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**W**ÆT PELARD

na in gear dagum. þeod cynninga  
 þrym ze frunon huda æþelingas elles  
 fre medon. oft scyld sceþing sceape  
 þreatum monegū mæþum meodo secl  
 of teah <sup>þeod</sup> esode eorl syddan ærest þeod

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## Wh-words in time

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# Introduction

- Diachronic dimensions of wh-words (syntax/morphology):
  - Morphology: etymology/historical origin of wh-words (focus: Indoeuropean)
  - Syntax: the rise and fall of wh-movement
  - Morphosyntax: further evolution of wh-constructions (wh-relatives, in particular)
- The majority of these aspects are still underresearched...

# The historical origin of wh-words

- Origin of wh-words in Proto-Indo-European (PIE) (cf. Gonda 1954 for an overview):
  - PIE roots *\*k<sup>w</sup>i-* and *\*k<sup>w</sup>e-/k<sup>w</sup>o-* (cf. Latin *quis*, *quo*, *quid*, *quem* etc.; Ital. *quando*: pronominal elements that could be used both as indefinites and interrogatives (cf. e.g. Brugmann 1911: 348)
    - *\*k<sup>w</sup>i-* → wh-nominals ('who', 'what' etc.)
    - *\*k<sup>w</sup>e-/k<sup>w</sup>o-* → wh-adjectives/wh-determiners ('which')
  - Which function was primary? Two camps:
    1. *\*k<sup>w</sup>i-/k<sup>w</sup>o-* were originally indefinites; interrogative pronouns are a secondary development (Meillet, Hirt and others).
    2. The interrogative use is older; indefinite pronouns developed from former interrogative forms (Miklosich, Frei, Leumann and others).

# The historical origin of wh-words: indefinites?

- General idea (Meillet 1922, Hirt 1937 and others):
  - indefinite + special position (and/or focus/stress) = interrogative
- Arguments in favor of an indefinite origin of wh-words:
  - **Ablaut:** Hirt (1937) takes \**k<sup>w</sup>i-* to exhibit a zero grade vowel, which is typical of unstressed/enclitic elements ⇒ indefinite origin, since interrogative pronouns are typically stressed/focused.
  - **The impact of stress/syntactic movement:**
    - wh-words in-situ (deaccented): indefinite reading
    - wh-words + movement/fronting (+accent/stress): interrogative reading



# The historical origin of wh-words: indefinites?

- Problems/questions:

- A zero grade analysis of *\*k<sup>w</sup>i-* implies the existence of an older form *\*k<sup>w</sup>ei-*, which is proposed by only very few people (including Hirt himself; see also Pokorny 1959)
- The adjectival stem *\*k<sup>w</sup>e-/k<sup>w</sup>o-* exhibits a non-reduced full grade/o-grade vowel, which is not expected under Hirt's scenario.
- The hypothesis implies that there was a time when the interrogative function was not expressed (at least not by the elements in question), which seems quite odd from a typological perspective.

# The historical origin of wh-words: interrogatives?

- General idea(s) (Miklosich 1874, Frei 1940, Leumann, Hofmann & Szantyr 1972: 459):
  - a. interrogative – focus/stress = indefinite
  - b. interrogative + morphological marking = indefinite
- Arguments in favor of an interrogative origin of wh-words:
  - In many languages, indefinites are derived from simple wh-words by adding morphological material (cf. e.g. Haspelmath 1997):
    - reduplication: Lat. *quis* ‘who’, *quisquis* ‘whoever, anybody’ Indones. *apa* ‘what’, *apa-apa* ‘anything’
    - neg+wh: Sanskrit *nakis* ‘nobody’ (← neg + \**k<sup>wi</sup>-*); Indones. *apa* ‘what’, *tiada apa* ‘nothing’
    - wh+particle: Lat. *quisque* ‘everybody’ (← \**k<sup>wi</sup>-* + \**k<sup>w</sup>e-*), Engl. *who*, *whoever*; Jap. *dare* ‘who’, *dare ka* ‘somebody’

“Haspelmath’s generalization”

Many languages: Question = wh-word; Indefinite = wh-word + morpheme; No language:  
Indefinite = X; Question = X + morpheme.

