes it
morphologically visible. (105) from OE (a negative concord language) illustrates:
the negative morphology on *nan* ‘not-one’ is not interpreted, but the element
requires the presence of a sentence negation. This can be modelled in terms of
syntactic Agreement (Penka 2011): *nan* has a feature [uNeg] which requires
interpretable [Neg] in a suitable structural relationship.

(105) & cwæð: Nis hit *nan* wundor þeah hwa wene þæt

and said: not.is it not.one wonder if who thinks that
swelces gehwæt nu unmyndlinga geberige, þonne he ne
such GE-what now unexpectedly happens when he not
con ongitan & gereccan forhwy swylc God geþafað.
can understand & explain why such god permits
(coboeth,Bo:39.125.22.2495)

‘and said: “It is no wonder though anyone should think that some such thing
happens now without planning, when he does not know how to understand and
explain why God permits such things.’ (The Old English Boethius, S. Irvine
and M.Godden 2012, Harvard University Press)
(106) [NegP [Neg[... n-word[uNeg]... ]]

We also have a predecessor for the proposed change from lexical a to prefix a- in the domain of negative concord: Gianollo (2017) argues that Latin nec changes from semantic [Neg] (negation) to formal [uNeg] in negative indefinites in negative concord (e.g. Italian nessuno). A parallel perspective is plausible here: lexical a expresses a universal quantifier, semantic \( \forall \), and changes to the prefix a- [u\( \forall \)] looking for an appropriate evaluating operator.

(108) and (110) illustrate that the other evaluating operators All-Alt and EXH are also universal in nature (and I proceed in the same manner as above with the presentation of the examples).}

(107) a. (þurh ða onfengnesse ðæs Halgan Gastes, hie

\[\text{through the reception (of) the Holy Gost they}\]

wæron toðon frome ond toðon

\[\text{were so firm and so}\]

strange ðæt) hie mihtan æghwæt gefremman mid Godes

\[\text{strong that they might accomplish with god’s}\]

fultome ðæs ðæ hie woldan

\[\text{help that they wanted}\]

‘Through the reception of the Holy Spirit, they were so firm and strong

that they could accomplish with God’s assistance \textbf{anything} they wished.’

(B&T Bl. H. 137, 1. Blickling Homilies: Translation, Richard J. Kelly 2003: The Blickling Homilies, Continuum, London, New York)

b. They could accomplish æghwæt.

‘They could accomplish anything.’

(108) a. [All-Alt [can [they accomplish a-ge-hwæt]]]

\[\text{universal agreement}\]

‘They could accomplish anything.’

b. All plausible propositions ‘they can accomplish x

(x a possible wish)’ are true.

\[\begin{align*}
\text{(i) [All-AltR [can [they accomplish FCI R]]]} & \quad \text{agreement} \\
\end{align*}\]

\[\text{\footnotesize{\textsuperscript{10}} The agreement mechanism in (108) could provide us with the missing piece in the analysis of FCI in terms of All-Alt from Sect. 3.2.3, namely the modal interpretation of both All-Alt and the FCI. If that analysis is correct in assuming that the same accessibility relation R is at work in both the operator and the FCI, the agreement mechanism could be held responsible for this, as sketched in (i). The details are beyond the scope of the present paper.}\]
(109) a. (& þrie Scottas comon to Ælfrede cyninge,) on anum bate butan ælcum gereþrum (of Hibernia,) in a boat without ÆLC oars
‘And three Irishmen came to King Alfred in a boat without any oars’
(B&T; Chr.891; P.82,19; Two of the Saxon Chronicles, ed. Charles Plummer; Translation: Kahlas-Tarkka, L. 1993: Towards the modern English dichotomy between every and each. In Matti Rissannen, Merja Kitö & Minna Palander- Collin: Early English in the Computer age. Mouton de Gruyter, Berlin, 201–218
b. The boat did not have ælc oars.
‘The boat did not have any oars.’

(110) a. [EXH [not [the boat have a-hwelc oars]]]
                  [____________________] universal agreement
‘The boat did not have any oars.’

b. The boat didn’t have oars and all stronger alternatives are false.

This, then, is the analysis that I suggest for the a-series: indeterminate phrases of the a-series have the semantics of the ge-series and in addition carry a feature [uV]. All three operators responsible for the interpretations available to OE a-indeterminate phrases have interpretable [V]; that is, they are universal quantifiers.

