The genesis and typology of correlatives

Typological dataset

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Definition and sample

This document contains the relevant information about correlative constructions in our sample. The sample includes virtually all constructions for which sufficient information is available and which conform to our definition of correlatives as given in section 2.1 of the main paper, repeated here for convenience:

- (1) A correlative structure consists of two clauses, the correlative clause and the matrix clause, where
 1. a noun phrase containing a relativizer occurs in the correlative clause;
 2. a noun phrase anaphorically related to the first one occurs in the matrix clause;
 3. the correlative clause is wholly to the left of the matrix clause.

Note that, due to requirement of an NP-internal relativizer and the preposition of the relative clause, this definition excludes certain constructions that have sometimes been labeled as ‘correlatives’. Two examples are particularly noteworthy. Australian ‘adjoined clauses’ as in (2) can mark any kind of subordinate clause and have no marking apart from a general subordinating morpheme on the verb. The tradition since K. L. Hale (1976) is to treat such constructions as a special kind of subordinate clause, but others, such as Bittner (2001), have argued that they are, in fact, structurally and semantically analogous to correlatives. Since no special marking is found on the relative NP (which may even be absent altogether, as in ex. 2), and the subordinate clause is postposed, these do not fit our definition; in fact, this result is justified as there is no consensus in the literature on the extent to which Australian ‘adjoined clauses’ are akin to correlatives (see Nordlinger 2006).¹

1. The glossing follows the Leipzig Rules (<https://www.eva.mpg.de/lingua/resources/glossing-rules.php>). Glosses in the original (if there were any) are mostly left unchanged, with the exception of minor notational modifications to comply with the Leipzig Rules. The following non-standard abbreviations are used: ABSUP: ablative-superessive (Shina), ACP.POS: positive completive (French ACCOMPLI), ACT: active voice, ADD: additive, AGP: agent perfective case marker (Shina), AGT: agent, ANIM: animate, AOR: aorist, APUD: apudessive, C: common gender (Hittite), CONT: concessive, CL: clitic, COMPAR: comparative, CONC: concessive, CONN: connective, COREF: coreference, DEONT: deontic mood marker, DETR: detransitive, DIST: distributive, EMPH: emphasis, EXP: experiencer, G1: first gender (East Caucasian), G4: fourth gender (East Caucasian), GEN2: second genitive (Tsez), GNT: general tense, HAB: habitual, HPL: human plural, HUM: human, ILL: illative, INACP.POS: positive incomplete (French *inaccompli*), INANIM: inanimate, INTERR: interrogative, IQ: indirect question, LAT: lative, OPT: optative, PST.W: witnessed past, POSTP: postposition, PTCL: particle, PRET: preterite, PROSP: prospective, PV: preverb, REP: repetitive, SEQ: sequential auxiliary, SIM: simultaneous, SUB: subordinate, SUPER: superessive, ST: stem. For consistency, the glosses ‘who’, ‘what’ and ‘which’ referring to relativization markers have been replaced by REL.ANIM, REL.INANIM and REL.POSS.

(2) Warlpiri (Pama-Nyungan)

Ngajulu-rlu rna yankirri pantu-rnu, [kuja-lpa ngapa nga-rnu]

I-ERG AUX emu spear-PST COMP-AUX water drink-PST

‘I speared **the emu** which was / while it was drinking water.’ (K. L. Hale 1976, 78)

Another similar case is Modern Georgian, where a new construction (3) developed that some authors, e.g. Hendery (2012, 180ff.), treat as a correlative. In these construction, the subordinate clause precedes the main clause, which contains a noun phrase containing a demonstrative; the subordinate clause is introduced by the preverbal universal subordinator *ro(m)*,² which is also used for many other types of subordinate clauses (see Hewitt 1987 for an overview of the Georgian system of subordination).

(3) Georgian (South Caucasian)

[*a-m k’ac-ma rom naxa*], *i-m kal-s vicnob*
this-DET.OBL man-ERG COMP he.saw.her.AOR that-DET.OBL woman-DAT I.know.her

‘I know **that woman which this man** saw.’ (Hewitt 1987, 188)³

The relative NP, when present, is often accompanied by a demonstrative, as in (3), which may make it seem that this construction is a *dem*-correlative; however, this is not necessarily so: the clause-internal NP can be left unmarked (4) or be absent altogether (5).

(4) Georgian (South Caucasian)

[*Durmišxan-s Alget-ze rom c’iskvili eč’ira*], *i-s c’iskvili...*
Durmišxan-DAT Alget-on COMP mill he.have.it that-DET.NOM mill

‘**the mill which** Durmishxan had on Alget ...’

(Harris 1994, 134 *apud* Hendery 2012, 180)

(5) Georgian (South Caucasian)

[*šen-gan ro miviyeḇ*], *i-m pul-it me gadavixdi val-s*
you-from COMP I.receive.it that-DET.OBL money-INS I.NOM I.pay.it debt-DAT

‘I will pay off the debt with **that money which** I receive from you.’

(Harris 1994, 133 *apud* Hendery 2012, 180)

Thus, Georgian conforms to all the requirements in (1) but one: it does not use a designated relativizer. In fact, other linguists, such as Harris (2000), treat this construction as a ‘pre-nominal gapped relative’ rather than a true correlative; if this is the case, the examples with an overt ‘internal head’ are instances of resumption, not unheard of in prenominal gapped relative clauses in other languages; a well-studied example is Japanese, see e.g. McCawley (1976).

Thus, the status of Georgian prenominal relative clauses must be clarified before they can be included in any typology of correlatives.⁴

2. The glossing of *rom* has been changed from ‘that’ to ‘COMP’ to avoid ambiguity: this marker is a complementizer, not a demonstrative.

4. It should be noted, however, that, if anything, Georgian prenominal relative clauses are *dem*-correlatives; if so, they seem to conform to our proposal, as all examples in the literature that we are aware of involve the definite reading.

More generally, it is not clear how ‘correlative-like’ constructions with no overt obligatory marking of the relative NP, such as in Australian languages or possibly in Georgian, should be treated: they seem intuitively similar to correlatives but significantly different at the same time. It may be that, while sharing certain structural and semantic properties, they ultimately involve a different scenario of grammaticalization. Note that both Warlpiri and Georgian use universal subordinators or complementizers (*kuja* and *rom*, respectively), which is not attested in any language in our sample, which either use no overt clause-level marker or a specialized marker, such as a conditional morpheme or an indirect question particle.

