Does the cross-linguistic distribution of *wh*-free relatives justify a semantic typology?

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1   The cross-linguistic distribution of *wh*-free relatives

- In many languages, (a subset of) *wh*-clauses, despite being string-identical to *wh*-questions (1a), can refer to **entities** as in (1b).

(1)   a.   Sue wonders [**what John cooked**].   [embedded *wh*-question]

  b.   Sue ate [**what John cooked**].   [*wh*-free relative]
         (i)   = Sue ate <u>the thing(s) John cooked</u>
         (ii)   ≠ Sue ate <u>(the answer to) the question what John cooked</u>

- These entity-denoting *wh*-clauses have been called (***wh***)-**free relatives** (Bresnan and Grimshaw, 1978; Groos and van Riemsdijk, 1981; Larson, 1987; Jacobson, 1995; Grosu, 1996; Caponigro, 2003; van Riemsdijk, 2017, a.o.).

- *Wh*-free relatives are not that uncommon. Paradigms like in (1) can be replicated in many genetically or geographically unrelated languages.

  (2)   Nieves Mixtec (Oto-Manguean)   Caponigro et al. (2013)
     a.   **yō**   ni-kuvaʔa ndyāyi
            who CMP-make mole
            'Who made the mole?' [ex.13] '   ✓[*wh*-question]
     b.   [*wh*-clause **yō**   ni-kānī jēráldó] ni-kānī jwán
                   who CMP-hit Geraldo CMP-hit Juan
            'The one(s) who hit Geraldo hit Juan too.' [ex.68]   ✓[*wh*-free relative]

     – But, crucially, not in all languages.

- <u>Cecchetto and Donati (2015) claim</u>: There is an asymmetry between the two constructions:
  "*... while there are in-situ interrogatives, there are no in-situ free relatives, although both constructions involve the same wh-words.*" (p.50)

– What they mean is, there are languages that have *wh*-in-situ in interrogative clauses (3a) but there are no languages that have *wh*-in-situ in *wh*-free relatives (3b).

(3)   a hypothetical language
         a.   ✓"Sue wonders John cooked **what**"
         b.   × "Sue ate John cooked **what**"

– Turkish illustrates the distribution Cecchetto and Donati (2015) have in mind:

(4)   Turkish

         a.   Suzan [Can-ın **ne** pişir-diğ-in-i]   merak ed-iyor
            Suzan Can-GEN **what** cook-NOMLZ-3SG-ACC wonder-IMPF
            'Suzan wonders what Can cooked.'   ✓[embedded *wh*-question]

         b.   *Suzan [Can-ın **ne** pişir-diğ-in-i]   ye-di
            Suzan Can-GEN **what** cook-NOMLZ-3SG-ACC eat-PST
            Lit: 'Suzan ate what Can cooked.'   × [*wh*-free relative]

– | SPOILER: Cecchetto and Donati's typological claim is false but **almost** right. |

• I have put together a comprehensive sample of languages with *wh*-free relatives, supplementing the survey in Caponigro (2003) that only covered three well-known language families.

Table 1: Sample of languages with *wh*-free relatives

Family	**Language**	**Reference**
Finno-Ugric	Finnish, Estonian	Caponigro (2003)
	Hungarian	Caponigro (2003)
Indo-European	Albanian	Caponigro (2003)
	French, Romanian, . . .	Caponigro (2003)
	German, Icelandic, . . .	Caponigro (2003); Vogel (2000)
	Greek	Iatridou and Varlokosta (1998)
	Polish, Serbo-Croatian, . . .	Citko (2009); Gračanin-Yuksek (2008)
Mayan	Chuj	Kotek and Erlewine (2018)
Nakh-Daghestanian	Tsez	Polinsky (2015)
Niger-Congo	Wolof	Caponigro and Heller (2007)
Oto-Manguean	Melchor Ocampo Mixtec	Caponigro et al. (2013)
	Nieves Mixtec	Caponigro et al. (2013)
Semitic	Hebrew	Caponigro (2003)
	Maltese	Sadler and Camilleri (2018)
	Palestinian Arabic	Razaq (2011)
Uto-Aztecan	Nahuatl	Langacker (1975)
isolate	Haida	Enrico (2003)

1.1 The odd one out: Tsez

- Strikingly, out of all the languages surveyed, it seems that there is only ONE language that allows *wh*-in-situ in its *wh*-free relatives:
  → the Nakh-Daghestanian language Tsez (Polinsky, 2015).

