

On wh-questions, wh-relatives, and their kin

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TYPOLOGICAL GENERALIZATIONS: WHAT THERE IS TO EXPLAIN

There are a number of robust typological generalizations that have gone almost unnoticed:

G1 Ban on wh-in-situ in relatives

de Vries 05, Comrie 06, Demirok 17a, etc.

- a. There are no wh-in-situ free or restrictive headed relatives.
- b. No wh-in-situ language has wh-based free or restrictive headed relatives.

G2 Wh-in-situ correlatives

Liu 16, Demirok 17b, a.o.

Wh-in-situ correlatives (incl. unconditionals, wh-conditionals) exist (e.g.: Chinese, Hindi, Turkish).

G3 Generalized Caponigro's generalization

Caponigro 03, Chierchia & Caponigro 13, etc.

The set of interrogative wh-words is always a superset of the set of non-interrogative wh-words.

G4 Wh-morphology

- a. Interrogative wh-words can be the morphological base for relative wh-words; not conversely.
- b. Correlatives typically use relative wh-morphology, but interrogative wh-morphology is not completely ruled out (e.g.: Hungarian).

G5 Availability of wh-based constructions (tentative, under investigation)

- a. If a language has wh-based headed relatives, it has wh-based free relatives.
- b. If a language has wh-based relatives, it has wh-based correlatives/unconditionals.
- c. (All languages have constituent questions ≈ wh-based interrogatives.)

Morphosyntactic and paradigmatic properties clearly point to the **primacy of wh-questions** and the **derived nature of wh-relatives** (with wh-correlatives being ambivalent between the two) → *this should be reflected in the semantics, too.*

	WH-QUESTION basic	WH-CORRELATIVES intermediate	WH-RELATIVES derived
syntax	wh-in-situ / wh-ex-situ	wh-in-situ / wh-ex-situ	wh-ex-situ
morphology	interrogative	interrogative / relative	relative
paradigm	all wh-words	limited	limited
semantics	proposition	proposition / property	property

TOWARDS A SEMANTIC PROPOSAL

Leading idea: No unified analysis of wh-clauses

- Wh-questions ≈ (sets of) propositions vs. Wh-relatives ≈ properties.
- Wh-relatives should be *derived from* wh-questions and should necessarily involve wh-movement.

Option 1 Extrapolation of Berman 91

Question	{ wh-word ~ free variable question ~ open proposition	Berman 91 by function application
Relative	{ wh-word ~ lambda relative ~ property	Heim & Kratzer 98 by lambda-abstraction: <u>ex situ</u>
(1) a. Question	$[\text{what}_1 \text{ happened}]^g = \text{INANIM}(g(1)) \wedge \text{HAPPENED}(g(1))$	by variable assignment + function application

$$[\text{what}_1 \text{ happened}]^g = \lambda x[\text{INANIM}(x) \wedge \text{HAPPENED}(x)]$$

$$\text{b. Relative}$$

$$[\text{what}_1 \text{ t}_1 \text{ happened}]^g = \lambda x[\text{INANIM}(x) \wedge \text{HAPPENED}(x)]$$

- + Transparent relation between wh-questions (index in situ) and wh-relatives (index ex situ).
- Non-compositional treatment of ex situ wh-words.

Option 2 Chiechia & Caponigro's 13 attempt

Question	{ wh-word ~ \exists -quantifier question ~ set of propositions	Karttunen 77, a.o. by specialized Q-operator
Relative	{ wh-word ~ \exists -quantifier (free) relative ~ (topical) property	by specialized TP-operator: <u>in situ ok</u> (!)