Features and their values

The values of the columns are as follows: **type** refers to the etymology of the relativizer: *wh* means that the relativizer is formally identical to an interrogative (which in most cases can be shown to also be used as an indefinite), *wh-indef* means that it is an indefinite pronoun which is morphologically derived from an interrogative one, and *dem* means that it is demonstrative. **univ** and **def** refer to the availability of the universal and definite reading (see section 2.2 of the main paper): + means it is available, +/– that it is only available with special marking, and – that it is unavailable. +/– was only used in cases where the special marking is minimal and additive: specifically the conditional marker, the subjunctive mood or generic tense morphology is involved in the cases at hand, as discussed in the description of the relevant languages. Whenever there are more substantial differences, we postulated two different correlative constructions instead. (This happens in Tamil and Dargwa.) **[i=i]** is adopted from Gärtner (2009) and refers to the indefinite-interrogative ambiguity (see section 4.1 of the main paper): % means that interrogatives can be used with indefinite meaning in conditional structures (and possibly some other embedded structures) and – that interrogatives cannot be used as indefinites.⁵ **cond.** refers to the presence of (relics of) conditional morphosyntax in correlative constructions. The latter two columns are only relevant for *wh*-based correlatives, so *dem*-based correlatives have n/a in these columns.

language	type	univ.	def.	[i=i]	cond.
Indo-European					
Hittite (§ 1.1)	wh	+	+	%	–
Latin (§ 1.2)	wh	+	+	%	–
Ancient Greek (§ 1.3)	dem	+/–	+	n/a	n/a
Old Czech _{dem} (§ 1.4.1)	dem	–	+	n/a	n/a
Old Czech _{wh} (§ 1.4.1)	wh	+	–	%?	–
Serbo-Croatian (§ 1.4.2)	wh	+	–	%	–
Russian (§ 1.4.3)	wh	+	–	%	–
Ossetic _{simple} (§ 1.5.1)	wh	+	+	–	–
Ossetic _{multiple} (§ 1.5.1)	wh	+	–	–	–
Old Indic (§ 1.6.1)	dem	+/–	+	n/a	n/a
Hindi (§ 1.6.2)	dem	+/–	+	n/a	n/a
Kalasha (§ 1.6.3)	wh	+	+	%?	–
Shina (§ 1.6.4)	wh	+	+	%	–

5. Following Gärtner (2009) we would use + for languages where interrogatives can be used as indefinites in all contexts, but this does not occur in our sample.

Table 1: (continued)

language	type	univ.	def.	[i=i]	cond.
Uralic					
Hungarian (§ 2.1)	wh	+	+	—	—
Old Hungarian (§ 2.1)	wh-indef	+	—	?	+
Udmurt (§ 2.2)	wh	+	+	%	—
Turkic					
Old Turkic (§ 3.1)	wh	+	—	%?	+
Tungusic					
Udihe _{wh} (§ 4.1)	wh	+	—	?	+
Udihe _{dem} (§ 4.1)	dem	—?	+	n/a	n/a
Yenisean					
Ket _{wh} (§ 5)	wh	+	—?	?	—
Ket _{dem} (§ 5)	dem	—?	+	n/a	n/a
Basque					
Basque (§ 6)	wh-indef	+	—	—	+
Dravidian					
Tamil _{COND} (§ 7.1)	wh	+	—	%	+
Tamil _{FIN} (§ 7.1)	wh	—	+	%	—
Old Tamil (§ 7.2)	wh	+	—	%	+
East Caucasian					
Kryz (§ 8.1)	wh	+	—?	%	+
Khwarshi (§ 8.2)	wh	+	—?	%?	—
Tsez (§ 8.3)	wh	+	—?	%?	—
Dargwa _{GEN} (§ 8.4)	wh	+	—	%	+
Dargwa _{SPEC} (§ 8.4)	wh	—	+	%	—
Sino-Tibetan					
Chinese (§ 9.1)	wh	+	—	%	+
Tibetan (§ 9.2)	wh	+	+	%?	+
Niger-Congo					
Kita (§ 10.1)	dem	+/—	+	n/a	n/a
Mandinka (§ 10.1)	dem	+/—	+	n/a	n/a
Bambara (§ 10.1)	dem	—	+	n/a	n/a
Soninke (§ 10.1)	dem	—	+	n/a	n/a
Vai (§ 10.1)	dem	—?	+	n/a	n/a
Supyire (§ 10.2)	dem	+/—	+	n/a	n/a

1 Indo-European

1.1 Anatolian: Hittite [WH]

Readings Correlatives were the main strategy of relativization in Hittite. They had both the definite and universal readings, which are referred in the literature as *determinate* and *indeterminate*, respectively (Held 1957; M. Hale 1987, 46–49; Garrett 1994, 43–49; Hoffner and Melchert 2008, 424–425). The following examples illustrate both types:⁶

- (6) *KUR.KUR.HI.A kue dannatta ammuk EGIR-pa ašešanun #*
land.ACC.PL.N REL:ACC.PL.N empty:ADJ:N.ACC.PL I.NOM.SG.C re.PV settle:1SG.PRET.ACT
nu=mu=kan apē=ya hūmanda arḥa dāš
CONN=CL.1SG.DAT=PTCL.LOC this:ACC.PL.N all:ACC.PL.N away.PV take-3SG.PRET.ACT
‘The empty lands which I resettled, all those he took away from me.’ (Yates 2014, 2)

- (7) *nu=šši=ššan kuit šahḥan LUGAL-uš*
CONJ=CL.3SG.DAT=PTCL.LOC REL.INANIM:ACC.SG.N service:ACC.SG.N king-NOM.SG.C
dāi # nu apāt ēššai
place:3SG.PRS.ACT CONN that:ACC.SG.N do:3SG.PRS.ACT
‘Whatever service the king imposes on him, (he) will do that.’ (Yates 2014, 2)

Unfortunately, there are no good examples of quantification in episodic contexts in the literature; most of the so-called indeterminate contexts involve genericity or indefinite future-tense reference. However, it is well-established that the two types of correlative readings have different syntactic properties in Hittite. Thus it can be safely assumed that these are two genuine readings, and the generic reading is not derived from the definite one.

Interrogative-indefinite affinity The indefinite pronoun in Hittite is formed from the interrogative via suffixation: *kuiš* ‘who’ → *kuiški* ‘someone’ (Hoffner and Melchert 2008, 149). ‘Only in combination with takku/mān ‘if’ can *kui-* have an indefinite meaning’ (Hoffner and Melchert 2008, 149). This usage is seen in the following example:

- (8) *nu=kan mān AWAT NARARI kuwapi šarā išparzazi #*
CONN=LOC.PTCL if summons assistance when up come:PRS.3SG
‘If at some point (lit. If when) a summons for assistance comes...’
(Hittite, NH/INS (CTH 106.A.1) Bo 86/299 rev. iii 44–46; Andrej Sideltsev, p.c.)

