An alternative semantic analysis of Old English indeterminate phrases and universals

Old English indeterminate phrases (*hwa*, *hwelc* etc.) have an interesting range of uses. As (1) indicates, they can be interrogative, polarity items, existentials and universals.

(1) a. Tó hwam gá wé   (interrogative)
          to whom go we   'To **whom** do we go?'
     b. (Búton) hwá þurh flánes flyht fyl genáme   (Free Coice)
          (except) who through arrow's flight death took
          '(except) **whoever** by the arrow's flight took death'
     c. Gif hwá on cirican hwæt þeófige   (NPI)
          if who in church what steal 'if **any one** steal anything in a church'
     d. (Nellaþ hí gelýfan)   ðeáh hwá of deáþe árise   (existential)
                                though who of death arose
          '(they will not believe,) though **one** rose from death'
     e. het tha hyssa hwæne hors forlætan   (universal)
          he then ordered whom horse leave
          'he then ordered **everyone** to leave his horse behind'

In this paper, I take this observation as my starting point to account for their diachronic development to universal quantifiers like æ*ghwa* 'everyone', æ*ghwelc* 'every'. I propose that an alternative semantics is a possible beginning of an expression's career towards a nominal universal DP and I develop an analysis of the first steps on this diachronic path.

Bare indeterminate phrases like the ones in (1) can be used in particular in questions. This strongly suggests that they contribute a set of alternatives to the semantics. An analysis following Hamblin (1973) in sketched in (2) (I use hypothetical examples to illustrate the analysis for simplicity).

(2) a. [Q [XP hwa left]]   'Who left?' (cf. (1a))
     b. $[[hwa]]_{Alt}$ = {x: x∈D} and $[[hwa]]_o$ is undefined
     c. $[[Q XP]]_o$ = $[[XP]]_{Alt}$
     d. $[[Q hwa left]]_o$ = {λw.x $left_w$ | x∈D}

Keeping the semantic contribution of the indeterminate phrase stable requires an alternative semantics for their other uses in (1): polarity, existential and universal. Concentrating on universals, Kratzer and Shimoyama (2002) propose such an analysis, with a covert universal quantifier, sketched in (3).

(3) a. [ALL [XP hwa left]]   'everyone left' (cf. (1e))
     b. $[[ALL XP]]_o$ (w) =1 iff for all p ∈ $[[XP]]_{Alt}$: p(w)=1
     c. $[[ALL hwa left]]_o$ (w) =1 iff for all p ∈{λw.x $left_w$ | x∈D}: p(w)=1

I take this semantics to be the starting point in the further development of OE indeterminate phrases towards universals. I first discuss the prefix *ge*- 'and, also', and then the prefix *a*- 'ever/always', whose combination with bare indeterminate phrases yields the OE æ- series including æ*ghwa, æghwelc*.

The ge- series: It is well-known (e.g. Kahlas-Tarkka (1987)) that the *ge*- series corresponding to the bare indeterminate phrases can be used as a universal. It can also occur in polarity contexts and receive an interpretation as an existential - data in (4).

(4) a. gewha mihte his leofostan frynd forgytan   (free choice)
          GE-who might his dearest friend forget
          '**any one** might forget his dearest friends'

       b.   Gif hrýðera gehwylc sié þe hegas brece,   (NPI)
              if cattle GE-which be that hedges break
              'If **any** of this cattle breaks the hedge'
       c.   Oft gehwá gesihð fægre stafas áwritene,   (existential)
              often GE-who sees fair characters written
              'often **someone** sees fair characters written'
       d.   He ðeóda gehwam hefonríce forgeaf   (universal)
              he peoples' GE-whom heaven's kingdom gave
              'he to **every people** gave heaven's kingdom'

The *ge*-series cannot be used in questions (nor related data like free relatives and correlatives). It is desirable to derive this from the semantics of the indeterminate pronoun on the one hand, and the contribution of *ge*- on the other. I propose that *ge*- similar to 'also' (5bi) equates the alternative and ordinary semantic value of its sister (5bii) - deriving the universal use in (5). I further propose that the required ordinary semantic value makes the *ge*-series unfit for use in questions, which work with alternatives only.

     (5)   a.   [ALL [XP ge-hwa left]]   'Everyone left' (cf. (4d))
          b.   (i) $[[\text{also XP}]]_o(w) = 1$ iff $[[\text{XP}]]_o(w) = [[\text{XP}]]_{Alt}(w) = 1$
              (ii) $[[\text{ge-XP}]]_o = [[\text{ge-XP}]]_{Alt} = [[\text{XP}]]_{Alt}$
          c. $[[\text{ALL ge-hwa left}]]_o = 1$ iff for all p p $\in \{\lambda w.x \text{ left}_w \mid x \in D\}$: p(w)=1

The æg- series: The pronouns of the æg-series contribute universal quantifiers, with additional uses as polarity items. Relevant data are given in (6). The æ-series cannot be used in questions, and they are not used as existentials in non-NPI-environments.

     (6)   a.   Ǽghwylc heáhgeréfa wæs gewita,   (universal)
              ǼG-which ruler was witness
              (of this) **each** ruler (in Judea) was a witness
       b.   Ǽghwæt heó gefón mæg   (free choice)
               ǼG-what she seize may   '**whatever** she may seize'
       c.   Bútan ǽgwylcum leahtre   (NPI)
              without ǼG-which sin   'without **any** sin'

Once more it is desirable to derive this from the compositional ingredients, i.e. the *ge*-series plus the *a*-prefix 'ever/always'. I propose that there has to be agreement between the inherently universal 'ever/always' and the covert operator that evaluates the alternatives contributed by the indeterminate phrase. This excludes existential quantifiers (but is compatible with NPI evaluation by the covert universal operator from the analyses of Krifka (1995) etc., and with free choice according to analyses like Menendez-Benito (2010)). (7) sketches the analysis.

     (7)   a.   [ALL [a-ge-hwa left]]   'Everyone left' (cf (6a))
                |_____| universal agreement
       b. $[[\text{ever/always XP}]]_o(t) = 1$ iff for all t, $[[\text{XP}]]_o(t) = 1$

Thus the combination of the alternative semantic core (the indeterminate pronoun) with the alternative sensitive *ge*- and the semantically constraining *a*- yields the Old English universal quantifiers in the *æg*-series. This is a case study of how an alternative semantic expression can develop towards a nominal universal quantifier (Haspelmath (1995)).

     Further interesting semantic questions addressed in the paper concern the loss of NPI uses, the loss of the alternative semantic core and possible change towards an ordinary DP universal quantifier, and concerning English in particular, the relation to *ælc* and the future development to *each* and *every*.