# The historical origin of wh-words: interrogatives?

- Potential problems:
- The hypothesis implies that there was a time when the indefinite function was not expressed (at least not by the elements in question); again, this seems to be somewhat peculiar from a typological perspective.
- The fact that indefinites can be derived by (a) adding morphological material or (b) loss of stress does not necessarily imply that the interrogative function is more basic:
  - The absence of additional markers does not automatically give rise to an interrogative reading – in many (early) IE languages, bare wh-elements may also be used as indefinites (cf. e.g. Lat. *quis* alongside the extended forms *quisquis*, *quisque*, *aliquis*).
  - Lack of stress/accent on indefinites  $\neq$  loss of stress – “the absence of a feature can also mean that it has never existed” (Gonda 1954: 247)

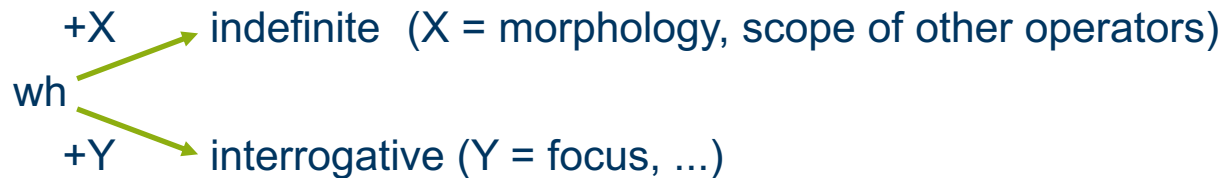
# The historical origin of wh-words: preliminary conclusions

- Apparent paradox: syntax vs. morphology
  - **syntax**: wh-word + X (X: movement) = interrogative
  - **morphology**: wh-word + X (X = additional markers) = indefinite
- Potential solution:
  - Neither the indefinite nor the interrogative function is primary; PIE *\*k<sup>w</sup>i-/k<sup>w</sup>o-* were **underspecified** pronominal elements that could express both functions depending on position/syntactic context and/or intonation (cf. already Delbrück 1893: 521; Brugmann 1911: 348, and Gonda 1954; cf. also Roland's talk):
  - “the I.E. *\*k<sup>u</sup>-*pronouns [...], expressed the idea of unspecified individuality; [...] The *\*k<sup>u</sup>-*pronouns had, or 'obtained', their special functions only in the syntactic surroundings – including position in the sentence, sentence modulation etc.” (Gonda 1954: 266)
    - **movement/focus = interrogative; in-situ/deaccented: indefinite (alternative: explicit morphological marking)**
  - (some) **syntactic** contexts that turn bare wh-words into indefinites (Gonda 1954; Tran & Brüning 2010 on Vietnamese):
    - negation
    - yes/no questions
    - protasis of conditionals



# The historical origin of wh-words: research questions

- How can we express the link between indefinites and interrogatives in a formal way?
  - Brüning & Tsai 2009 (following Hamblin 1973 and Kratzer & Shimoyama 2002):
    - bare (interrogative) wh-words introduce a set of alternatives
    - indefinite = wh +  $\exists$ ;
  - But: Again, this assumes that the interrogative use is more basic...
  - alternative assuming an underspecified basic form:



- Rise of new wh-words/wh-phrases:
  - alternative pathways leading to wh-words (e.g. Ital. (*che*) *cosa*)?
  - differences between wh-arguments (relatively stable) and wh-adjuncts (Cecilia's work on 'where' in Romance)

# The rise and fall of wh-movement

- The previous discussion has already suggested that there is a connection between movement and an interrogative reading of wh-words.
  - (Caveat: Of course, (overt) movement is not a necessary ingredient for interrogatives. In fact, in-situ strategies are cross-linguistically more common (WALS))
- However, not much is known about diachronic aspects of wh-movement...

# The loss of wh-movement

- Loss of wh-movement/rise of in-situ strategies:
  - Japanese: Watanabe (2002)
  - Iraqi Arabic: Simpson (2004)
  - Chinese: Aldridge (2009)
  - Basque: Duguine & Irurtzun (2014)
  - Brazilian Portuguese: Kato & Duarte (2002), Kato (2013)
  - French: Foulet (1921), de Boer (1926), Matthieu (2004).
- Potential account: wh-movement is masked by other operations
  - Watanabe (2002): Increasing rate of subject topicalization blurred the evidence for wh-movement to the left of the subject.
  - Simpson (2004): wh-movement is never lost, but merely concealed by other movement operations:
    - multiple topicalization operations (cf. Simpson & Bhattacharya 2003 on Bengali)
    - pied-piping of larger chunks containing the wh-phrase

