On the stubborn refusal of English grammar to generate multiple correlatives

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Section 1

Introduction

Where do headed *wh*-relatives come from?

- ▶ Haspelmath (1997): Indo-European interrogative pronouns often grammaticalize into indefinite pronouns.
- ▶ Belyaev & Haug (2014): A recurring diachronic pathway from conditional + *wh*-indefinite to *wh*-correlative.
- ▶ Haudry (1973): A recurring pathway from *wh*-correlative to headed *wh*-relative.
- ▶ Compose the three pathways, and you get a long and winding path from interrogative to headed relative.

The pathway in Old English

- Most of these stages are simultaneously visible in Old English. *Wh*-forms can be used as:
  - Interrogative pronouns
  - Indefinite pronouns
  - (Correlative pronouns???)
  - Free relative pronouns
  - . . . and some precursors to headed relative pronouns (Gisborne & Truswell 2015).
- As you may have noticed, we are unsure about the status of *wh*-correlatives in Old English.
- Canonical correlatives, as described in Srivastav (1991); Bhatt (2003); Lipták (2009a), have several co-occurring properties.
- Old English doesn't have all of them. Specifically, it doesn't have multiple correlatives.

Single and multiple correlatives

(1)   [correlative clause . . . relative phrase(s). . .][main clause . . . correlate(s). . .]

(2)   jo   laRkii khaRii   hai vo   lambii hai
     REL girl   standing is   DEM tall   is
     lit. Which girl is standing, she is tall
     'The girl who is standing is tall'

(3)   [jis laRkii-ne jis laRke-ke saath khelaa] us-ne   us-ko
     REL girl-ERG REL boy-GEN with played that-ERG that-ACC
     haraayaa
     defeated
     lit. Which girl played with which boy, she defeated him
     'Every girl defeated the boy she played with'

Matters arising

- Given that OE appears to have all the necessary ingredients for multiple correlatives, how come we don't find them?
- Could that mean that there are necessary ingredients that we haven't noticed?
- But what counts as a correlative anyway? The cluster of prototypical correlative properties has a worryingly constructional flavour to it, and it's in our interest to try to dissociate those properties, to see how they interrelate.
- If nothing else, something that's highly constructional shouldn't be the diachronic source of something obviously compositional (e.g. headed relatives) — see Traugott & Trousdale (2013).

This talk

- We think that OE lacks multiple correlatives because the left half of OE correlatives is an NP, and OE NPs never contain multiple *wh*-phrases.
- The interpretation of this NP + IP structure is always conditional, or indefinite correlative (the two can't be truth-conditionally distinguished).
- We will argue this in the following sections:
  2. Summary of the conditional/correlative pathways in Indo-European;
  3. Properties of the components recurring in these constructions (conditionals and *wh*-indefinites);
  4. Typology of correlative-like structures emerging from properties of these components;
  5. Locating Old English in this typology.

Section 2

The Indo-European pathway

Conditionals and correlatives

- ▶ Andrews (1975): The same string can be interpreted as a conditional or a correlative in Sanskrit.

  (4) yasya   yat   paitṛkam   ritkam   sa
       who.GEN what.NOM paternal.NOM inheritance.NOM he.NOM
       tad   gṛhnīta,   netaraḥ
       that.ACC should.get not.another
       'Of whom what is the paternal inheritance, he should get it and not somebody else.'
       'If someone has something as a paternal inheritance, then he should get it and not someone else.'

- ▶ Similar ambiguities exist in Warlpiri (Hale 1976), Hungarian (Lipták 2009b), Serbo-Croatian (Arsenijević 2009), etc.
- ▶ The differences between correlative and conditional in examples like these are small:
  - ▶ Correlatives require matching between relative pronouns and correlates.
  - ▶ Conditionals construe a possibility as topical, while correlatives topicalize individuals (Bittner 2001).
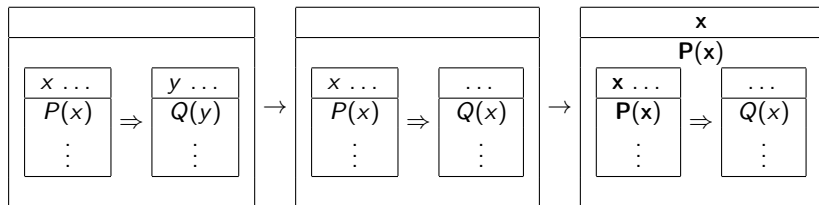
An implicational universal

- Andrews rejected a universal conditional analysis for correlatives because single correlatives can have definite readings (see also Dayal 1996).