1.2 Italic: Latin [WH]

Readings In Latin, *wh*-based correlative structures are quite common in the early texts, and we find both universal and definite readings (9)–(10).

6. We are grateful to Andrej Sideltsev for drawing our attention to these examples. The glossing in Hittite examples deviates somewhat from the Leipzig standard: the hyphen (-) separates Akkadograms and Sumerograms from transcribed Hittite forms, while the period sign (.) separates several Sumerograms and Akkadograms from each other.

- (9) [*cui testimonium defuerit*], *is tertiis diebus*
REL.DAT testimony:NOM.SG is.absent:FUT.PRF.3SG, he:NOM third:ABL.PL day:ABL.PL
ob portum obuagulatum ito.
to door:ACC.SG to.summon go:IMP.3SG
‘he whose witness is absent, he shall go to summon him every third day’
(The twelve tables II.3, Warmington)

- (10) [*quam earum in iis locis optimam dicent*
REL.ACC.SG them:GEN.PL in these:ABL.PL places:ABL.PL best:ACC say:FUT.3PL
esse], *eam maxime serito*
be:INF, that:ACC in.particular sow:IMP.2SG.FUT
‘(the one) which they say is best in these places, sow that one in particular’
(Cato, de Agricultura 6.1)

As pointed out by Sturtevant (1930, 148), the universal reading is much more frequent than the definite one in early Latin. It is, however, not clear whether this reflects a primacy for the generalizing meaning, or whether it is a genre effect, see e.g. the discussion in Probert and Dickey (2016, 404–415).

Interrogative-indefinite affinity Latin is included in the list of [%i=i] languages in Gärtner (2009, 13).

1.3 Greek [DEM]

Ancient Greek displays a wide array of strategies for relativization from the earliest stages.⁷ Alongside postnominal relative clauses and free relative clauses, we also find correlatives. The pronoun *hos* used in relative clauses of all types is traditionally taken to be a demonstrative in origin.

Both correlatives and free relatives display the expected maximalizing semantics yielding a definite reading (11). However, correlatives and free relatives in the indicative are not normally used for universal readings — this meaning requires the use of the subjunctive mood and (in most dialects) a modal particle *ke* or *an* (12).

- (11) *hos de moi oios ee:n* (...) *ton su pro:e:n*
REL.NOM but me:DAT alone:NOM be:PST.3SG him:ACC you:NOM just.now
kteinas
killed:PFV.PST.2SG
‘He that alone was left me, him you just now killed.’ (Homer, Iliad 24.499–500)

- (12) *hos ke t^heois epipeit^he:tai, mala t’ ekluon*
REL.NOM MODAL god:DAT.PL obey:SBJV.PRS.3SG, greatly and listen:PFV.PST.3PL
autou
him:GEN
‘Whoever obeys the gods, they listen greatly to him.’ (Homer, Iliad 1.218)

7. We ignore Mycenaean Greek although there may be relative clauses in the material, see Probert (2015, 199–202).

Occasionally, maximalizing relatives can get a universal reading even when the verb is in the indicative (13)

- (13) *ap^hre:to:r e^hemistos anestios estin ekeinos, hos polemou*
 clanless:NOM lawless:NOM hearthless:NOM be:PRS.3SG he:NOM, REL.NOM war:GEN
eratai epide:miou kruoentos
 loves:PRS.3SG civil:GEN horrible:GEN
 ‘Clanless, lawless and hearthless is he who loves horrible civil war.’
 (Homer, Iliad 9.63–64)

This construction is much rarer than the subjunctive construction; moreover, it always involves individual-level predicates in the relative clause (statives, or derived habituals, see Probert 2015, 92–93). As such, the construction generalizes over individuals rather than situations and may be akin to the generic use of definites in sentences like *The lion has a mane*.

1.4 Slavic

1.4.1 Old Czech [WH/DEM]

Readings Czech represents a unique case, as not only did it extensively employ correlatives, but correlatives with both interrogative and demonstrative-based pronouns have coexisted for some time in the history of the language.⁸ Their semantic distribution is quite remarkable. As Bauer (1972, 40–41) demonstrates, in Old Czech ‘les [propositions relatives avec *jenž*, *ješto*] (i.e. *yo*-based relatives – *O.B. & D.H.*) indiquaient d’habitude le caractère d’une personne ou d’une chose connue, les [propositions relatives avec *kto*, *čso*, *který*] (i.e. interrogative-based relatives – *O.B. & D.H.*) se rattachaient à une personne ou à une chose en général’. He provides the following examples to illustrate this point:

- (14) Old Czech (Slavic > Indo-European), *dem*-based [DEM/WH]
jehož někdy najvěrnějšieho mnieše, tomu
 REL.M.SG.ACC sometimes most.loyal.M.SG.ACC consider:AOR.3PL that.M.SG.DAT
káza na nátonu bradu obrubati
 order:AOR.3SG on log:SG.LOC beard:SG.ACC cut.off:INF
 ‘He ordered to cut off the beard on the (wood) log to **the one** who was considered the most loyal.’
 (Bauer 1972, adapted from The Chronicle of Dalimil 59,50)
- (15) Old Czech (Slavic > Indo-European), *wh*-based [DEM/WH]
kdo chce zbýti strasti, nerod’ prsta
 REL.M.SG.NOM want:PRS.3SG stop:INF sorrow:PL.ACC not.care:IMP.2SG finger:DU.ACC
mezi dřvi a podvoj klásti
 between door:SG.INS and frame:SG.INS put:INF
 ‘**Whoever** wants to stop sorrows should not put two fingers between a door and its frame.’
 (Bauer 1972, adapted from the Chronicle of Dalimil 85,58)

According to Bauer, later in the history of Czech, interrogative-based relative clauses gradually extended their function, such that they started to be used in both contexts, and *jenž* ‘which’

8. I am grateful to Maria Kholodilova for drawing my attention to these data.

and other *dem*-based correlatives were displaced to their marked stylistic (archaic) variants. This perfectly corresponds to our theory.

Interrogative-indefinite affinity We are not aware of any information on the licensing of indefinite readings of interrogatives in Old Czech. However, all other Slavic languages in our sample and in Gärtner (2009) are [%i=i], which makes this status a plausible assumption for Old Czech as well. In addition, modern Czech licenses indefinite readings of *wh*-pronouns at least in some modal constructions (Šimík 2009).