# The rise of wh-movement

- Rise of wh-movement: Similar to other related phenomena (verb movement, scrambling etc.) the historical emergence of movement operations has rarely been observed.
- Clefts as a likely candidate: In many (wh-in situ) languages, wh-questions may be formed by an alternative strategy that involves clefts and is linked to focus:
  - Bantu (cf. e.g. Sabel & Zeller 2006, Van der Wal & Maniacky 2015, Zentz 2016)
  - Niger-Congo (cf. e.g. Adesola 2006 on Yoruba)
  - Austronesian (Georgopoulos 1991; Paul 2000; Pearson 2001; Massam 2003; Aldridge 2004; Potsdam 2006, 2009; Aldridge 2013)
- Example: Indonesian (cf. e.g. Sneddon 1996)

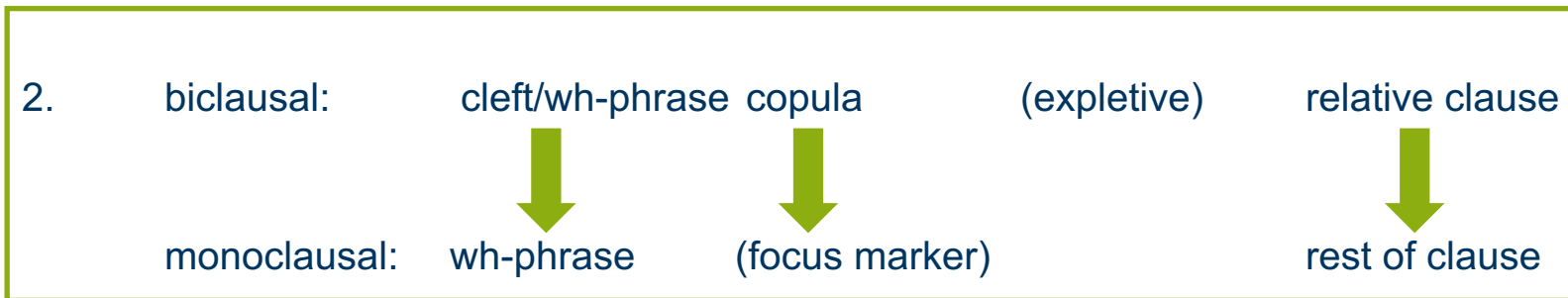
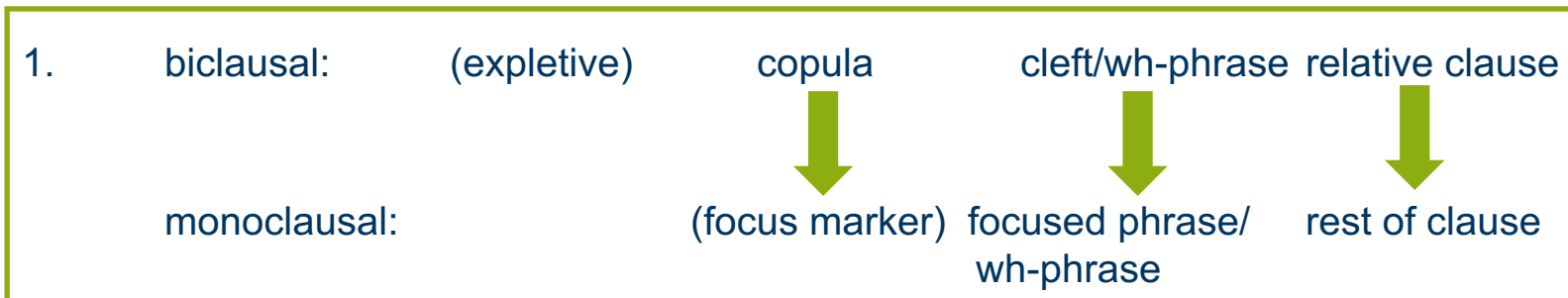
- (1)
- |  |   |
|--|---|
| a. Dia menulis apa?<br>he wrote what                       | wh-in-situ  |
| b. Siapa yang menulis buku ini?<br>who REL wrote book this | w-ex-situ A ( <i>yang</i> also introduces relative clauses)   |
| c. Siapa $\emptyset$ menulis buku ini?                     | w-ex-situ B (without <i>yang</i> ; accepted by some speakers) |



# The rise of wh-movement

- Reanalysis of an originally biclausal cleft structure (with the wh-element base-generated in the upper clause) as a monoclausal structure (with wh-movement):

(2) [Who is it [that ate the fish]]? → Who<sub>[+foc]</sub> ate the fish?