  (5) jo laRkii khaRii hai vo lambii hai
       REL girl   standing is DEM tall   is
       'The girl who is standing is tall'
       *'If a girl is standing, she is tall'

- However, Belyaev & Haug (2014) uncover an implicational universal: *wh*-correlatives 'must possess a universal interpretation; definite is optional (and possibly has special marking)'.

- Languages where *wh*-correlatives are only generalizing (from Belyaev & Haug): Tamil, Serbo-Croatian, historical Basque. Tibetan *wh*-correlatives only allow definite readings with marker *na*.

A diachronic account

- Belyaev & Haug recast this universal as a diachronic pathway: *wh*-correlatives are initially universal and may develop definite interpretations.

- Although represented here as a single pathway, the development in the denotation of *wh*-phrases (indefinite → definite) is independent of the development of a requirement that a correlate be present in the matrix clause.
- This factorization is represented as [±an, ±def].

Implications

- ▶ Belyaev & Haug give a diachronic account of the relationship between conditionals and different types of correlatives which avoids the criticism from Andrews (1975) and Dayal (1996).
- ▶ The constant element of their analysis is the bipartite syntactic structure interpreted as a conditional.
- ▶ Two axes of variation within that frame are the denotations of *wh*-phrases and the nature of the anaphoric links between the two halves of the structure.
- ▶ For each stage they describe, it is possible to vary the conditional structure that Belyaev & Haug keep constant.
- ▶ That leads to a pathway like that described by Haudry (1973); Gisborne & Truswell (2017): correlative / free relative → adjoined relative → embedded relative.

Section 3

The toolkit

What counts?

- ▶ The reconstructed source for *wh*-correlatives involves three ingredients.
    1. A bipartite conditional structure;
    2. Interrogatives, also used as indefinites;
    3. Demonstratives, also used as correlates.
- ▶ None of these ingredients are particularly rare.
- ▶ *Wh*-correlatives are quite rare (c.7% of languages have them, De Vries 2002).
- ▶ Headed *wh*-relatives are very rare (c.2% of non-IE languages have them).
- ▶ Why don't more languages follow this pathway?
- ▶ One possible answer is because further conditions apply. We will investigate this below.
- ▶ We will tentatively suggest that OE *wh*-indefinites were specialized for conditional contexts.
- ▶ If this is true of early IE more generally, it could go some way towards explaining the unusual typological distribution of *wh*-relatives.

Subsection 1

Conditionals

Variation in conditional markers

- The canonical conditional structure involves a form like *if*, which introduces a dependent clause and quantifies over situations described by that clause.
- Not all conditional structures have this form.
- Asyndetic conditionals are bipartite structures which express a condition, and which do not have a lexical quantifier over situations.
- They are marked by:
    - Prosody;
    - V1 position;
    - Subjunctive or imperative verb forms;
    - *and* & *then*.
- They are always marked by something. Even the 'asyndetic' prosody can be associated with arbitrary meanings.

Prosody is nothing special

- ▶ Languages where prosody alone can't mark a conditional interpretation (from a Facebook survey):
  - ▶ Bulgarian, Finnish, German, Icelandic, Italian, ?Japanese, Mandarin, Polish
- ▶ Languages where prosody can:
  - ▶ English, French, Middle Egyptian, Korean, Persian, ?Russian, Welsh
- ▶ At least one language uses 'asyndetic' prosody to mark something other than conditional interpretation.