1.4.2 Serbo-Croatian [WH]

Readings Only the universal interpretation is available. For example, Arsenijević (2009) has proposed an analysis equating correlatives with conditional sentences based on Serbo-Croatian data.

- (16) [*Ko ima magarca*], *taj ga i bije*.
REL.ANIM has donkey that CL.ACC and beats
‘Anyone who has a donkey beats it.’ (Arsenijević 2009, 142)

One of the arguments that Arsenijević uses to support his analysis, and one which is quite important alongside other languages in our sample, is that the conditional subordinator can optionally be inserted into the relative clause:

- (17) [*Ko tebe ako nečim udari*], *ti tome vrati istom merom*
who you.ACC if something.INST hits you that.one.DAT return.IMP same.INS
measure.INS
‘If anyone hits you with something, hit him in the same way as he hit you.’
‘Whoever hits you with something, hit him in the same way as he hit you.’
(Arsenijević 2009, 141)

Interrogative-indefinite affinity Serbo-Croatian is explicitly described as [%i=i] by Arsenijević (2009, 144):

- (18) *Ako tebe ko nečim udari, ti idi kući*.
if you.ACC who something.INS hits you go home
‘If anyone hits you with something, go home.’ (Arsenijević 2009, 144)

1.4.3 Modern Russian and other Slavic [WH]

Readings With varying degrees of explicitness, the same situation as in Serbo-Croatian is described for other modern Slavic languages. For example, as Nikunlassi (2008, 108) observes, correlatives in modern Standard Russian always involve universal quantification and can be paraphrased through conditional constructions. Similar parallels between conditionals and correlatives in Slavic are observed in Izvorski (1996) for Bulgarian.

Middle Russian used to also have a different construction, which used the pronoun *koto-ryj* ‘which’ with an optional internal head; this construction is still marginally possible in the

modern colloquial language (Kholodilova 2014, 5.1.3). These could have definite interpretations:

- (19) A [*kotoraja* *gsdr'* *lošed* *poslanaja* *s* *nim*] <...> *i*
 and REL.NOM.SG.F master horse.NOM.SG send.PTCP.NOM.SG.F with he.INS and
ta *lošed* *stala* *v* *Volodimere*
 that.NOM.SG.F horse.NOM.SG stay.PST.SG.F in Vladimir.LOC.SG
 ‘As for **the horse that** was sent with Stephan, **that horse** stayed in the city of Vladimir.’
 (Mitrenina 2010, 62)

However, Mitrenina (2010) argues that these constructions should more properly be called ‘pseudo-correlatives’, and the *kotoryj* is actually an indefinite pronoun or determiner rather than a relativization marker; the ‘correlate’ in the main clause is bound according to general rules of anaphora. According to this analysis, then, this Middle Russian construction is excluded from our sample.

Interrogative-indefinite affinity Russian is included in the list of [%i=i] languages in Gärtner (2009, 13).

1.5 Iranian

1.5.1 Ossetic [WH]

Readings In Ossetic, simple correlatives can have the universal and definite readings (Belyaev 2014a):

- (20) [*didinž-ət3 sə čəžg-3n ba-l3var kot:-aj*], *fet:-on wəj fəd-ə*
 flower-PL REL girl-DAT PV-present do-PST.2SG see.PFV-1SG that.GEN father-GEN
 ‘I saw the father **of the girl who** you gave flowers to.’ (Belyaev 2014a, 276–277)

- (21) [*uroč-ə čī n3 wəd-i*], *wəj direktor-m3 a-s3w-3d*
 lesson-IN REL.ANIM.NOM NEG be-PST.3SG that.DEM headmaster-ALL PV-go-IMP.3SG
 ‘Let **whoever** didn’t come to the lesson go to the headmaster.’ (Belyaev 2014b, 199)

However, Ossetic also has multiple correlatives, which are a separate construction with a different set of properties. The main semantic difference between simple and multiple correlatives is that the latter may only have a quantificational reading:

- (22) [*k3m-3n sə čəžg j3= ž3rd3-m3 f3-səd-iš*], *wəj-ə ra-k^wart:-a*
 who-DAT REL girl his heart-ALL PV-go-PST.3SG that.DEM-GEN PV-ask-PST.3SG
 ‘Everyone married **whichever** girl he liked’, lit. ‘Who liked **which** girl, (he) married her.’
 (Belyaev 2014b, 201)

This sentence cannot mean that a specific young man like a specific girl and married her; it can only have a quantificational interpretation. Other languages that have multiple correlatives, such as Hindi (Srivastav 1991, 670), do allow specific interpretations.

Unlike simple correlatives, where the relative markers/subordinators have already diverged from interrogatives proper and form a separate lexical class, pronouns used in multiple

correlatives are *bona fide* interrogatives; in particular, $k^wə$ ‘when’ can be used in simple correlatives, but not in questions or multiple correlatives, while $kəd$ ‘when’, conversely, can be used in questions and multiple correlatives, but not in simple correlatives. Multiple correlatives also do not have such a strict demonstrative requirement as simple correlatives; for example, in (22), only the direct object is overtly expressed by a demonstrative, the subject, coreferent with *či* ‘who’, is pro-dropped. Thus the construction where only a generalizing reading is available is both more formally connected to interrogatives and closer in its syntax to standard discourse anaphora.

Interrogative-indefinite affinity Ossetic does not allow using interrogative as indefinites in embedded contexts. However, this can in part be explained by syntactic reasons: interrogatives and the majority of subordinators (including conditional $k^wə$) compete for the preverbal position (Erschler 2012; Belyaev 2014a). The fact that Ossetic has a series of indefinite pronouns based on the combination of negation *ni-* and interrogatives suggests that it used to license indefinite readings of interrogatives in negative contexts at some point in the past.

1.6 Indo-Aryan

1.6.1 Old Indic [DEM]

The situation in the oldest stage of Indic – Vedic Sanskrit – is similar to that of Greek, which is not unexpected since the relativizers of both languages have the same etymon, $*yo-$. Ordinary indicative correlatives mostly have a definite reading.

- (23) *sóma* [*yás* *te* *mayobhúva* *ūtáyah* *sánti*
 soma:VOC REL.NOM.PL.F yours delightful:NOM.PL.F means.of.help:NOM.PL.F be:PRS.3PL
dāsúṣe] *tābhir* *no* *avitā* *bhava*
 worshipper.DAT those:INS.PL us helper:NOM be:IMP
 ‘Soma, **which** delightful means of help are yours for the worshipper, **with** those be our helper.’
 (RV 1.91.9)

The universal reading often has special marking in the form of a subjunctive.