This predicts that alternative evaluating operators for OE a-(ge-) indeterminate phrases include ALL, EXH and probably All-Alt, but not EXIST or Q. This accounts for the range of available interpretations of the a-series.

3.5 OE indeterminate pronouns as FCI?

This section returns to the question of whether OE indeterminate pronouns have an analysis as FCIs. Remember that superficial observation doesn’t allow us to decide because all three series of indeterminate pronouns permit a universal interpretation. At the same time, the descriptive literature reveals a clear intuition that an FCI use is available, as witnessed by frequent translations in terms of FCI any or who/whatever ((e.g., (12), (65a, b)).

In this section, I will concentrate on the intuition that FCIs, in contrast to plain universal quantifiers, have an intensional component. Remember from Sect. 3.2 the analysis in (111), (112), according to which quantification is over possible objects of the indeterminate phrase description. Plain universal quantifiers, on the other hand, make an assertion (and possibly have a presupposition) that holds in the actual world.

(111) a. [All-AltR [GEN [men praise hwaR of the good]]]

b. [[GEN men praise hwaR of the good]]Alt
   = {that men will praise x | x a possible good thing}

c. All plausible propositions ‘that men will praise x’ (x a possible good thing) are true.
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(112) \[ [[\text{All-Alt}_R \text{XP}]]_o(w) = 1 \text{ iff } \forall p \text{ such that } p \in [[\text{XP}]]_{\text{Alt}}: \]
\[ \forall w' \text{ such that } R(w')(w), p(w') = 1 \]
\[ R(w')(w) \text{ iff } w' \text{ follows the normal course of events in } w \text{ (R is realistic)}. \]

So let’s ask whether there are examples of indeterminate pronouns that are more plausibly understood as intensional. I present some data and their interpretation below.

(113) a. Se sit, swelce he sitte on ðæm stole ðæs forhwierfdan \[ \text{who sits, as he sits on } \text{the chair (of) the } \text{perverse}\]
\[ \text{gemotes, se } \delta e \text{ hine upahfeð } \text{on } \delta a \text{ ofermetto}\]
\[ \text{assembly who that } \text{him elevates in the arrogance}\]
\[ \text{swelcre unryhtwisnesse } \delta ætte he fullfremme } \text{hwelc yfel}\]
\[ \text{such unrighteousness that he fulfills which evil}\]
\[ huru } \delta ðurh geðeaht. \]
\[ \text{certainly by design}\]
\[ \text{(cocura,CP:56.435.24.3093)} \]
\[ ‘\text{He sits, as it were, in the chair of the perverse assembly, who exalts }\]
\[ \text{himself with the pride of such unrighteousness that he perpetrates }\]
\[ \text{every evil designedly.’ (Sweet) (‘… any evil…’)} \]

b. \[ [[\text{All-Alt}_R [\text{GEN} [he perpetrates [hwelc yfel]_R designedly]]]] \]

c. All plausible propositions ‘that he perpetrates x designedly’ (x a possible evil) are true.
\[ \text{(intuition: if x were an evil he might commit, he would}\]
\[ \text{commit x by design.)} \]

(114) a. Þa geceas he him ane burg wið þone sæ, Bizantium wæs \[ \text{then chose he him a fortress by the sea Byzantium was}\]
\[ hatenu, } \text{to } \delta ðon } \text{þet } \text{him gelicade } \text{þet } \text{hie } \text{þer mehten}\]
\[ called, } \text{because that him pleased that they there might}\]
\[ betst } \text{fríð } \text{binnan habban, } \text{& eac } \text{þet } \text{hie } \text{þer gehendaste}\]
\[ best peace within have & also that they there handiest}\]
\[ wæren on } \text{gehwelc lond } \text{þonan to winname;} \]
\[ be against GE.which land from there to fight}\]
\[ \text{(cocorosiu,Or_3:7.63.32.1241)} \]
\[ ‘\text{(Then he chose a fortress by the sea, called Byzantium, because he liked that }\]
\[ \text{hey might best find peace there, and also) that they would be most handy there}\]
\[ \text{to fight any land from there.’} \]

b. \[ [[\text{All-Alt}_R [\text{would} [\text{CP that [IP they [VP there handiest be}\]
\[ [\text{IP } \text{on gehwelc lond}_R \text{from there to fight]]]]]]]]\]

c. All plausible propositions ‘that they are handiest there to fight x from there’ (x a possible hostile land) are true.
\[ \text{(intuition: if x is a possible hostile land, then they are handiest there to fight x.)} \]
(115) a. So you can vice in the man first by some sign recognize, what you expect shall, before he reveals it with words or deeds. (Sweet)

b. [All-Alt R [may you recognize any vice by some sign]]

c. All plausible propositions ‘that you can recognize x by some sign’ (x a possible vice) are true.