  (5) Tsez   Polinsky (2015)

      a.   [ħul   babi-y-ä   **ʃebi**   ʒek'-a-zo-r]   magalu tetɬ
           yesterday father-OS-ERG who.ABS hit-PST.INT-ATTR-LAT bread   give.IMP
           Give the bread to whoever Father beat yesterday! [ex. 131, p. 291]   [*wh*-free-relative]

      b.   už-ä   **ʃebi**   kid-be-r   teλ-ä?
           boy-ERG what.ABS girl-OS-LAT give-PST.WIT.INTERR
           'What did the boy give to the girl?' [ex. 35a, p. 183]   [*wh*-question]

- Why is this {interesting, weird, suspicious}?

  - It seems that more than half of the world's languages are *wh*-in-situ in their *wh*-questions (Dryer, 2013).[1] Then, *wh*-free relatives seem suspiciously allergic to *wh*-in-situ.

  - Tsez also seems to be the **only** language in the sample that **allows *wh*-in-situ in its (embedded) *wh*-questions**.[2]

- But, is there an independent property that allows Tsez to have *wh*-free relatives but disallows many other *wh*-in-situ languages like Turkish to have *wh*-free relatives?

  - A potential clue: **the *wh*-in-situ in Tsez is island-sensitive** (Polinsky, 2015).

  (6)   *[island **ɬa-r**   täλ-ru   micxir] b-ok'ek'-ä   žedä?
               who-LAT give.PST.PTCP money III-steal-PST.WIT.INTERR they
               Intended:"Who$_1$ is such that they stole the money that had been given to them$_1$?"
                                        [Polinsky 2015, p.191, ex.82]

  (7)   *[island beɬi-λ'   **ʃebi**   b-äk'-äsi   yäɬ-zay]
               chase-SUPER.ESS who.ABS.IPL IPL-GO-RES be.PRS-WHILE
               λirba-bi   b-ay-ä?
               guest-PL.ABS.IPL IPL-COME-PST.WIT.INTERR
               Intended: "'Who$_1$ is s.t. the guests arrived when they$_1$ were away hunting?"
                                        [Polinsky 2015, p.192, ex.84]

---

[1]264 out of the 902 languages in the WALS sample are characterized as languages where interrogative phrases are 'initial in content questions' whereas 615 languages are characterized as languages where interrogative phrases are 'not initial in content questions' (Dryer, 2013)

[2]See Kotek and Erlewine (2018) for Chuj, Allkivi (2018) for Estonian, Huhmarniemi (2012) for Finnish, Cable (2018) for Hungarian, Borg and Azzopardi-Alexander (1997) for Maltese, Caponigro et al. (2013) for Mixtec, Shlonsky (2002) for Palestenian Arabic, and Martinović (2016) for Wolof.

- This is in contrast with the typical island-insensitive behavior of *wh*-in-situ, illustrated by Korean, Malay, and Sinhala examples below.

> (8) a. Minswu-ka   [island **nwukwu**-ka ssu-n   chayk-ul] sass-ni?
>   Minswu-NOM   who-NOM   write-REL book-ACC bought-Q
>   'Which person x is such that Minswu bought the books that x wrote?'
>   *Korean*   (Shin, 2005): ex.6a
>
>   b. Kamu sayang [island perempuan yang telah   berjumpa **siapa**]?
>   you   love   woman   that already meet   who
>   'Which person x is such that you love the woman who met x?'
>   *Malay* (<Austronesian)   (Cole and Hermon, 1998): ex.13b
>
>   c. Oyaa [island Chitra **kaa**-ta   dunna pota] da kieuwe?
>   you   Chitra who-DAT give   book Q read
>   'Which person x is such that you read the book that Chitra gave to x?'
>   *Sinhala* (<Indo-European)   (Kishimoto, 2005): ex.47a

- The island-sensitive behavior of Tsez is on a par with overt *wh*-movement, which results in degradedness when it originates in extraction islands (Ross, 1967).