- (24) [*yás* *túbhyaṃ* *dāśān*] *ná* *tám* *áṃho* *ásnavat*
 REL.NOM.SG you.DAT honour:PRS.SBJV.3SG not that:ACC fear reach:PRS.SBJV.3SG
 ‘**Whoever** honours you, fear shall not reach **him**.’
 (RV 2.23.4b)

Like in Ancient Greek, indicative correlatives also sometimes have a universal reading. In the absence of a detailed semantic study like that of Probert (2015) on Greek, it is unclear whether these have a special meaning. Taken together, the state of affairs in the two oldest IE language to preserve the $*yo-$ relativizer suggests that the core meaning of such constructions is that the definite reading is the original state of affair. This was in fact the view of Sturtevant (1930), who argued that $*k^wi-$ / $*k^wo-$ was used in generalizing relative clauses and $yo-$ in definite ones (Sturtevant 1930, 148). We should note that the originally demonstrative function of $*yo-$ is not beyond doubt, although it is the common view.

1.6.2 Hindi [DEM]

Hindi, as most other modern Indo-Aryan languages, employs correlatives as the main, if not the only, strategy of relativization. Correlative structures permit both definite and universal readings. Only the definite reading is available in (25a), while (25b) has the universal reading due to the presence of an overt habitual operator. In Hindi, this is a strict requirement (Dayal 1995, 189).

(25)

- a. [*jo laRki tez hai*] *vo aksar safal hotii hai*
 REL girl smart is she often successful HAB is
 ‘The girl who is intelligent is often successful.’ (unique individual)
- b. [*jo laRki tez hotii hai*], *vo aksar safal hotii hai*
 REL girl smart HAB is she often intelligent HAB is
 ‘A girl who is smart is often intelligent.’ (generic) (Dayal 1995, 189)

The relative pronoun, of course, has the same probably demonstrative origin as the Old Indic *yo-* series.

1.6.3 Kalasha [WH]

Readings Kalasha (Dardic) has a correlative construction which Bashir (1988, 358–359) calls the ‘incipient relative-correlative’ because it uses interrogatives instead of a dedicated series of relative pronouns. This makes Kalasha almost unique among Indo-Aryan languages in employing a *wh*-based relativization strategy. While Bashir does not discuss the semantics of correlatives, her examples shows that both readings are available:

- (26) [*ku’ra moc ki sarak’-una kas’-iu-dai*] *a’sa mai mōa*
 REL.ANIM man COMP road-LOC walk(PRS/FUT-ST)-3SG he my maternal.uncle
 ‘The man who is walking in the road is my maternal uncle.’ (Bashir 1988, 360)
- (27) [*kiy’a jayga’-una ki bo moc a’an*] *a khós-em’-dai*
 REL place-LOC COMP many people be(PRS/FUT)-3PL I like(PRS/FUT)-ST-1SG
 ‘I like a place where there are lots of people.’

As Bashir (ibid.) observes, the last sentence has no pronominal correlate and formally resembles a free relative. However, as shown further in the dissertation (Bashir 1988, 367ff.), free relatives in Kalasha have a totally different structure; hence, such examples are best interpreted as having a null correlate.

Interrogative-indefinite affinity There is no data available for Kalasha interrogatives in conditionals. However, it is clear that the language at least does not have robust interrogative-indefinite affinity, and seems to license the indefinite reading of interrogatives in certain contexts only, e.g. when accompanied by the adjective ‘other’:

- (28) *war’ek k’aas putr se*
 another who:OBL son that.SG:NOM
 ‘That one (was) a son of someone else.’ (Di Carlo 2010, 80)

1.6.4 Shina [WH]

Readings One more rare example of an Indo-Aryan language with *wh*-correlatives is Shina, another Dardic language. In this language, correlatives can have both definite and universal readings:

- (29) [*kesi* *myei madat thaw*] *zu* *kone* *gaw?*
 REL.ANIM.ERG my help did that where went
 ‘Where did **the one who** helped me go?’ (Hook 1997, 141)

- (30) [*thó-o jóo th-áa-e*] *to asá b-úu*
 YOU-AGP REL.INANIM do-PRF-2.M.SG TOP that be-FUT.3.F.SG
 ‘**Whatever** you did, **that** will be.’ (Schmidt and Kohistani 2008, 92)

Interrogative-indefinite affinity Judging from examples, Shina interrogatives can function as indefinites when embedded under conditionals:

- (31) [*kudí jo lap ban jée-ji lah-áa-n-oe*] *to*
 where what morsel arrangement anyone-ABSUP find-IPFV-AUX-prs-2.m.sg TOP
mo-r at-á
 me-DAT bring-IMP
 ‘If you find an arrangement for **any food** from anyone **somewhere**, bring it to me.’
 (Schmidt and Kohistani 2008, 91)

2 Uralic

2.1 Old and Modern Hungarian [WH]

Readings Modern Hungarian correlatives allow both universal and definite readings, as seen from the following examples from Lipták (2008):

- (32) definite
 [_{RC}*Amit* *Mari tegnap főzött*], *azt* *a levest* *nem ette meg*
 REL.INANIM:ACC Mari yesterday cooked that:ACC the soup:ACC not ate PV
János.
 John
 ‘John didn’t eat **the soup that** Mari cooked yesterday.’ (Lipták 2008, 289)

- (33) universal
 [_{RC}*Akit* *szeret Mari*], *azt* *meghívta a buliba.*
 REL.ANIM:ACC loves Mari that:ACC invited the party-TO
 ‘**Who(ever)** Mari loves, she invited to the party.’ (Lipták 2008, 293)

Correlatives in Old Hungarian, however, differed from modern correlatives in two important respects. First, the pronouns used were not bare interrogatives, but had to be preceded by the particle *vala* (derived from the verb ‘to be’). This series of indefinites had various functions, including a free choice interpretation. Second, Old Hungarian correlatives could only have a universal interpretation:

- (34) [*vala-my zyletendyk hym nemzeth*], *azth koronkeed wr*
 VALA-REL.INANIM be-born-FUT.3SG male issue that-ACC age-DIST lord
ystenuek aldozzad
 god-DAT sacrifice-IMP.2SG
 ‘whatever male issue is born, that should always be sacrificed to God’
 (Bende-Farkas 2015, 13)

Bende-Farkas explicitly states that these structures yield to a conditional analysis of correlatives; all of them could be paraphrased as conditionals. We conclude that Old Hungarian correlative structures strongly resembled conditionals and had only universal readings. The transition to Modern Hungarian presumably involved a semantic extension to definite contexts combined with the replacement of *vala*-interrogatives by bare interrogatives.