(intuition: if x were a vice in the man, you could recognize x first by some sign.)

A more formal version of the truth conditions of (115) is given in (117).

(117) \( \forall x[\exists w'[w'R@ & vice(x)(w') & in(x)(M)(w')]] \rightarrow \exists w' \exists y[w'R'@ & sign(y)(w') & recognize(you)(x)(y)(w')]] \)

The interpretation is intensional; it is about potential vices in the man, not actual vices. At the same time, ælc unðeaw takes scope over meaht und sum tacn; hence, the intensional interpretation of ‘ælc unðeaw’ does not come about via narrow scope relative to the modal. This excludes an interpretation as a plain universal quantifier. (115) is not an NPI licensing context either. The remaining possibility is that (115) is an example of an FCI use of ælc.

Similarly, in (116) no slave need actually have been given anything by any man. In (114), a plausible paraphrase has the universal quantifier over ‘lands’ take wide scope over ‘they would be handiest’ and range over possible enemies.

I argue that these data make transparent the intuition that the indeterminate pronouns in question are FCIs, by virtue of the intensional meaning component in FCIs that is not present in plain universal quantifiers.
I add a theoretical consideration: OE indeterminates represent a stage in a
diachronic development from indeterminate pronoun to universal quantifier; that
is, OE *hwelc* ‘which’ is, as far as we can determine, at the etymological origin of PDE
*each* and *every*. Haspelmath (1995) argues convincingly, and I follow him in Beck
(2017, 2018), that this development proceeds via FCR and FCI (see Sect. 4.3. below).
Since at the stage we are looking at, OE bare indeterminate pronouns still have
interrogative and FCR uses, and already have universal uses, it would be odd to think
that they have lost the FCI reading, an intermediary interpretation on this trajectory.
This also speaks in favour of an FCI analysis being available.

### 3.6 Summary of Sect. 3

The analysis developed in this section accounts for the pattern summarized in (39’).

(39’) | bare series | question | FCR | FCI | NPI | Univ | Exist |
|---|---|---|---|---|---|---|---|
| | √ | √ | √ | √ | √ | √ |

To recapitulate, all types of OE indeterminate phrases give rise to several sentence
interpretations. This informs an analysis according to which the semantics of the
indeterminate phrase is separated from the semantics of a covert sentence level
operator. Due to the nature of the sentence interpretations available (in particular
question, FCR, FCI, NPI), the contribution of the indeterminate phrase is a set of
alternatives. In the manner familiar to us from other empirical domains and their
analyses, the alternative semantics projects compositionally just like the ordinary
semantics of an expression. The resulting propositional alternatives are evaluated by
the appropriate operator: Q for questions and in FCR, All-Alt for FCI, EXH for NPI,
ALL for universal, and EXIST for existential interpretations.

The obvious question is which indeterminate pronouns can associate with which
operator. I have argued for the options for OP in (118) which derive (39’).\(^\text{(11)}\)

(50) \[\text{OP [... indeterminate pronoun...]}\]

(118) a. bare series: Q, ALL, EXIST, All-Alt
b. *ge*-series: ALL, EXIST, All-Alt, EXH
c. *a*-series: ALL, All-Alt, EXH

\(^\text{(11)}\) The bigger picture should contain further alternative evaluating operators like the \(\sim\) for focus
evaluation, and perhaps others (e.g., ScalarAssert or covert *even* (Krifka 1995; Lahiri 1998; Chierchia
2013) for evaluation of strong NPIs). The \(\sim\) cannot evaluate OE indeterminate pronouns, for semantic
reasons—see the discussion in Sect. 3.3.3. I am not at present aware of OE data that would make
particular more fine-grained constraints on evaluating operators necessary. See Chierchia (2013) and
Beck (2016) for general discussion of additional syntactic mechanisms that can constrain alternative
trigger/evaluating operator pairings, where required.
An interesting aspect of the analysis is the role attributed to the morphemes ge- and a-. Both reduce the available interpretations of indeterminate phrases, ge- removing question and FCR interpretations, and a- additionally removing existential readings. This has been interpreted as ge- mediating between alternative and ordinary semantic values, making the indeterminate phrase unable to act as interrogative (and therefore also unable to occur in FCR). This means that ge-pronouns cannot associate with Q, but in contrast to bare indeterminate pronouns, they can associate with EXH. The morpheme a- is transparently universal and removes non-universal interpretations from the range of possibilities. Therefore a-pronouns cannot associate with EXIST. Both morphemes find theoretical predecessors in the semantic and syntactic literature.