> (9)   *Who$_1$ did they steal [island the money that has been given to $\mathbf{t}_1$]?

- Ok, Tsez exists. Cecchetto and Donati's claim is wrong. What is there to pursue?
  * A fine response: Nothing. What does island-sensitivity in *wh*-questions have to do with *wh*-free relatives? It's probably a coincidence.
  * A fine(r?) response: All surveyed languages except Tsez have overt *wh*-movement both in their (embedded) *wh*-questions and *wh*-free relatives. And Tsez "behaves like" an overt *wh*-movement language. This is unlikely to be a coincidence.
- I go with the second.

1.2   A new empirical conjecture on the availability of *wh*-free relatives

> **A new empirical conjecture:**
>
> (10)   If a grammar exhibits **island-insensitive** behavior in its (single) *wh*-questions, it **cannot generate *wh*-free relatives**.

- Needless to say, (10) is easily falsifiable (but it is impossible to empirically show that it is right).
  - For example, the Martian dialect of Turkish in (11), if it existed, would falsify it.

(11) The Martian dialect of Turkish (where both sentences are fine!)

a. Deniz [wh-clause Alev-in **ne** pişir-diğ-in-i] ye-di
Deniz Alev-GEN what cook-NOMLZ-3SG-ACC eat-PST
'Deniz ate what Alev cooked.'

b. [island Hale-nin **kim-e** yaz-dığ-ı mektub-u] oku-du-n?
Hale-GEN who-DAT write-NOMLZ-3SG letter-ACC read-PST-2
'Which person x is such that you read the letter that Hale wrote for x?'

– In an attempt to falsify (10), I have looked for variation among close relatives in two sub-families.

• The immediate relatives of Tsez are Hinuq and Khwarshi. They together form the West Tsezic branch of Tsezic languages, part of the large Dagestanian language group.

– Hinuq and Khwarshi, unlike Tsez, exhibit island-insensitive behavior in their *wh*-questions.

(12) a. [island išet'-i **łul** l-i-gu čorpa] l-ogu
mother.OBL-ERG who.LAT IV-do-PST.PTCP soup.IV IV-good
l-eč-i.
IV-be-PST.WIT
'Which person x is s.t. the soup that the mother made for x was good?'
Khwarshi [Khalilova (2009):p.468, ex.1153a]

b. [island iyo-y **łu-qo-r** toλλo goła ɣiy] y-oč'č'u zoqʷe-y?
mother-ERG who-AT-LAT give-ICVB be.PTCP milk.IV IV-cold be-Q
'Which person x is s.t. the milk that the mother gave to x was cold?'
Hinuq [Forker (2013):p.751, ex.1403a]

– The thorough grammars by Khalilova (2009) and Forker (2013) do not report *wh*-free-relatives. Forker writes "*Hinuq lacks specialized relative clause markers or relative pronouns.*" (p.566).

• Among Arabic languages/dialects, some are reported to have *wh*-free relatives and some are reported to exhibit island-insensitivity in their *wh*-questions.

– These properties do **not** seem to co-occur. (I have been able to check 6 dialects, 2 of them are given below.)

(13) Palestinian Arabic

a. ma-ʕimlt-š [wh-clause **šuu** ma ʔinti ʕimilt]
NEG-I.did-NEG what that you did
'I didn't do what you did.' [Razaq (2011): p123. 80b]

b. *Mohammad darab [island ill-walad illi howwa ʕayyish **wayyn**]?
Mohammad hit the-boy COMP he lives where
'Which place x is such that Mohammad beat the boy who lives at x?'
[Abu-Jarad (2008), ex.22a]

(14) Egyptian Arabic

    a. ʔinta ʔaabilt   [$_{island}$ ʔil-bint illi ʔitgawwizit **miin**]?
       you met.2SG.M   the-girl that married.3SG.F who
       'Which person x is such that you met the girl that got married to x?'
       [Soltan (2012): ex.13a]

    b. *Huda ʔakalit   [$_{wh\text{-}clause}$ **ʔeih** Ahmad tabax-(u)]
       Huda ate.3SG.M   what Ahmad cooked.3SG.M-it
       Intended: 'Huda ate what Ahmad cooked.' [Usama Soltan, *pers. comm.*]

- In short, the proposed implicational generalization has no counterexample, to the best of my knowledge.