(6)   did-i   xan-i=a   ar m-i-nax-av-xar
          great-NOM time-NOM=be.3SG not 1SG-PRV-see-TH-2SG
          'It's been a long time since I've seen you.'
          (lit. 'It is a long time, I have not apparently seen you.')(Georgian)

- ▶ So there's no intrinsic connection between this prosody and any given interpretation.
- ▶ It's a marker like any other.

Conditional markers and correlative markers

- ▶ We don't know much about Proto-Indo-European conditionals, because early IE conditionals were already quite divergent (Clackson 2007: citing Meillet).
- ▶ However, the same markers that occur in conditionals frequently crop up in correlatives (not just in IE).
    - ▶ Prosody (many languages);
    - ▶ *if* (Tibetan correlatives; Cable 2009);
    - ▶ *and* (Basque correlatives; Rebuschi 2009);
    - ▶ Hindi uses a member of the *j-* series of relative forms for conditionals.

(7) [JEr to   ithE yel],   tEr miN tya-Ia   goli
     [*if* that.M here comes], *then* me.ERG that.M-ACC bullet
     mar-in
     kill-FUT
     '*If* he comes here, *then* I'll kill him.'   (Hindi)

- ▶ This suggests that conditionals and correlatives have an incestuous past: many different syntactic types of conditional influenced the attested forms of correlatives.

Bittner on conditionals and topics

- Left-adjoined conditionals involve a topic–comment structure.
- The topic is a possibility (which is an object constructed out of situations).[1]
- The comment refers anaphorically to that possibility.
- This reconstructs classical theories of conditionals such as Lewis (1973), using centering-like theories of accessibility in place of Lewis's orderings over worlds.
- Correlatives are very similar, but have an individual rather than situation as topic.
- This will become important below: it suggests that distinctively correlative structures require an NP capable of being a topic.

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[1]Bittner says worlds rather than situations, but that is too coarse-grained.

Conditionals: Summary

- The syntactic heterogeneity of conditionals in early IE is not well understood.
- It doesn't seem to be distinctive to IE (e.g. compare Tibetan and Basque above).
- But it is less important to us than the interpretation of left-adjoined conditionals.
- These are interpreted with reference to a topical 'possibility' (Bittner 2001).
- In sum, conditionals are an important component of the source construction for IE *wh*-relatives, but there doesn't seem to be anything particularly distinctive about IE conditionals, now or in the past.

Subsection 2

Wh-indefinites

Variation in indefinite meaning

- There is a large amount of variation in indefinite semantics.
- This is inferrable from the different distributions of indefinite pronouns across languages (Haspelmath 1997).
- The challenge of pairing different distributions with different model-theoretic objects has stimulated a lot of recent research, but is some way from being definitively addressed.
- Early IE *wh*-indefinites were probably distributionally restricted (*I saw who, in most languages).
- We think they may have some distinctive semantic properties, though this is little more than a hunch at present.
- The hunch is that early IE *wh*-indefinites introduce a set of alternatives, as in questions (Yanovich 2005), and that this makes them particularly suitable to conditional-like contexts.
- At least some non-IE interrogative/indefinite pronouns don't behave this way.

Not quite NPIs

- The antecedent of conditionals is a downward-entailing environment.

(8)   a.   Yesterday I saw a bird.
         b.   Yesterday I saw a sparrow.

(9)   a.   [If you see a bird], tell me.
         b.   [If you see a sparrow], tell me.

- Our source construction is a conditional.
- That makes it tempting to believe that the distinctive property of *wh*-indefinites is that they are NPIs (licensed in downward-entailing environments).
- But we'll see in Section 5 that Old English *wh*-indefinites are not NPIs:
  - They don't occur in every DE environment.
  - They occur in some non-DE environments.
- In fact, the class of licensing environments varies between languages (Haspelmath 1997; Yanovich 2005).