Two properties of the analysis emerge directly which are of more general interest: (i) The connection between interrogative and FCR uses that OE exhibits supports analyses of FCR as underlyingly interrogative (Hirsch 2016). (ii) It is possible to bring together two strands of research working with alternatives: questions and NPIs, unifying Hamblin alternatives and NPI alternatives. This confirms Erlewine and Kotek’s (2016) result (which is based on Tibetan data and a slightly different analysis of NPIs). In view of the fact that crosslinguistically, the make-up of NPIs frequently derives from indeterminate or interrogative expressions (e.g. Haspelmath 1997; Kratzer and Shimoyama 2002), this unification is highly desirable.

4 Consequences and outlook

In this final section, I consider the findings from OE under a wider perspective. In Sect. 4.1 I relate OE to indeterminate phrases in other languages. Universal quantification is discussed from a crosslinguistic perspective in Sect. 4.2 and from a diachronic perspective in Sect. 4.3.

4.1 Indeterminate phrases crosslinguistically

In recent years, the field has collected substantial evidence on indeterminate phrases in semantically underdescribed languages. We have begun to develop generalizations across languages and an analysis of those generalizations. I take Szabolcsi (2015) to be a culmination of a lot of interesting work in this area. OE indeterminate phrases offer an illuminating case study because there are two respects in which they do not match the generalizations reached on the basis of other languages, the properties (119(i)) and (119(ii)):

(119)  

(i) **Universal bare indeterminates:**  
OE bare indeterminate phrases permit a universal interpretation.

(ii) **Existential/universal ambiguity:**  
The OE ge-series, despite the additive nature of ge, permits an existential interpretation in addition to a universal interpretation.
The first empirical fact is to be emphasized in view of the generalization in (120). OE shows that a universal interpretation is not per se excluded for bare indeterminates.

(120) “to my knowledge, bare indeterminate pronouns do not receive universally quantified interpretations, cross-linguistically.” (Szabolcsi 2015, 188)

The second empirical fact contradicts the generalization that indeterminate phrases with additive particles—MO-type quantificational particles in Szabolcsi’s terms—lead to universal interpretations, not existential interpretations. Japanese (1b) is an example. (Existential interpretations, according to the existing generalizations, are derived by KA-type quantificational particles; see below.) Given the fact that ge-series indeterminate phrases can have both existential and universal interpretations, my analysis of ge- does not lead to a disambiguation between the two. That is, OE ge- is neither a MO-type particle nor a KA-type particle. Its analysis is repeated below.

(88) a. \[[[ge-XP]]_o \cup [[[XP]]_{Alt}} (if the elements of [[[XP]]_{Alt} are not of type e)\]
    \[= \lambda P. \lambda w. \exists x [[[XP]]_{Alt} \& P(w)(x)]\]
    (if the elements of [[[XP]]_{Alt} are type e)

   b. \[[[ge-XP]]_{Alt} = [[[XP]]_{Alt}}\]

The closest connection I am aware of is, as pointed out above, Erlewine’s (2017) analysis of Toba Batak manang. This morpheme can be added to indeterminate pronouns and disjunctions. In order to capture the distribution and interpretation of phrases with manang, Erlewine decomposes manang into two operators J and \(\exists\) defined in (121a, b). (121b) is of course (88). Manang spells out one or both of these operators, depending on its sentence context. (Erlewine refers to Alonso-Ovalle (2006) as a theoretical predecessor for (121b), though in a one-tier semantics.)