  - Moreover it *is* different from possibly right, random generalizations like (15).

    (15)   No human language uses the same word for 'book' and 'snow'.

  - Because it is theoretically well-grounded.

2 A perspective from semantic composition

> (16)   If a grammar exhibits **island-insensitive** behavior in its (single) *wh*-questions, it **cannot generate *wh*-free relatives**.

- (16) is theoretically well-grounded because

  - *wh*-questions **can be composed without movement**

  - *wh*-free relatives **cannot be composed without movement**.

- DP-like *wh*-free relatives, e.g. (17), are on a par with definite descriptions and denote **maximal individuals** (Jacobson, 1995; Caponigro, 2003, a.o.).

(17)   Susan ate [FR what John cooked].
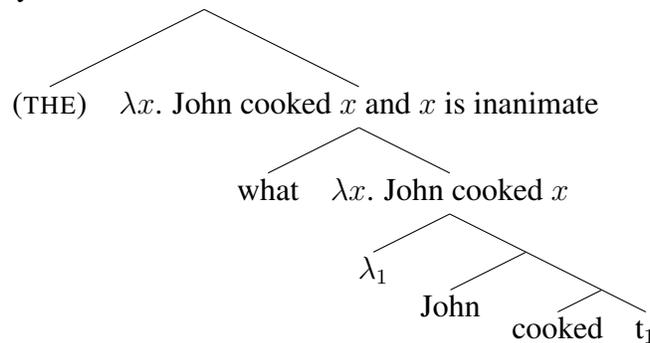   = Susan ate the thing(s) John cooked.

1. The crucial step in deriving a DP-like *wh*-free relative is creating **a predicate**. This is achieved by <u>movement</u>, which yields λ-abstraction (Heim and Kratzer, 1998).

2. The *wh*-word restricts the created predicate.

    (18)   a. I will hire [**who** you choose].
          b. I will eat [**what** you cook].

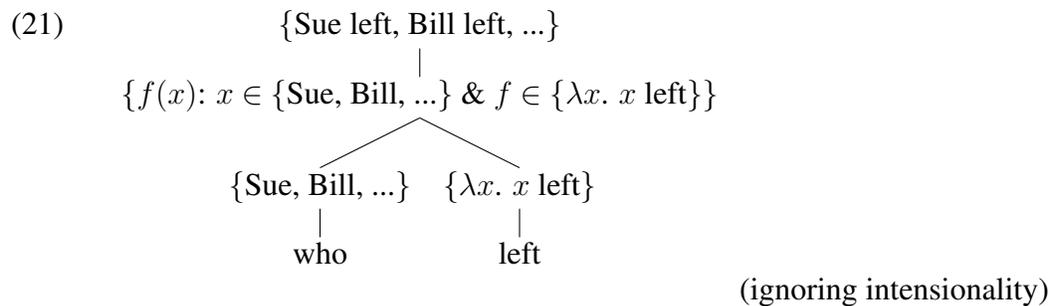3. Finally, definite-shift applies to this predicate.

(19)   the maximal entity x such that John cooked x and x is inanimate

$$
\begin{array}{c}
\text{(THE)} \quad \lambda x.\ \text{John cooked } x \text{ and } x \text{ is inanimate} \\
\text{what} \quad \lambda x.\ \text{John cooked } x \\
\lambda_1 \\
\text{John} \\
\text{cooked} \quad t_1
\end{array}
$$

- On the other hand, *wh*-questions like (20) denote **proposition sets** —under the influential Hamblin/Karttunen view of questions (Hamblin, 1973; Karttunen, 1977).