- cf. e.g. Harris & Campbell 1995, Harris 2001, Hartmann & Zimmermann 2006, Jendraschek 2009, Tailleur 2013 (on the development of *Wh-est-ce-que*), Van der Wal & Maniacky 2015, Zentz 2016

# The rise and fall of wh-movement: research questions

- Are clefts the only diachronic pathway to wh-fronting? Or are there other potential sources for wh-ex-situ (cf. e.g. Hirt 1937 on Indo-European)?
- Is wh-movement always a focus strategy, or may it grammaticalize further leading to some abstract 'fossilized' EPP[+wh]-feature that triggers movement?
- Is there a link between the rise of wh-movement and the etymology/historical development of wh-pronouns?
- Did wh-movement evolve as a strategy to distinguish between interrogative and indefinite functions of one and the same pronominal element in Indo-European?
- Which factors/developments can lead to a situation where wh-movement cannot any longer be detected by the learner? Is it really plausible to attribute relevant changes to shifts in usage frequencies (cf. e.g. Kroch 2001 for a critical assessment)?

# The evolution of wh-relatives

- Well-known fact: In many IE languages, wh-words turned into relative pronouns (cf. Delbrück 1893: 389ff., Gonda 1954 on early IE languages; Truswell & Gisborne 2015, Gisborne & Truswell 2017, Gisborne & Truswell 2018).
  - both d- and wh-relativizers are rare cross-linguistically (de Vries 2002), but very common in the IE family (Comrie 1998: European areal feature)
  - wh-relativizers are not inherited from PIE; they evolved repeatedly in various daughter languages (polycentric/parallel evolution, Gisborne & Truswell 2018)
- Early IE development: original relative stem \*yo- is replaced by \*k<sup>w</sup>i- and \*k<sup>w</sup>e-/\*k<sup>w</sup>o- (Indo-Iranian, Greek, Balto-Slavic families)
- Germanic: relative d-pronouns are replaced by wh-forms (ongoing change for ≈1.000 years, cf. e.g. Fleischmann 1973; Fuß 2016, 2018; Coniglio & Paul 2019 on German; Brandt & Fuß 2014, 2018 on present-day German)

# The evolution of wh-relatives

- General diachronic pathway (cf. Radek's and Olga's talks):
  - (3) wh-interrogatives/-indefinites (in various constructions) → generalizing/free choice free relatives → individuating/specific free relatives → headed relatives (subject to language-specific restrictions)
- Language-specific developments depending on:
  - the constructions that were reanalyzed as free wh-relatives
  - the specific contexts in which free relatives (FRs) were reanalyzed as headed relatives
  - the set of wh-elements that were affected by these reanalyses (headed relatives).



# The evolution of wh-relatives: free relatives

- Three scenarios:

1. Traditional idea (cf. e.g. Gonda 1954) – reanalysis of indefinites in conditionals:
    - (4) ‘[earns wh-SOMEONE money] he should keep it’ → ‘[who-REL earns money] should keep it.’
  2. Reanalysis of cases where a wh-indefinite is modified by an adverbial element *sô* and a corresponding relative clause (Paul 1920: 199; Jespersen 1954 on OE):
    - (5)
      - a. [NP *sô hwer* [CP<sub>Rel</sub> *sô ...*]] ‘such one as ...’
      - b. [NP *sô hwer* [CP<sub>Rel</sub>  $\emptyset$  ...]]
      - c. [NP *swer* [CP<sub>Rel</sub>  $\emptyset$  ...]] ⇒ [free CP<sub>Rel</sub> (s)wer ...] (Middle High German, MHG)
- Gisborne & Truswell 2018: (5) is actually linked to (4) (see also Paul 2007 on the conditional interpretation of FRs in MHG):
    - (6) [eal swa hwæt swa ic þe gehet] [eal ic hit gesette] (Gisborne & Truswell 2018: 26)  
all so what so I thee promised all I it appoint  
‘If I promised you anything, I will do it.’  
‘Whatever I promised you, I will do it all.’