(121) a. \[[[J XP]]_o\) is undefined
   \[[[J XP]]_{Alt} = \cup [[[XP]]_o\) closed under \(\vee\) (where \([[[XP]]_o\) is a set of disjuncts)

   b. \[[[\exists XP]]_o = \cup [[[XP]]_{Alt}} (if the elements of [[[XP]]_{Alt} are type \(<e>\),
    \[[[\exists XP]]_o = \lambda P. \lambda w. \exists x [[[XP]]_{Alt} \& P(w)(x)]\]
    \[[[\exists XP]]_{Alt} = [[[XP]]_{Alt}}\]

Erlewine’s goal is to account for the fact that manang forms NPIs with an indeterminate phrase, and ordinary disjunctions or alternative questions with disjunctive phrases. (Manang has other possible uses in FCI and embedded questions.) The derivation of NPIs from indeterminate phrases via (88) = (121b), in particular, links his proposal to the present paper. Like ge-pronouns, manang + XP permits several interpretations; hence manang is not the evaluating operator.
The semantic connection of *ge-* to so-called question particles or Q-particles (e.g., Hagstrom 1998; Shimoyama 2001, 2006; Cable 2010; Slade 2011; Uegaki 2018) is less close than to *manang*. The term is applied to morphemes that may mark questions (*wh* and alternative), indefinites and NPIs, and disjunctions. (The details of the distribution and interpretive options vary from particle to particle.) (122) illustrates with Japanese -*ka* (examples after Uegaki 2018), a Q-particle, or (in Szabolcsi’s (2015) terms) quantificational particle of the KA-type.

(122) a. Dare-ga hashitta-KA oshiete. who-Nom ran-KA tell ‘Tell me who ran.’

b. Dare-KA-ga hashitta. who-KA-Nom ran ‘Someone ran.’

c. Hanako-KA Jiro-KA-ga hashitta. Hanako-KA Jiro-KA-Nom ran ‘Either Hanako or Jiro ran.’

Q-particles also require a navigation of the two tiers of semantic interpretation (alternative and ordinary semantics). That is, somewhere in the interpretation we need to get from Hamblin alternatives to ordinary semantic values, and where and how this happens depends on the construction we analyse (question vs. NPI etc.) (e.g., Uegaki 2018; Kotek 2019). The range of interpretations considered in the Q-particle literature cited above is, however, different from the range of interpretations we find for OE indeterminate phrases. In particular, Japanese -*ka* and its crosslinguistic counterparts do not mark universal quantification, while this is a possible interpretation of the *ge*-series. Accordingly, the semantic analyses developed for Q-particles do not apply to OE indeterminate pronouns. For example, the difference between interrogative and non-interrogative interpretations in OE does not lie in the application of existential closure (e.g., Uegaki 2018), which determines an existential interpretation.

Instead, the semantics of *ge-* can go into both a universal and an existential interpretation. This morpheme is another piece of the puzzle in the derivation of non-interrogative readings of indeterminate phrases. I conjecture that the operator personified by *ge-* may play a role in the semantic decomposition of Q-particle constructions, as demonstrated in Erlewine (2017) for *manang*, perhaps more generally.

4.2 Universal quantification across languages

The composition of universal quantification that we have seen in OE is markedly different from how quantification works in PDE. Below, I contrast a minimal pair. The contrast invites examining the analysis of OE in the light of crosslinguistic variation in the domain of quantification.
(123) a. Each day had a favourable wind.
   
   b. \[[\text{DP each day}] [had a favourable wind]\]
   
   c. \[[\text{each day}]\circ = \lambda Q. \forall x [\text{day}(x) \rightarrow Q(x)]\]
   
   d. \[\forall x [\text{day}(x) \rightarrow \text{had a favourable wind}(x)]\]

(124) a. \[Ælce \text{ ðæge hæfde ambyrne wind}\]

   ‘Each day had a favorable wind.’

   (UTexas; Voyages of Othere and Wulfstan)

   b. \[\text{[ALL } [ÆlC ðæge hæfde ambyrne wind]\}

   c. \[\text{[ÆlC ðæge]\}_\text{Alt} = \{\text{day}_1, \text{day}_2, \ldots, \text{day}_n\}\]

   d. All propositions ‘\(x\) had a favourable wind’, \(x_\in \{\text{day}_1, \text{day}_2, \ldots, \text{day}_n\}\),

   are true.

Semantically, universal quantification in OE seems more similar to languages like
Japanese than to PDE. I provide a Japanese example below; following Shimoyama
(2001, 2006), also Yatsushiro (2009), MO expresses universal quantification. Unlike
\textit{every}, quantification is over the alternatives provided by the sister of MO.