(20)   ⟦who left⟧ = {Bill left, Sue left, ...}   (informal)

  – There are various ways to compositionally build a proposition set.

  – In particular, there are ways that **do not involve movement**, i.e. there are island-insensitive methods to build a proposition set.

    * For example, grammar can be powerful enough to perform "pointwise composition" (Hamblin, 1973). (alternatively: choice functions (Reinhart, 1997))

(21)   {Sue left, Bill left, ...}
                              |
          {$f(x)$: $x \in$ {Sue, Bill, ...} & $f \in$ {$\lambda x.\ x$ left}}

          {Sue, Bill, ...}   {$\lambda x.\ x$ left}
              | |
            who   left

                                        (ignoring intensionality)

- But how can the way a language composes its *wh*-questions restrict its ability to form *wh*-free relatives?

  – I hypothesize that the variation concerns what *wh*-phrases can do in a given language.

    * Type-1: *wh*-phrases are **restrictors**, i.e. they restrict functions

    * Type-2: *wh*-phrases are **saturators**, i.e. they saturate functions
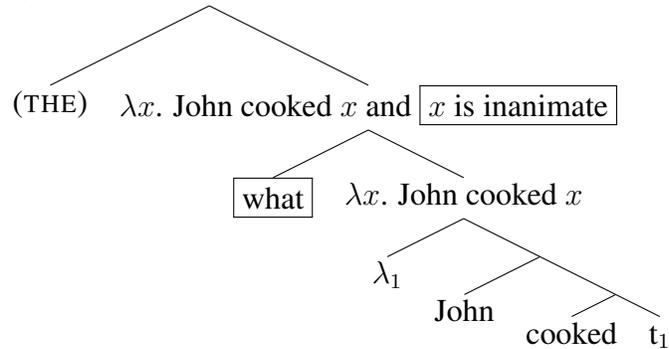
2.1 Type-1 *wh*-phrases

- *wh*-phrases are restrictors

  (22) $[\![\text{what}]\!] = \lambda P.$ inanimate(x) & $P(x)$

- We have already seen this at work in *wh*-free relatives.

  (23)   the maximal entity x such that John cooked x and x is inanimate

  (THE) $\lambda x.$ John cooked x and $\boxed{x \text{ is inanimate}}$

  $\boxed{\text{what}}$ $\lambda x.$ John cooked x

  λ_1

  John   cooked t_1

- More importantly, proposition sets, too, can be composed when *wh*-phrases are restrictors (Caponigro, 2003).

  - It is semantically **possible to go from properties to proposition sets**, which the Q head does below.[3]

  (24) $\lambda p.\ \exists x\colon p =$ John cooked x & x is inanimate

  Q $\lambda x.$ John cooked x and $\boxed{x \text{ is inanimate}}$

  $\boxed{\text{what}}$ $\lambda x.$ John cooked x

  λ_1

  John   cooked t_1

  (ignoring intensionality)
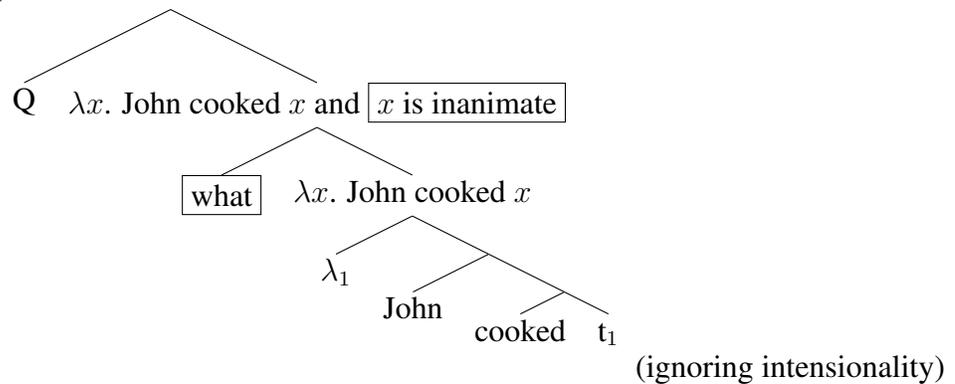
- These languages