# The evolution of wh-relatives: free relatives

- Three scenarios:

3. Reanalysis of indirect questions as free relatives: Ambiguous cases in connection with verba dicendi/sentiendi, which may license a propositional or nominal complement (cf. e.g. Hogg & Denison 2006 on OE):

(7) uuanda si ne-uuizzen [ uuaz sî tuônt] ⇒... [<sub>free CPrel</sub> uuaz sî tuônt]  
since they NEG-know what they do  
(N\_Ps\_Glossen\_18\_56-59 (edition 75 - 95))

- German: Relative wh-pronouns were initially confined to free relatives with indefinite/generalizing readings, while d-FRs expressed definite and individuating readings (cf. e.g. Paul 1920: 199ff.).

# The evolution of wh-relatives: headed relatives

- Reanalysis of appositive free relatives (cf. Paul 1920: 206f.; Behaghel 1928: 726; Truswell & Gisborne 2015, Gisborne & Truswell 2017 on OE)).
- Extraposed wh-relatives are often structurally ambiguous:
  - appositive free relative that provides additional information linked to a nominal expression
  - headed (restrictive) relative that modifies a nominal expression
- This ambiguity might lead to syntactic reanalysis:

(8)    quaemet inti gisehet [thia stat] [<sub>free CPrel</sub> uuar trohtin gilegit uuas]  
      come    and see    the place                    where Lord laid-to-grave was

↓

      quaemet inti gisehet [thia stat] [<sub>headed CPrel</sub> uuar trohtin gilegit uuas]]

- This reanalysis first affected contexts that fitted the indefinite/generalizing semantics of wh-words (*alles+was*, in particular, Paul 1920: 206, Behaghel 1928: 726)).

# The evolution of wh-relatives: headed relatives

(9) dhazs sie ni eigun eouuihd [**huuazs** sie dhar uuidar setzan].  
that they not own anything, what.REL they there against set  
'that they do not possess anything that they set against it'  
(Isidor IX.12, Eg. 719)

■ Another context: d-pronouns as antecedents:

(10) vnder diesen allen ist keiner das, [**was** er seyn will]  
among these all is nobody that what he be want  
'among all these people, nobody is what he wants to be'  
(Hans Michael Moscherosch, Gesichte Philanders von Sittewald; Alsatian, 1650)

■ Present-day colloquial German: Extension to neuter nouns:

(11) "Wir waren zu statisch in der 2. Halbzeit.  
we were too static in the 2nd half  
Das 0:0 ist ein Ergebnis, [**was** für uns nicht zufriedenstellend ist]."  
the 0:0 is a result what for us not satisfactory is  
'A draw is a result that is not satisfactory for us.'  
(dpa, 22.08.2008; Magerkost in Hannover: 96 und Energie Cottbus trennen sich torlos)

# The evolution of wh-relatives: lexical choices

- Languages may differ with regard to the set of wh-elements that are used in headed relatives (Germanic):
  - English: *who*, but not *what*
  - German: *what* (to some extent), but not *who*
  - Dutch: *who* (in PPs and oblique cases), *what* (subject to similar restrictions as in German)
- Replacement of d-pronouns by wh-elements is possibly shaped by (Fuß 2018):
  - properties of the gender system ⇒ in headed relatives, ‘who’ is only possible after the loss of grammatical gender (otherwise, the presence of semantic gender on personal wh-forms leads to a feature mismatch between antecedent and relative pronoun)
  - German: The transition from *das* ‘that’ to *was* ‘what’ involved a reanalysis in which an originally semantically motivated distribution ([–def] → wh-, elsewhere → d-) was attributed to morphosyntactic properties ([+gender] → d-, elsewhere → wh-)

# The evolution of wh-relatives: research questions

- Are there alternative pathways to (headed) wh-relatives?
- How can we account for fine-grained differences between the relevant developments in various (Indo-European) languages (for instance, it seems that in English early wh-relatives favor oblique wh-words, while in German, 'what' seems to play a special role)?
- Is the restricted areal distribution of wh-relatives linked to borrowing (cf. Gisborne & Truswell 2018 for discussion)?
- Can the observation that there seem to be recurring pathways of change in different languages be attributed to a common feature/property of wh-words? (cf. e.g. Gisborne & Truswell 2018)

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