(125) a. \[\text{dono gakusei-no okaasan-MO odotta.}\]

   which student-Gen mother -MO danced

   b. For all alternatives \(x\) such that \(x \in \{y\text{’s mother} \mid y \text{ a student}\}: x\) danced

(126) a. \[\text{[which student’s mother]-MO danced.}\]

   b. \[\text{[[which student]]}_\text{Alt} = \{x: x \text{ is a student}\}\]

   e.g., \{Linda, Julia, Saskia\}

   c. \[\text{[[which student’s mother]]}_\text{Alt} = \{x\text{’s mother} \mid x \text{ is a student}\}\]

   e.g. \{Linda’s mother, Julia’s mother, Saskia’s mother\}

   d. If \(Z = [\text{XP -MO}]\) then \([[Z]]\circ = \lambda Q. \forall x [x\in[[\text{XP}]]\_\text{Alt} \rightarrow Q(x)]\)

   e. \[\text{[[which student’s mother] -MO]}\circ = \lambda Q. \forall x [x\in[Linda’s mother, Julia’s mother, Saskia’s mother] \rightarrow Q(x)]\]

   f. \[\text{[[which student’s mother] -MO danced]}\circ = 1 \text{ iff } \forall x [x\in[Linda’s mother, Julia’s mother, Saskia’s mother] \rightarrow x\text{ danced}]\]

MO has a role similar to the covert operator ALL in OE in quantifying universally over
alternatives. But while MO quantifies over the alternatives provided by its sister—in the
example, individual alternatives—ALL according to the above analysis quantifies over
propositional alternatives. Is this a point of crosslinguistic variation?

The analysis for Japanese MO is well-motivated because there is evidence that
the place where we observe the morpheme is the place where universal
quantification takes scope (Yatsushiro 2009). Interpreting MO in situ means, for
data like (125), that the quantification is over individuals.

The situation is less clear in OE. I have not been able to come up with clear
empirical criteria for deciding whether quantification is over alternative
propositions, as in (124) above, or over alternative individuals, as in the alternative analysis in (127), which mirrors (126). 12

(127) a. \[[DP \text{ALL} [DP \text{ÆLC dæge}] hæfde ambyrne wind]\]
b. If \(Z = [\text{ALL} \text{XP}]\) then \([Z]_o = \lambda Q.\forall x[[\text{XP}]]_{\text{Alt}} \rightarrow Q(x)\]
c. \([[[\text{ALL} [\text{ÆLC dæge}]]]]_o = \lambda Q.\forall x\{\text{day}_1, \text{day}_2, \ldots, \text{day}_n\} \rightarrow Q(x)\]

Since with All-Alt and EXH, indeterminate phrases in OE are evaluated by operators that certainly are propositional (we know this because these two operators take scope over the licensor, a modal or negation), it seems more parsimoneous to define a propositional ALL (in the footsteps of Kratzer and Shimoyama 2002). If this is accurate, then OE contributes a slightly different pattern from Japanese in the domain of quantification crosslinguistically. The next subsection offers a diachronic perspective on this issue.

4.3 Diachronic development of universal quantifiers

OE ælc, via Middle English (ME) elk, elc, ylc, ..., ech is the word from which (perhaps together with æghwelc) PDE each developed (e.g., Einenkel 1904; Kahlas-Tarkka 1987; Haspelmath 1995). PDE every’s source is the combination æfre ælc ‘ever each’ which became frequent during ME. Looking back at the two analyses in (123) and (124), it is clear that the semantic change involved is far from trivial. How did PDE each and every derive from ælc?

In Beck (2017, 2018) I propose that there is a universal semantic cycle, in analogy to Jespersen’s (1917) cycle for negation. Following Beck (2017, 2018), (128) sketches the major stages in the cycle.

(128) Universal Semantic Cycle:

stage 1: Covert universal quantification over alternative propositions
Example FCR unconditional:

\(\lambda w.\text{Ellen supervises x in w} \land x \in \text{D} \land \text{person(x)} \rightarrow \text{if p, then Ellen needs a bigger office}\)

stage 2: Universal quantification over individual alternatives
Example wh-ever FCI:

\(\forall z[\text{Ellen will supervise z}]\)

stage 3: Lexical universal quantification over individuals by universal DP
Example Generalized Quantifier DP:

\(\forall x[\text{Ellen will supervise x}]\)

12 Note that an existential PSP for the ge- and the a-series is easily defined under the analysis in (127); cf. the issue raised in Footnote 9. In (i) below, only the restrictor is presupposed, not the nuclear scope. This may be more appropriate, but again is hard to check for OE.