  - create a λ-abstract **via overt or covert *wh*-movement** and
  - use this λ-abstract to build their *wh*-questions and *wh*-free relatives

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[3] $[\![\text{Q}]\!] = \lambda f_{<e,\,st>}.\ \lambda p.\ \exists x\colon p = f(x)$ (Caponigro, 2003; George, 2011; Hirsch, 2016)

2.2 Type-2 *wh*-phrases

- *wh*-phrases are not restrictors, they (lexically) want to saturate functions.

  - For concreteness, I assume that grammar can perform in-situ pointwise composition.

  - In particular, I assume that lexical items can be upgraded to sets on demand (via a type-shifter shown as ↑ below) and pointwise function application is achieved via a recurring type-shifter (shown as * below)[4] (Charlow, 2017), cf. (Hamblin, 1973; Kratzer and Shimoyama, 2002).

(25)
$$\{\text{Sue left, Bill left, ...}\}$$
$$\mid$$
$$\{f(x)\colon x \in \{\text{Sue, Bill, ...}\} \ \& \ f \in \{\lambda x. \ x \ \text{left}\}\}$$

$$\lambda k. \ \{f(x)\colon x \in \{\text{Sue, Bill, ...}\} \ \& \ f \in k\} \qquad \{\lambda x. \ x \ \text{left}\}$$
$$\mid \qquad\qquad\qquad\qquad\qquad\qquad \mid$$
$$\text{*kim} \qquad\qquad\qquad\qquad\qquad\qquad \uparrow \text{gitti}$$

<div align="right">(ignoring intensionality)</div>

- Notably, pointwise composition yields a proposition set **without any movement**. Therefore,

  - Extraction islands are irrelevant for this method of generating *wh*-questions.

  - No predicate base is created for a *wh*-free relative to be built on.

- Moreover there is no way to **go from proposition sets to a property or an individual** (Rooth, 1992; Krifka, 2011; Xiang, 2017).

  - That is, once a *wh*-question is built, it **cannot be type-shifted** into a *wh*-free relative.

  - I take this to be a plausible explanation for why typical *wh*-in-situ languages that rely on in-situ composition cannot generate *wh*-free relatives.

(26) Turkish
    a. Suzan [Can-ın **ne** pişir-diğ-in-i] merak ed-iyor
        Suzan Can-GEN **what** cook-NOMLZ-3SG-ACC wonder-IMPF
        'Suzan wonders what Can cooked.' ✓[embedded *wh*-question]
    b. *Suzan [Can-ın **ne** pişir-diğ-in-i] ye-di
        Suzan Can-GEN **what** cook-NOMLZ-3SG-ACC eat-PST
        Lit: 'Suzan ate what Can cooked.' ×[*wh*-free relative]

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[4]$[\![*]\!] = \lambda m. \ \lambda k. \ \{f(x)\colon x \in m \ \& \ f \in k\}$

3 Correlatives: a counter-example?

- We have pursued the hypothesis that the way a language builds its *wh*-questions may restrict its ability to form *wh*-free relatives.

  - There are important challenges to overcome. One such challenge comes from *wh*-correlatives.

- Many languages have a *wh*-construction that appears to contain a *wh*-free relative that tends to appear sentence-initially and co-occurs with a pronoun that refers to it.

  - This construction is a sub-type of correlatives (Srivastav, 1991; Dayal, 1996; Bhatt, 2003; Lipták, 2009) that I will refer to as **wh-correlatives**, exemplified below.

(27) Polish   (Citko, 2009)

    a.   [**Co** chcesz], **to** dostaniesz
        what want.2SG DEM get.2SG
        Lit: "What you want, you will get **it**." [p.52, ex.9c]   [*wh*-correlative]

    b.   Dostaniesz [**co** chcesz]
        get.2SG   what want.2SG
        "You will get what you want." [p.52, ex.9b]   [*wh*-free relative]

  - The logical form for a *wh*-correlative like (27a) is usually thought to be along the lines of (28) (Izvorski, 1996).