Interrogative-indefinite affinity No data is available for Old Hungarian. Modern Hungarian is [–i=i] according to Gärtner (2009, 13).

2.2 Udmurt [WH]

Readings Correlatives in Udmurt are based on the use of the *wh*-pronoun *kudiz* ‘which’ with an internal head, or the interrogatives ‘who’ and ‘what’. The examples in Belyaev (2012) from the Besermen dialect and the corpora demonstrate that both the universal and the definite readings are available:

- (35) [*kud-iz zor zor-i-z kâk nunal*], *so gâlt-i-z š'erâš'-ez*
 REL-3 rain rain-PST-3 two day that wash.out-PST-3 road-ACC
 ‘The rain that rained for two days washed out the road.’ (Belyaev 2012)

- (36) [*kin-len jonat-š'k-em-ez pot-e*], *so žog-ges*
 REL.ANIM-GEN cure-DETR-NMLZ-POSS.3SG want-PRS.3SG that fast-COMPAR
kat'ja-š'k-e
 heal-DETR-PRS.3
 ‘Who wants to be cured, (s/he) heals better.’
 (Udmurt Corpus: *Udmurt dunne*, 2007.10.19)

Interrogative-indefinite affinity Corpus examples show that Udmurt allows using interrogatives as indefinites in conditional sentences:

- (37) *Ti kilidj, mar šu-emjn vaškala-os-lj: «En viĵ; noš kin*
 you have.heard what say-PRF ancient-PL-DAT NEG kill[IMP.2SG] and who
vi-iz ke, sud-e šuro-z ».
 kill-PST.3SG if judgement-ILL happen-PRS.3SG

‘Ye have heard that it was said of them of old time, Thou shalt not kill; and whosoever shall kill shall be in danger of the judgment.’ (Matthew 5:21)

lit. ‘You have heard that it was said to the ancients: Do not kill; and if **someone** (lit. **who**) kills, he will be subject to judgement.’

(Udmurt Corpus: *Matfejleš žeč ivor*, 1990–2010)

3 Turkic

3.1 Old Turkic [WH]

Readings Correlatives (and finite relative clauses in general) are not typical for modern Turkic languages, but a correlative construction did exist in Old Turkic, based on interrogatives:

- (38) [*tavar kimnig ūklisä*] *bäġlik aġar käreġäyür*
 wealth REL.POSS if.grows bāg-hood to.him befits

‘Whoever acquires much wealth, being a *bāg* befits him.’

(Erdal 2004, 500)

Erdal provides the following note on the universal use of Old Turkic correlatives: ‘In what appears to have been the primary use, the pronoun serves as a variable argument, the content of the main clause being understood to apply for any value of that variable’ (p. 499). While definite uses are encountered in texts, according to Erdal they are secondary to the universal ones, so this is in fact a borderline case. Note the use of a conditional verb form in the subordinate clause.

Interrogative-indefinite affinity Erdal (2004, 210) notes that ‘The set of [interrogative-indefinite pronouns] unites different functions (as happens with such pronouns in a wide variety of languages): They serve with interrogative content, given in the first line of the table, but also as indefinites, i.e. they can also signify ‘anyone’, ‘anything’, ‘anywhere’ and ‘any’ respectively.’ This description is ambiguous between [+i=i] and [%i=i]. However, judging from the translation of the pronouns with the *any*-series and the examples provided, all of which, when indefinite, seem to contain a conditional, modal, or negative operator, we tentatively conclude that Turkic had a non-robust interrogative-indefinite affinity.

4 Tungusic

4.1 Udihe [WH/DEM]

Readings Some Tungusic languages, among them **Udihe** (Nikolaeva and Tolskaya 2001), have both *wh*-correlatives and *dem*-correlatives. Most Tungusic languages are not described in sufficient detail to allow us to draw any conclusions on the semantics of correlatives. Udihe is exceptional in this respect due to the existence of two comprehensive studies: the grammar of Nikolaeva and Tolskaya (2001), which contains a large number of examples of correlatives but

does not discuss their semantics in enough detail, and Baek (2016), which includes an areal study of *wh*-correlatives in the languages of Eastern Eurasia (Eastern Siberia and Northern China), with a particularly detailed description of Udihe. While there is no explicit discussion of the semantics of Udihe *wh*-correlatives as such, all of Baek's examples involve universal quantification. Furthermore, it is explicitly stated (p. 200) that the only two forms that can be used in subordinate correlative clauses are the simultaneous converb in *-mi* and the conditional converb in *-(l)isi*. According to the author, both involve conditional semantics (*ibid.*); the only difference is in switch reference. The following examples demonstrate *wh*-correlatives in Udihe:

- (39) *ilə olokto-mi, uta-la diga-i*
 where cook-SIM.CVB that-LOC eat-PTCP.PRS
 'He eats **wherever** he cooks.' (Baek 2016, 201)

- (40) *sii ono diana-isi-i, bii utə=bədə nixə-i-mi*
 thou how say-COND.CVB-2SG I that=PTCL do-PTCP.PRS-1SG
 'I do **however** you say.' (Baek 2016, 201)

According to Baek, such *wh*-correlatives are not necessarily the result of Russian influence but rather a wider Eastern Eurasian areal feature (which might also explain their existence in Ket). Unfortunately, Baek does not discuss *dem*-correlatives. However, they are mentioned in the grammar of Nikolaeva and Tolskaya (2001). For our purposes, it is enough to show that, unlike *wh*-correlatives, they do have a definite reading, as exemplified by the following:

- (41) *dem*-based
Nua-ni uti xoton-digi eme-gi-e-ni [si anana uta-du bagdi-e-i].
 he-3SG that city-ABL come-REP-PST-3SG you long.ago REL-DAT live-PST-2SG
 'He came from **the** same city you used to live in.' (Nikolaeva and Tolskaya 2001, 666)

Among the examples provided by Nikolaeva and Tolskaya, there is not a single one that involves a universal reading. Thus we can conclude with some certainty that the distribution of *dem*-correlatives and *wh*-correlatives corresponds to the distinction between definite and universal readings, as predicted by our hypothesis.

Interrogative-indefinite affinity No data is available for Udihe.