Hamblin semantics for *wh*-indefinites

- Hamblin (1973) uses sets of alternatives to model the semantics of questions.
- Yanovich (2005) builds on this to model the behaviour of Russian dependent *wh*-indefinites, arguing that they denote a set of individuals.
  - $[\![\text{who}]\!] = \{x | \text{person}(x)(w)\}$
- This set is input into an operator which quantifies over its members.
- Ability to take a set as an argument is a lexical property, and accordingly the class of operators which can take Hamblin set arguments differs between languages.
- We hope that this unusual denotation of a *wh*-indefinite can help to explain the unusual distribution of *wh*-indefinites (to be returned to below).

Wh-indefinites elsewhere

- ▶ The way Yanovich conservatively extends Hamblin's semantics is appropriate, because interrogative pronouns 'are among the slowest changing elements in any language' (Haspelmath 1997: 176).

- ▶ However, not every interrogative-derived indefinite pronoun is as restricted as the IE descendants of $*k^w i$-/$k^w o$-.

- ▶ Mandarin *shénme* is often described as NPI-like, but has specific uses, as documented in Haspelmath (1997: 171).

  (10) Tā bǎ shénme shū diū le
        she ACC what book throw PFV
        'What books did she throw away?'
        'She threw away a certain book.'

- ▶ We don't know the fine details of the distribution of interrogative-derived indefinites, but we suspect that the distribution found in IE is typologically quite distinctive.

Why does this matter?

- A regular indefinite may occur in the scope of a conditional operator.
- But regular indefinites occur in a very wide range of syntactic environments.
- If *wh*-indefinites are dependent indefinites, their syntactic distribution is more limited.
- Their meaning is less easily dissociable from the compositionally derived meanings of the structures in which they are embedded.

Indefinites in conditional contexts

- ▶ Conditionals make the 'indefiniteness' of indefinites less clear.

  (11)   If a bishop meets another bishop, he blesses him.
  - a.   #$\forall s.[\exists b_1, b_2.[\text{bishop}(b_1, s) \wedge \text{bishop}(b_2, s) \wedge \text{meets}(b_1, b_2, s)]][\exists s' \supseteq s.[\text{bless}(b_1, b_2, s')]]$
  - b. $\forall s.[\exists b_1.[\text{bishop}(b_1, s) \wedge \exists s' \supseteq s.[\text{bishop}(b_2, s') \wedge \text{meets}(b_1, b_2, s')]][\exists s'' \supseteq s'.[\text{bless}(b_1, b_2, s'')]]$

- ▶ (11) means pretty much the same as *Every bishop blesses every other bishop he meets*.
- ▶ But (11a) is compatible with scenarios in which only one of each pair of bishops blesses the other when they meet.
  - ▶ Conclusion: the situations which conditionals quantify over are keyed to unique individuals.
- ▶ This means that the shift from a topical possibility (Bittner's conditionals) to a topical individual (Bittner's correlatives) is even smaller than it might seem.

Section 4

Family resemblance among correlatives

Prototypical correlative checklist

- ► Lipták (2009b: 2) presents a checklist for correlatives:
  - ► The relative clause occupies a peripheral position;
  - ► The nominal head can be spelled out in both the relative clause and the correlate;
  - ► The correlate must have a demonstrative;
  - ► There can be multiple relative phrases.
- ► Elsewhere, Lipták (2009b: 8) points out that Grosu & Landman (1998) 'define correlatives — together with free relatives, degree relatives (also called amount relatives) and Quechua-type internally headed relatives — to be of a "third kind". The special, third-kind nature of correlatives is due to a meaning component that does not characterize either restrictives or appositives: maximalizing semantics.'
- ► It is not necessary for all of these properties to be simultaneously present: each can be lost in isolation.
- ► Correlatives are also associated with 'loose' head final languages: strict head-final languages such as Japanese or Turkish don't have them.

Prototypical correlatives: Hindi

(12) [jis laRkii-ne jis laRke-ke saath khelaa] us-ne
      REL girl-ERG REL boy-GEN with played that-ERG
      us-ko   haraayaa
      that-ACC defeated
      'Every girl defeated the boy she played with'

- ▶ Although this is widely understood as the prototypical correlative, it's arguable that this is a sociological phenomenon, as this is the correlative construction which has received the most attention in the theoretical literature.
- ▶ Rather than seeing these structures as prototypical, they can be analysed as having reached the end of the Belyaev and Haug pathway.
- ▶ They are left adjoined; they have multiple correlatives; there is a demonstrative correlate in the main clause; and both generalizing and definite interpretations are available.