(2) a. Question	$[\text{Q what } \lambda_1 \text{ t}_1 \text{ happened}] = \lambda p \exists x[\text{INANIM}_@ (x) \wedge p = \lambda w[\text{HAPPENED}_w(x)]]$	by quantifier raising + Q-operator
b. (Free) Relative	$[\text{TP} [\text{CP Q what } \lambda_1 \text{ t}_1 \text{ happened}]] = \lambda w \lambda x[x = iy \text{ INANIM}_@ (y) \wedge \text{HAPPENED}_w(y)]$	by quantifier raising + Q + TP

- Problematic on a general level (Liu 18, Zimmermann 85).
- Only for free relatives.
- **Fails to derive the in situ vs. ex situ asymmetry between wh-questions and wh-relatives.**

Option 3 Exploratory

Question	{ wh-word ~ set of individuals question ~ set of propositions	Hamblin 73, Kratzer & Shimoyama 02, a.o. by pointwise function application
Relative	{ wh-word ~ property relative ~ property	by set → characteristic function by predicate modification: <u>ex situ</u>

(3) a. Question	$[\text{what}] = \{x : \text{INANIM}(x) \mid x \in D_c\}$ (a set)	by pointwise function application (in situ ok)
	$[\text{what happened}] = \{\text{INANIM}(x) \wedge \text{HAPPENED}(x) \mid x \in D_c\}$	
b. Relative	$[\text{what}^f] = \lambda x[\text{INANIM}(x) \wedge x \in D_c]$ (characteristic function of the set above)	by set → function + movement (only ex situ)

- + Derives ex situ nature of wh-relatives (properties cannot be interpreted in situ).

- Unorthodox (but intuitive) treatment of wh → wh^f.

SELECTED REFERENCES AND ACKNOWLEDGMENTS

Caponigro, I. 2003. Free not to ask: On the semantics of free relatives and wh-words cross-linguistically. University of California PhD thesis. • Chierchia, G. & I. Caponigro. 2013. Questions on questions and free relatives. Presented at SubB18. • Demirok, Ö. 2017a. Free relatives and correlatives in wh-in-situ. In *NELS 47*. • Demirok, Ö. 2017b. A compositional semantics for Turkish correlatives. In *WCCFL 34*. • de Vries, M. 2005. The fall and rise of universals on relativization. *J of Universal Language* 6(1):125-157. • Kotek, H. & M. Erlewine. 2018. Wh-indeterminates in Chujo. To appear in *Canadian J of Linguistics*. • Lehmann, W. P. 1977. *Proto-Indo-European syntax*. University of Texas Press. • Liu, M. 2018. *Varieties of alternatives: Focus particles and wh-expressions in Mandarin*. Springer. • Polinsky, M. 2015. Tsez syntax: A description. Ms. available from lingbuzz. • Sadler, L. & M. Camilleri. 2017. Free relatives in Maltese. To appear in *Brill's Journal of Afroasiatic Languages and Linguistics* (available online).

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SELECTED EVIDENCE RELATED TO THE GENERALIZATIONS

G1 Ban on wh-in-situ in relatives

The generalization is based on the 32-language sample of de Vries 02/05, 28 -language sample of Caponigro 03 (with significant overlap) and, in addition, the existing literature on individual languages (Cable 05 on Tlingit and Haida; Caponigro et al. 13 on Mixtec; Wilbur 14 on Pite Saami; Sadler & Camilleri 17 on Maltese; Kotek & Erlewine 18 on Mayan; É. Dékány, p.c., on Udmurt and Khanty). Convincing counterexamples are yet to be found, cf.:

- **Claim:** Hindi allows wh-in-situ in postnominal relatives (Lehmann 84, Mahajan 00, de Vries 05); (4). **Caveats:** 1. This is only possible with appositive relatives (Lehmann 84, R. Bhatt, p.c.), (5), and appositive relatives could well be propositions (Del Gobbo 07). 2. It remains to be explored if the wh below is genuinely in situ (R. Bhatt, p.c.).

(4) mujhe vo aadmii [Siiataa -ko jo acc^haa lagtaa] he pasand nahī he
I:DAT DEM man Sita -DEM REL nice seem:IMP be:PRES like not be
'I don't like the man who Sitea likes.'