5 Yenisean: Ket [WH/DEM]

Ket (Yeniseian) has both *wh*-correlatives and *dem*-correlatives (Georg 2007; Nefedov 2012). While there is no explicit discussion of their semantics, the available examples show that *wh*-correlatives are used for universal RCs while *dem*-correlatives are used for definite RCs:

- (42) *dem*-based
 [*qode kuŋa qaj bat d{i}-asan-l-bed] tu-de da-o-n-a-dij*
 REL thou.DAT just PTCL 1-speak-PST-make this-F 3F-PST-PST-3COREF-reach
 'That (woman) I was about to tell you about (just) showed up.' (Nefedov 2012, 218)

(43) *wh*-based

[*ána* *òn* *du-b-ded*] *túde bilda itelem*
 REL.ANIM much 3-3N-read that all he.knows

‘Who reads a lot, knows everything.’

(Georg 2007, 174)

Note that the former construction is in fact indistinguishable from simple juxtaposition (‘I was about to tell you about that woman; she just showed up’), although the fact that it is discussed in reference descriptions such as Nefedov (2012) shows that it does have a degree of grammaticalization. The latter construction might, in fact, be a calque from Russian (Yulia Galyamina, p.c.), which makes this data point somewhat less reliable. Unfortunately, new data are difficult to obtain given that Ket is a moribund language.

Interrogative-indefinite affinity No data is available for Ket.

6 Basque [WH]

Readings Constructions that are described as correlatives in Northern Basque only have a universal reading (Rebuschi 2009). Rebuschi describes them as a subtype of conditionals.

(44) *Bainan* [*nor-k* *ere irau-nen bai-du akhabantza-raino*], *eta hura*
 but REL.ANIM-ERG ever last-PROSP AUX end-until and DEM
iza-nen da salbatua.
 be-PROSP AUX saved.SG

‘... but he that endureth to the end shall be saved.’

(‘Qui autem perseveraverit in finem, hic salvus erit.’)

(Haraneder 1740, Rebuschi 2009, 94)

There are several features here that are noteworthy. First, the verb in the correlative clause is marked by the prefix *bai(t)-*, which, as Rebuschi argues, is the same element that marks conditional clauses, and also certain series of *wh*-based indefinite pronouns. Second, the interrogative in the correlative clause must be accompanied by the particle *ere*, which is glossed as ‘ever’, but whose meanings include ‘also’ and ‘even’. Thus we are not dealing with a *bare wh*-word in the subordinate clause; yet, as far as can be seen from the description, *ere* in its use with interrogatives seems to be a specialized correlative marker. Third, the two clauses may also be connected by the conjunction *eta* ‘and’:

(45) [*Nor* *ere maite bait-dut*], *eta hura begira-tuko dut.*
 REL.ANIM ever love bait-AGT.3/EXP.1 and DEM preserve-PROSP AGT.3/EXP.1

‘Whoever I love, them I will look after.’

(Rebuschi 2009, 83)

This suggests a paratactic origin for this correlative structure. Among other things, this rules out an origin from left dislocation of a free relative or any other similar construction.

Interrogative-indefinite affinity Basque is classified as [–i=i] in Gärtner (2009, 13), which formally classifies the language as an exception to our generalization. However, Basque correlatives are not ‘true’ *wh*-correlatives in the sense that they use an explicit additional marker *ere*. Hence, a special context for licensing interrogative-indefinites is not really required.

7 Dravidian

Dravidian languages employ two major strategies of relativization: participial RCs and correlative RCs. The relationships between these two types has been much discussed in the literature. The traditional view of Dravidian syntax is that each sentence must have only one finite verb, cf. e.g. Caldwell (1913, 488). In this context, correlatives, a kind of finite subordination, were naturally viewed as a contact-induced feature that is due to Indo-Aryan influence. However, unlike Indic relative clauses, which use the *yo- pronominal series that originally probably had the demonstrative function (Frisk 1954–72; Chantraine 1980, s.v. *hos*), Dravidian languages use interrogatives as relativizing elements. Therefore, even if one assumes a degree of external influence, by and large this must have been an internal structural development. Therefore, Dravidian data are worth including in our typology alongside Indo-Aryan data. In this section, we will describe the relevant parameters for Old and Modern Tamil, two languages in this family for which correlatives seem to be described in most detail.

7.1 Modern Tamil [WH]

Readings Modern Tamil has two kinds of correlative structures. In both of them the relative phrase is expressed by an interrogative and resumed by a demonstrative in the main clause. In one construction, the subordinate clause is finite and marked by the sentence-final particle =*oo* (Lehmann 1993, §§2.66, 4.86; Ramasamy 1981); see (46) for an illustration. Such constructions are always interpreted as **definite** (Thomas Lehmann, p.c.).⁹

- (46) [*evan neerru va-nt-aan=oo*] *avan en tapi*
 REL.M yesterday come-PST-3SG.M=COMP he my brother
 ‘He who came yesterday was my brother.’ (Lehmann 1993, ex. 358)

In the second construction, the verb in the subordinate clause stands in the non-finite conditional form, which is marked by the additive particle =*um*. In the absence of interrogatives, such clauses are interpreted as concessive (Lehmann 1993, §2.55). When an interrogative is placed in the subordinate clause and resumed by a demonstrative in the main clause, this construction becomes a typical **universal** correlative structure:

- (47) [*enta paiyan mutalil va-nt-aal=um*], *antap paiyanukku anta peenaavaik*
 REL boy first come-PST-COND=ADD that boy-DAT that pen-ACC
koṭu
 give
 ‘Give the pen to whichever boy comes first.’ (Thomas Lehmann, p.c.)

Such clauses not only have universal semantics but are in fact syntactically indistinguishable from ordinary concessives with an interrogative-indefinite pronoun in the subordinate clause that is anaphorically connected to a main clause NP (see ex. 48).

As for definite correlatives, the data of Old Tamil (section 7.2) suggest that they only developed secondarily from conditional-based, universal correlatives.

9. Lakshmi Bai (1985) appears to claim that *all* correlatives in Tamil have the universal/indefinite reading. This presumably semantically differentiates them from participial relatives, which can have both definite and universal readings. However, other data on Modern Tamil do not confirm Lakshmi Bai’s generalizations (Thomas Lehmann, p.c.).

Interrogative-indefinite affinity Interrogatives in Tamil can be interpreted as indefinites in concessive clauses, even in the absence of any overt or covert correlate:

- (48) *yaar kuuppitt-aal=um, naan pook-a maatt-eeen*
 who call-COND=ADD I go-INF will
 ‘No matter **who** calls, I won’t go.’ (Thomas Lehmann, p.c.)