Unprototypical correlative-like structures, 1

- ▶ The Hindi example doesn't cover all of the possibilities.
- ▶ Bambara and the other Mande languages with correlatives have correlatives based on demonstratives (Givón (2009: 98) in Belyaev & Haug (2014)).
- ▶ Belyaev & Haug (2014) predict that *wh*-correlatives must have a generalizing interpretation but not necessarily a definite one and that demonstrative correlatives must have a definite interpretation but not necessarily a generalizing one. This is borne out.
    - ▶ Not all *wh*-correlatives have definite interpretations. Tamil and Serbo-Croat only have generalizing correlatives.
    - ▶ Ket factors its correlatives out, using *wh*-correlatives for universal interpretations and demonstratives for definite RCs.
    - ▶ Kita (Mande) and Vedic need special markers to get the generalizing interpretation ('if' in the case of Kita, subjunctive in Vedic).
- ▶ They also show that not all correlatives meet the demonstrative requirement.

Unprototypical correlative-like structures, 2

- ▶ Neither Russian nor Ashti (a Caucasian language) have definite correlatives or obligatory anaphoric resumption.
- ▶ Other languages, such as Hittite, have definite interpretations but do not have an obligatory anaphoric resumption.
    - ▶ Kryz (Caucasian) distinguishes between correlatives with a definite interpretation which use an indicative verb form and those with a generalizing interpretation if they have a conditional verb form. In the latter case there need be no correlate in the main clause
- ▶ Hindi appears to have lost the anaphoric semantics: the evidence is found in 'double-headed' correlatives, where only the repetition of the same noun, or of an expressive, is permitted; this indicates that the semantics is set-intersectional rather than anaphoric.

Section 5

Old English on the pathway

Where was Old English?

- Prototypical correlatives involve the co-occurrence of multiple dissociated phenomena.
  - Left-adjoined topic–comment structure;
  - Relative XP(s) in the topic
    - Typically NPs
    - Possibly more than one
    - Generalizing and definite interpretations available
  - Matching of relative XPs with correlates in the comment.
- Each of these properties can be isolated from the others.
- Old English is *somewhere* in that space of possibilities.
- We can find out more about Old English correlatives by investigating their properties within this intellectual space.

Subsection 1

The left half of an Old English correlative

Correlatives and free relatives

- The left half of an Old English correlative is syntactically and semantically identical to a subtype of free relative, with *swa hw. . . swa*.
- These free relatives are also found in clause-final position.
- We can learn about them in clause-final position, and then recycle the information to understand the left half of a correlative.

Free relatives in final position

- In clause-final position, free *hw*-relatives occur with or without *swa . . . swa*.
- *Swa . . . swa* triggers a generalizing interpretation.
- In its absence, we get a definite interpretation.

(13) Gaþ to Iosepe &   doþ [swa hwæt swa he eow   secge].
      Go to Joseph and do so   what so he you.DAT say.SBJ
      'Go unto Joseph; what he saith to you, do.'

(14) Gemyne,   [hwæt Sanctus Paulus cwæð]
      Remember what Saint   Paul   said
      'Remember what Saint Paul said.'

- In terms of external distribution, both types of free relative are just NPs (or more precisely, have the same category as their *wh*-phrase, Bresnan & Grimshaw 1978).

In initial position

- ▶ The left-hand half of an OE correlative is just a free relative, with *swa . . . swa*.
- ▶ There is often a correlate, but this is not required. (Particularly rare with adverbial *wh*-phrases).

(15) Swa hwylc eower   swa næfð   nane synne on him,
     So   which you.GEN.PL so   NEG.have no   sin   in him,
     awyrpe   se ærest ænne stan on hy
     cast.out.SBJ he first one   stone on her
     'He that is without sin among you, let him first cast a stone at her.'