(i) If \(Z = [\text{ALL} \text{XP}]\) then \([Z]_o\) is only defined if \([\text{XP}]_o(\lambda y.y = y) = 1\).
If defined, then \([Z]_o = \lambda Q.\forall x[[\text{XP}]]_{\text{Alt}} \rightarrow Q(x)\)
stage 4: Group denoting DP with possible universal distributive readings

Example collective universal pronoun:

\[ \text{Everyone (gathered in the hallway and) shouted ‘PIZZA’} \]

\[ \max(\lambda x.\text{person}(x)) \models [\lambda z.\forall x[x \leq z \rightarrow x \text{ shouted ‘PIZZA’}] \]

Haspelmath (1995) argues that a common source of universal quantifiers across languages is free relative clauses, which develop into FCI. I spell this out in terms of formal semantics as stage 1: universal quantification over propositions, as we see it, for example, in FCRs. At stage 2, the structure and compositional environment is reduced. Quantification is still over alternatives, but individual alternatives, and the universal quantification may become associated with a morpheme. Japanese -mo is a crosslinguistic example of stage 2 (English wh-ever DP is provided merely for illustration). Stage 3 is the stage we are familiar with from the analysis of quantification in formal semantics (e.g., Barwise and Cooper 1981): a generalized quantifier analysis. Quantification happens in the ordinary semantics. In a final stage, I suggest that an element may leave the cycle and lose its property of being a universal quantifier. We are beginning to see this with collective readings of PDE every (Champollion 2010; Beck 2018).

The diachronic development is parallel to what we see in Jespersen’s cycle: In a first stage, there is an element which does not itself express a logical concept, but occurs in environments in which the concept is expressed (e.g., emphatic particles like French pas ‘step’ supporting negation). In a next stage, the element becomes tied to the logical concept but does not express it alone (e.g., the combination ne…pas). At a central stage, this lexical item expresses the logical concept (present day French pas). But the item may lose this semantics (which is what happened to French ne), making room for the cycle—or more accurately spiral (Gergel 2016)—to begin anew.

The logical concept in the present example is universal quantification in the place of negation. The division of labour that is negotiated is between indeterminate phrases, covert universal quantifiers, and lexical universal quantification, instead of NPIs, negative concord, and lexical negation in Jespersen’s cycle. (Similar concepts plausibly apply to the diachronic development of various indefinite expressions, but I concentrate on universals here.)

We can now look at the analysis in Sect. 3 as a window into the Universal Semantic Cycle. The analysis of universal readings of OE indeterminate phrases is located in between stages 1 and 2 of the cycle. This is because quantification is still over propositions, but the structure is reduced and we no longer have the conditional and other material from the FCR. The question raised at the end of the preceding subsection, whether quantification could be over individual alternatives instead of propositions, directly relates to the further diachronic development. I conjecture that at some point covert ALL must Adjoin to DP and quantify over individuals, as in (127), since this is the stage 2 analysis that will allow us to eventually move on to stage 3 (the standard analysis in terms of generalized quantifier theory). I do not at this point have evidence to decide at what time English is to be analysed as stage 2, that is, whether the DP ALL analysis in (127) applies already in OE or only later, presumably in ME.
At any rate, from the stage 2 analysis, the following change has to occur to get us to stage 3:

(129) **Change from stage 2 to stage 3:**

\[
[[\text{ALL} + \text{[which P]} \text{ Q}] \\
\downarrow \\
[[\text{every P}] \text{ Q}]]
\]

- wh-expression loses its status as an alternative trigger, \{x: P(x)\} \Rightarrow \lambda x.P(x)
- universal quantification switches from alternatives to the ordinary semantics
- covert ALL is not postulated.

That is, we move from an alternative semantics to an ordinary semantics, and the determiner takes on the meaning of the universal quantifier while covert ALL is lost. These things have to happen all together to change the composition as indicated. I analyse this change in detail in Beck (2018).

The sketch presented here suffices for us to see how the analysis of indeterminate phrases in OE fits into a bigger picture of crosslinguistic variation and diachronic development of universal quantification. It is interesting to see how an English generalized quantifier, the standard example of quantification in natural language, developed diachronically—from a very different origin.

## 5 Summary and conclusion

This paper has offered an investigation into the interpretive possibilities of indeterminate pronouns in Old English. I have presented a sample of positive evidence extracted by searching the YCOE corpora. The data indicate a surprisingly massive ambiguity of sentences with indeterminate pronouns. The bare series is shown to allow interrogative, existential, universal, and free choice interpretations. The universal interpretation of bare indeterminates is a novel phenomenon crosslinguistically. Evidence is presented that the *ge*-series can participate in universal, existential, free choice, and NPI interpretations. The simultaneous availability of both an existential and universal interpretation is again unexpected crosslinguistically. The *a*-series, finally, participates in universal, free choice, and NPI readings.