(5) #ek-bhii kitaab [Ram-ne **jis-kii** taariif kii thi] Mina-ne mujhe nahiin dikhaayii
one-even book Ram-ERG REL-GEN praise do be Mina-ERG me.DAT NEG show
'Mina showed me the book that Ram had praised.'

- **Claim:** Tsez allows wh-in-situ in free relatives (Polinsky 15), (6). **Potential caveats:** 1. Obligatory preverbal position of wh-phrases (as opposed to non-wh) → movement after all (cf. Finno-Ugric)? 2. Presence of an interrogative suffix. (Cf. Polinsky, who has a lot of arguments for distinguishing free relative from correlatives in Tsez.)

(6) [hu^t babi-y-ä **šebe** žek'-ä(-si)] ik'i-s.
yesterday father-OS-ERG who/what.ABS hit-PST.WIT.INTERR-ATTR I.go-PST.WIT
'Whoever father beat yesterday left.'

G2 Wh-in-situ correlatives

Recent literature brought evidence to the effect that correlatives (esp. with unconditional semantics) can appear in wh-in-situ form/languages. Under the present perspective, this boils down to saying that correlatives/unconditionals can be propositional / question-based, as argued by Rawlins 13.

- An example from Turkish (7) (Demirok 17b) and Chinese (8) (Luo & Crain 11).

(7) [John partiene **kimi** çağır -sa] pro / o gelir.
John party who invite -SA pro DEM.NOM comes
'Whoever John invites to the party (, he) will come.'

(8) **Shei** xian lai, **shei** xian chi.
who first come who first eat
'Who(ever) comes first, eats first.'

- Interestingly, in some wh-movement languages, these constructions can be either ex situ (correlatives) or in situ (unconditionals), (9) (Czech), arguably using both the property-based and the proposition-based strategy.

- (9) a. **Koho** pozveš, **tomu** zavolám.
who.ACQ invite.2SG that.DAT call.1SG
b. **Ať už** pozveš **kohokoliv**, zavolám mu.
let already invite.2SG who.EVER call.1SG him.DAT
'Whoever you'll invite, I'll call him.'

G4 Wh-morphology

Morphological differences between interrogative and relative wh-words:

BULGARIAN	GREEK	HUNGARIAN	MACEDONIAN	SLOVENIAN
what_Q kakvo	ti	mi	kakvo	kaj
what_R kakvoto	oti	ami	kakvošto	kar

- It is tempting to analyze the relative morphemes on a par with definite articles (e.g. Giannakidou & Cheng 06), but the distribution is too general to support this (relative wh-words appear even in relatives headed by non-specific NPs).

- It is also not correct to say that the relative morpheme semantically derives the relative wh-word (e.g. property under Option 3). As evidenced by MECs, wh-movement is sufficient (and necessary; Šimík 11):

(10) Dhen exo (*o)**ti** na foreso sto parti
NEG have.1SG REL what SBJV wear at.the party
'I have nothing to wear at the party.'

- Analysis most likely to be correct: Relative morphemes are (syntactically high) complementizers (as argued e.g. by Rudin for the case of Bulgarian and Macedonian).

G5 Availability of wh-based relatives (and hypothesized diachrony)

Evidence for G5a, i.e. primacy of wh-based free relatives, as opposed to wh-based headed relatives:

- Languages with wh-based free relatives, but no wh-based headed relatives: Haida (Cable 05), Tsez (Polinsky 15), probably some Arabic vernaculars.
- Languages with wh-based free relatives, but restricted wh-based headed relatives, typically to adverbial or PP wh-phrases: Mayan (Kotek & Erlewine 18), Maltese (Sadler & Camilleri 17) and probably other Arabic vernaculars.

Hypothesized diachrony, reflected in typology (for step 3 in Indo-European, see Lehmann 77):

1. **Correlatives in situ ≈ proposition-based semantics**

$[\{\langle s$