(16) swa hwider swa he com   he cydde þas wundra
     so   whither so   he came he told the wonders
     'Wherever he came to, he told about the wonders'

(17) swa hwæt swa he mid his worde lærde, he ær   mid dædum
     so   what so   he with his word taught he before with deeds
     gefylde
     fulfilled
     'What he taught with his word, he had earlier done with his deeds.'

The topic–comment structure, and definiteness

- We see immediately that OE correlatives are $[-\text{an}, -\text{def}]$ in Belyaev & Haug's typology.
- Moreover, the left-adjoined phrase does not denote a topical individual.
- This is particularly clear in the case of (15): the point is that there is no individual without sin.
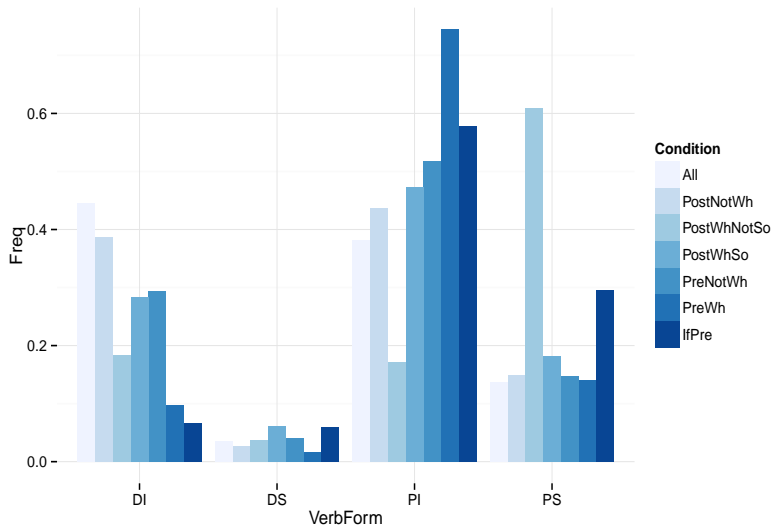- In fact, left-dislocation + resumption in OE only rarely marks a topical individual, unlike e.g. Italian.

NP type	LD	Anywhere
D (A) N (PP)	176 (6%)	153,290 (31%)
Proper name	208 (7%)	61,894 (13%)
Pers. pronoun	31 (1%)	126,142 (26%)
Hw-FR	212 (7%)	560 (0.1%)
Dem. FR	65 (2%)	771 (0.2%)
se (N) *þe/þæt*	1399 (46%)	10,559 (2%)

OE correlatives are still conditional

- We are forced to conclude that the 'correlative' structure in OE, at least sometimes, still topicalizes a situation rather than a (real-world) individual.
- In Bittner's terms, this means that it is still a conditional.
- However, it is a slightly unusual conditional, in that the antecedent is an NP (free relative), rather than a clause. See also Culicover & Jackendoff (2005).
- If this is accurate, we can also conclude that the *wh*-phrase inside the conditional is still indefinite.
- Supporting evidence for this: OE *wh*-correlatives, like OE *if*-conditionals, are disproportionately associated with present indicative verb forms.

Verb forms

Subsection 2

Wh-indefinites in Old English conditionals

Types of Old English conditional

- Old English has at least three types of conditional:
  1. *gyf ... þonne*;
  2. V1-antecedent;
  3. Indefinite correlatives, as analysed above.

- Indefinite *wh*-phrases occur in all three.

- Multiple *wh*-phrases are only attested in *gyf ... þonne*-structures
  - There is insufficient data on V1-conditionals to know if they are possible there; we assume that the gap is accidental and that they are in fact possible.

- OE does not have conditionals marked purely by prosody. This means that there is no chance of such conditionals + *wh*-indefinites approximating the source of multiple correlatives.

Wh-indefinites are dependent indefinites

- The distribution of OE *wh*-indefinites across contexts is different from regular indefinites.
- It is also different from NPIs.