(28)
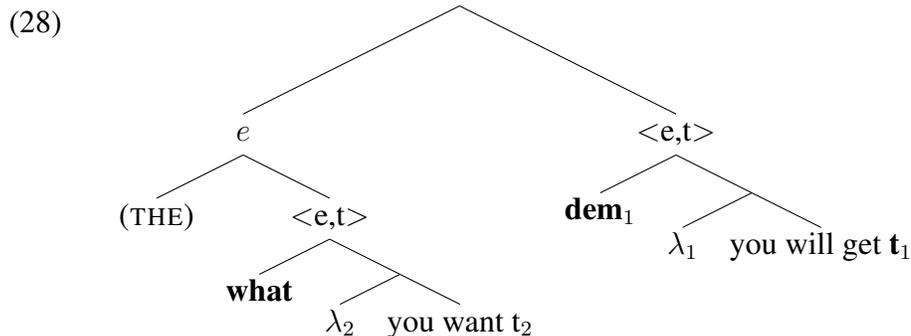
  - Under this view, *wh*-correlatives contain *wh*-free relatives and are semantically no different from them.

- Challenge: there are *wh*-in-situ languages that do not have *wh*-free relatives but have *wh*-correlatives:

(29) a.   *I will eat [FR you cook **what**]

      b.   [CORRELATIVE You cook **what**] I will eat **that**

> – Why is this a challenge?
>
> If a language exhibits island-insensitive behavior in its *wh*-questions, *wh*-clauses in *wh*-correlatives **cannot be *wh*-free relatives (i.e. entity-denoting objects)**.

- Turkish is one such language (Iatridou, 2015; Demirok, 2017). Given that it exhibits island-insensitive behavior, (30) **should not** have an LF where the *wh*-clause features a *wh*-movement that yields a property.

(30)   [John **ne** pişir-se]   Mary **onu**   ye-r
            John what cook-COND Mary DEM.ACC eat-AOR
            Lit: If John cooks what, Mary eats that.
            "Mary eats whatever John cooks."

> **How do we know we still have a *wh*-correlative when there is no overt pronoun?**
>
> (31)   Ne pişir-se-n   ye-r-im
>   what cook-COND-2SG eat-AOR-1SG
>   "I will eat whatever you cook."
>
> Iatridou (2015): If it doesn't survive in any case/DP position, it is not a *wh*-free relative.

(32)   [Kim gel-ir-se]   *(onun) **ile** konuş-ur-uz
            who come-AOR-COND 3SG.GEN with speak-AOR-1PL
            'We will speak with whoever comes.'

- As a matter of fact, there are two hypotheses on why (33) (from (32)) may be bad.

(33)

1. It is a mismatch in **syntactic category**: the postposition wants a DP but the *wh*-clause does not have the right category. (i.e. possibly (33) is semantically convergent)

2. It is a mismatch in **semantic type**: the postposition *ile* wants to combine with a type e argument, but the *wh*-clause does not have the right type.

- The Turkish case at hand is not very telling as to which one is responsible for the ungrammaticality, if not both.

- But Laz (<South Caucasian) is.

(34) Laz   (Ismail Bucaklişi, p.c.)

    a. [_wh-clause_ mi   na   moxt'u]   **himu**-şk'ala vixap'ari.
            who.NOM COMP come.PST.3SG DEM.NOM-with speak.PST.1SG
            Lit: 'Who came, I spoke with him.'   [_wh_-correlative]

    b. [_relative clause_ _e_ na   moxt'u]-şk'ala   vixap'ari.
            _e_ COMP come.PST.3SG-with speak.PST.1SG
            'I spoke with the one who came.'   [null headed relative]

    c. *[_wh-clause_ mi   na   moxt'u]-şk'ala   vixap'ari.
            who.NOM COMP come.PST.3SG-with speak.PST.1SG
            Intended: I spoke with who(ever) came.   × [_wh_-free relative]

- Both the null headed relative and the _wh_-clause in _wh_-correlatives are finite _na_-clauses.