The analysis puts a Hamblin alternative semantics at the heart of the composition. This is the contribution of the indeterminate pronoun. Covert alternative evaluating operators determine sentence interpretation on the basis of the alternatives triggered by the indeterminate. Each series permits several evaluating operators, but not the same ones. The morphemes *ge*– and *a*– are semantically active, affecting which evaluating operators are appropriate. This system derives the range of available readings for each series.

In addition to providing a case study of the expression of quantification crosslinguistically, Old English indeterminate pronouns invite a diachronic perspective. Focusing on *ælc*, the ancestor of *each*, the study opens a window to the historical development of universal quantification. From an alternative semantics, the expression changes to a standard universal quantifier. This necessitates a series of changes in the grammar that the present paper has begun to explore. Further steps would be to pursue a more fine-grained study of other interpretations and of the different periods of the English language, and to consider
the diachronic trajectory of other indeterminate pronouns. I must leave these follow-
up questions as projects for future research.

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Appendix: data collection from YCOE

My YCOE data sample as presented in this paper consists of occurrences of indeterminate pronouns that occur in the YCOE files listed below (in alphabetical order). The data were collected by running queries in the program CorpusSearch (see Taylor et al. 2003) for the various morphological forms and spellings of the indeterminate pronouns hwa, hwelc, hwæðer, gehwa, gehwelc, gehwæðer, æghwa, æghwelc, æghwæðer and ælc (supplemented by individual other examples, e.g., with hwær, gehwær). The first column in the table provides the YCOE file name, followed by the period information given in YCOE and the name of the text. The fourth column specifies the edition that the YCOE file is based on.

| File     | Period | Text                        | Edition                          |
|----------|--------|-----------------------------|----------------------------------|
| cobede   | OE2    | Bede’s History of the English Church | Miller (1959–1963)          |
| coboeth  | OE2    | Boethius, Consolation of Philosophy  | Sedgefield (1899)            |
| codocu1  | OE1    | Charters and Wills        | Harmer (1914)                  |
| codocu2  | OE2    | Charters and Wills        | Harmer (1914)                  |
| cocura   | OE2    | Cura Pastoralis          | Harmer (1914)                  |
| cocuraC  | OE2    | (replaces defective section) | Harmer (1914)                  |
| colaeece | OE2    | Bald’s Leechbook        | Cockayne (1864–1866)           |
| colawaf  | OE2    | Laws of Alfred          | Liebermann (1903–1916)         |
| colawafint | OE2 | Alfred’s Introduction to Laws | Liebermann (1903–1916)         |
| colawine | OE2    | Laws of Ine            | Liebermann (1903–1916)         |
| coorosiu | OE2    | Orosius                 | Bately (1980)                  |
| coprecura | OE2  | Preface to the Cura Pastoralis | Sweet (1958)                  |
The data collection reported here concentrates on the YCOE files identified as OE1 or OE2. In case the indeterminate pronoun under investigation is rare (as is the case in particular for the ge-series), I supplement the OE1 and OE2 files with files that identify the text as OE1 or OE2, though the manuscript source is later. This is the case for the Blickling Homilies described as OE23 (meaning the text is from OE2 but the manuscript from OE3) and Gregory’s Dialogues, OE24 or OE23.

coblick OE23 The Blickling Homilies Morris (1967)
cogregdC OE24 Gregory’s Dialogues Hecht (1965)
cogregdH OE23 Gregory’s Dialogues Hecht (1965)

Mentioned in the discussion (in particular in the context of the global searches of YCOE) are additional data points collected from the following files:

cocathom1 OE3 Alfric’s Catholic Homilies I Clemoes (1997)
cocathom2 OE3 Alfric’s Catholic Homilies II Godden (1979)

Some editions (e.g., Miller, Harmer and Sweet) include a translation of the OE text into modern English. This is generally the translation I cite. Liebermann (1903) includes a translation of the OE text into German, which I provide along with my translation into English. The edition of e.g. Sedgefield does not include translations into modern English. Here, Alfred the Great’s electronic Boethius (under www.uky.edu), which is based on YCOE’s source Sedgefield (1899), was helpful. In some cases (e.g., Bately’s (1980) edition of Orosius), I did not have access to the YCOE source edition. In such cases, the sources of the translations are as indicated in the individual examples.

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