Context	*hw*	*ænig*	*sum*	Numerals
Matrix	80 (7%)	134 (12%)	**2025 (78%)**	**8287 (56%)**
Negation	26 (2%)	**418 (36%)**	32 (1%)	451 (3%)
Question	21 (2%)	**153 (13%)**	15 (0.6%)	187 (1%)
Universal	1 (0.1%)	17 (1%)	3 (0.1%)	152 (1%)
gif	**578 (50%)**	**142 (12%)**	17 (0.7%)	116 (0.8%)
V1	*3 (0.3%)*	*7 (0.6%)*	0 (0%)	0 (0%)
þeah	**88 (8%)**	2 (0.2%)	30 (1%)	45 (0.3%)
þonne	**52 (4%)**	7 (0.6%)	8 (0.3%)	37 (0.3%)
butan	**35 (3%)**	1 (0.1%)	8 (0.3%)	26 (0.2%)

NPI-like behaviour of *wh*-indefinites
Conditionals

(18)   a.   gif ðu yfeles bitst ænigum oðrum menn ...
             if you ill   bid any   other men
             'If you wish any other man ill, ...'

        b.   gif hwa hyt bletsað...
             if who it blesses
             'If anyone blesses it, the illusion ceases.'

(19)   a.   forberste heora   ænig ...
             break.SBJ them.GEN any
             'If any of them breaks'

        b.   wyrce   hwa þæt ðæt he wyrce   ...
             work.SBJ who that that he work.SBJ
             'If anyone does what he does'

Un-NPI-like behaviour of *wh*-indefinites
Rare in DE environments

   (20)   þe   nis   nan neod þæt þe   hwa ahsige
            thee NEG.is no   need that thee who ask
            'You do not need anyone to ask you.'

   (21)   Is þæt hwelc wundor, þeah   ðe   ...
            is that which wonder though that
            'Is it any wonder if ...'

Un-NPI-like behaviour of *wh*-indefinites
Licensed by non-DE operators

(22) ðeah   ðe hwa secge be me tal   oððe hosp ...
     though that who says by me slander or   insult
     'Though (even if) anyone slanders or insults me, ...'

(23) ðonne he hwæt godes   deþ ...
     when he what good.GEN does
     'When he does anything good ...'

(24) ... buton he ær   hwæt mid godum willan for Gode gedyde.
         except he before what with good   will   for God did
     '... unless he previously did something for God with good will'

- ▶ Although *þeah* can often be translated with *if* (with non-veridical complements), we take failure to license *ænig* as indicative of non-DE semantics.

- ▶ Most examples with *þonne* and *butan* are clause-final, not in the correlative-like left-adjoined position.

Section 6

Conclusion: So where are the multiple correlatives?

Multiple *wh*-indefinites exist . . .

(25)   [Gif [**hwa**] anon mæssepreoste his behat for his
          If   who   one   mass.priest   his vow   for his
          andetnysse behæt], oððe [gif [**hwa**] [**hwylcum** oðres
          confession vows   or   if   who   which   other.GEN
          hades   preoste] [**hwilc** þing] for his sealmsancge   &
          person.GEN priest   which thing for his psalm.singing and
          for his gebedrædene behæt] . . .
          for his prayer   vows
          'If anyone gives his vows for his confession to a priest from
          outside the church, or if anyone gives anything to anyone
          else's priest for his psalm service and for his prayer vows,
          . . .'

- ▶ 22/30 examples in *if*-clauses
- ▶ V1-conditionals are so rare that the absence of multiple *wh*
  within them is uninterpretable.

... but not in correlatives

- ▶ We have argued that OE *wh*-correlatives still are conditionals.
- ▶ They are also plentiful, unlike V1-conditionals (218 *wh*-correlatives, 730 *if–then* conditionals).
- ▶ So the absence of multiple *wh*-correlatives appears to be real.
- ▶ We can explain this by observing that OE has no multiple free *wh*-relatives either.
- ▶ An OE *wh*-correlative has the following syntax and semantics.
    - ▶ $[_{IP} [_{FR} wh \dots] [_{IP} \dots]]$
    - ▶ For all situations s s.t. $[\![FR]\!](s)$, $\exists s' \supseteq s.[\![IP]\!](s')$

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