  - There is no obvious syntactic category difference between the two.

  - Despite this, only the null headed relative can complement the postposition _şk'ala_ 'with'. The _wh_-clause cannot.

- This plausibly suggests that (34c) is bad because the _wh_-clause **does not have the right semantic type to be there.**

- If the _wh_-clause in a _wh_-correlative does not have a DP-meaning (entity or generalized quantifier), what could it possibly denote?
  → it can denote **a proposition-set** (i.e. a _wh_-question)

(35)   a. [Kim gel-ir-se]   *(onun) **ile** konuş-ur-uz
            who come-AOR-COND 3SG.GEN with speak-AOR-1PL
            'We will speak with whoever comes.'

    b.

           TYPE MISMATCH   konuşuruz
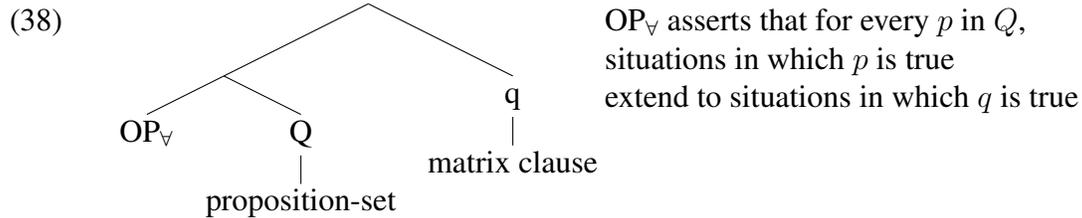
           kim gelirse   ile
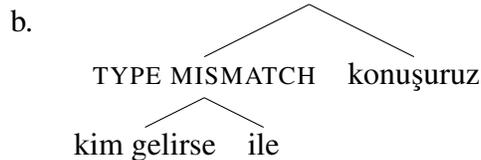
- How can a proposition-set contribute to the meaning of _wh_-correlatives?

  - The insight comes from Rawlins (2013) who argues that unconditionals like (36) are interpreted as <u>conjunctions of conditional statements</u>, as in (37).

(36)   Whoever comes to the party, we'll have fun.

(37)   [If Bill comes to the party, we'll have fun] &
        [If Sue comes to the party, we'll have fun], ...

- Here is an LF sketch that achieves this for *wh*-correlatives (grossly simplified from Rawlins).

(38)

OP$_\forall$ Q   q

proposition-set matrix clause

OP$_\forall$ asserts that for every p in Q, situations in which p is true extend to situations in which q is true

  - The interpretation of the pronoun is contextually retrieved (it is an E-type pronoun (Heim, 1990; von Fintel, 2004))

(39) [John **ne** pişir-se] Mary **onu** ye-r
   John what cook-COND Mary DEM.ACC eat-AOR
   Lit: If John cooks what, Mary eats that.
   "Mary eats whatever John cooks."
   = situations in which John cooks pasta extend to situations in which Mary eats **the thing John cooks in those situations** &
   situations in which John cooks soup extend to situations in which Mary eats **the thing John cooks in those situations** & ...

- In short, *wh*-correlatives may not be a counterexample, after all.

  - The presence of *wh*-correlatives in a given language does not necessarily mean that *wh*-clauses can have property/predicate denotations in that language.

  - It is possible to give a compositional semantics to *wh*-correlatives that does not involve relativization of any sort.

4 Conclusion and Remaining Questions

- I proposed a semantic typology for *wh*-phrases that predicts whether *wh*-free relatives may or may not exist in a given language.

  - I also presented the sketch of an alternative analysis for *wh*-correlatives, which otherwise pose a challenge to the proposed typology.

- **Is the semantic typology justified?** Early to say before we address these issues:

  - (mostly language-particular) differences between *wh*-free relatives and embedded interrogative clauses

  - island-insensitive behaviour in multiple-*wh*-questions of *wh*-fronting languages

  - overt pied-piping in *wh*-fronting languages

  - type-shift from type-1 *wh*-phrases to type-2 *wh*-phrases and vice versa

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