7.2 Old Tamil [WH]

Unlike Modern Tamil, correlatives were very rarely used in Old Tamil. The overwhelming majority of examples involve concessive clauses and have a universal interpretation:

- (49) [*etticai cel-in=um*] *atticai coru*
 REL.direction go-COND=ADD that.direction rice
 ‘**Whatever direction** we go that direction has rice.’
 (Purananuru 206.13, Thomas Lehmann, p.c.)

Like in the modern language, these clauses cannot be clearly separated from ordinary concessives or conditionals with *wh*-indefinites.

Correlatives that did not utilize conditional forms are very rarely encountered in texts. One such instance is with nonverbal predicates (Ramasamy 1981), which is explained as the consequence of nominals lacking non-finite forms (or any forms with verbal morphology, for that matter) in Lehmann (1998).

Therefore, we can conclude that in Old Tamil conditional correlatives were overwhelmingly predominant, and other types of correlatives were yet in a nascent state. It is difficult to draw definitive conclusions without a comprehensive study of both Old and Middle Tamil, but one can hypothesize that the extension from conditional to definite readings occurred gradually during later stages of the languages via a shift to other forms in dependent clauses.

8 East Caucasian

In East Caucasian, the main relativization strategy is invariably the participial prenominal gap construction. However, correlatives do exist in some languages, and for the most part, they have only a universal reading.

8.1 Kryz

Readings Authier (2009, 377) notes that in Kryz ‘[d]ans les relatives à pronom, les modes hypothétiques sont les plus fréquents, servant à former les relatives ‘indéfinies’. He calls this type of correlatives *relatives conditionnelles* and provides examples like the following:

- (50) [*hal-ir va-z kar taklif ar-na*], *hala adami.c-zina yi-ghin!*
 REL.ANIM-ERG 2-DAT work invitation do-COND that person-INS PV-draw.IMP
 ‘Si **quelqu’un** te propose du travail, va avec lui.’ (Authier 2009, 378)

Observe the use of the conditional in the above example: according to Authier, it is obligatory in universal correlatives. He notes that the definite reading is also available, when indicative

mood is used. However, in practice, all of his examples represent contexts that are ambiguous between a definite and a universal reading, as they involve unique referents. Consider the following example:

- (51) *hal-id q'ay-cu a-d an q'ay-i!*
REL.POSS-HUM die-PRF.F 3-HUM AN die-OPT
‘Celui **de qui** elle est morte, qu’il meure aussi!’ (Authier 2009, 380)

In this example, the possessor of the implicit subject of the verb ‘die’ is obviously unique, hence, the quantificational interpretation and the definite interpretation are extensionally equivalent. Therefore, at best, Kryz has both semantic types of correlatives differentiated by mood morphology. But in fact, it is more probable that the universal/conditional reading is the only one available.

Interrogative-indefinite affinity Kryz, in addition to correlatives, has bare interrogatives in conditional clauses, as in the following example:

- (52) [*hal-ir riki ġe-t'a-na*], *nabada riki ačuğ yi-yu vun!*
who-ERG door PV-strike-COND God.forbid door open do-DEONT 2
‘Si **qui que ce soit** frappe à la porte, garde-toi bien de (lui) ouvrir !’
(Authier 2009, 380)

In this example, the correlate is not overtly expressed, and the sentence can just as well be interpreted as a conditional: ‘If someone knocks at the door, God forbid you to open!’

8.2 Khwarshi [WH]

Readings The syntax of correlatives in Khwarshi (Tsezic) is similar. According to Khalilova (2009, 357), such correlatives use interrogatives, and the verb in the subordinate clause stands in the General tense, which has habitual semantics:

- (53) [*q'arλ'a hibo b-āh*], *izzu-qo golluč himon*
early REL.ANIM HPL-stand.GNT that.PL.(P)OBL-CONT everything thing(G4).ABS
l-ēq^w
G4-happen.GNT
‘One who gets up early manages to do everything.’ (Khalilova 2009, 357)

This implies that correlatives are universal, although this is not explicitly stated in the grammar.

Interrogative-indefinite affinity Khalilova (2009) does not discuss the subject explicitly, but notes that the interrogative *doco* ‘(how) many’ can be used not only in interrogative clauses, but also as an indefinite in concessives:

- (54) [*doco Ø-ul'-še Ø-eč-lon*], *uže isuyol Ø-oⁿk'-i*
many G1-be.afraid-IPFV.CVB G1-be-CONC boy(G1) that.APUD.LAT G1-go-PST.W
‘No matter **how** (he) was afraid of him, the boy went to his place.’
(Khalilova 2009, 154)

This suggests that Khwarshi is [%i=i].

8.3 Tsez [WH]

Readings Interrogative-based correlatives are described for Tsez (Tsezic) in Polinsky (2015, 293–298). No discussion of their semantics is provided. However, all examples permit quantificational interpretation, and many of them are explicitly translated with *whoever* type pronouns. Notably, there seems to be no strict requirement for a correlate in the main clause, implicit or explicit. According to Polinsky, the following sentence ‘is ambiguous in referring to the dog and its owner’ (p. 298):

- (55) [*nāzo uži-z y^way-ä mi han-ä*] *šuλ'-ir ža!*
 REL.OBL boy-GEN2 dog-ERG 2SG.ABS bite-PST.W.INTERR forget-CAUS.IMP DEM.ABS
 ‘**Whoever** boy’s dog bit you, forget **it/him**.’ (Polinsky 2015, 298)

Interrogative-indefinite affinity Polinsky (2015) does not provide any specific examples, but her discussion of interrogatives suggests that Tsez is [%i=i]: ‘Interrogative words are part of the set of indeterminate (indefinite) lexical items, which means that they can have an interrogative proper interpretation or an indefinite interpretation (for further discussion of the indefinite series, see Ch. YY[Particles]). For example, the word *šebi* ‘what/who’ can also mean ‘something’, and its interpretation depends on the nature of the clause in which it occurs.’ (Polinsky 2015, 185)

8.4 Standard Dargwa [WH]

Readings Mutalov (2017) describes two correlative constructions in Standard Dargwa, both *wh*-based. In one, which he calls *general correlative* (*obščekorreljativnaja*), the verb in the subordinate clause has the conditional / concessive suffix *-alra*; the construction has a universal interpretation:

- (56) general correlative
 [*quli či uħnawq-alra*], *il suratli-či*
 room.LOC[LAT] REL.ANIM M:come.IPFV-CONC.3SG that picture-SUPER[LAT]
herik’uli sa-j
 M:look.IPFV:CVB COP-M
 ‘**Whoever** comes to the room, **he** looks at the picture.’ (Mutalov 2017, 73)

The second construction, which Mutalov calls *specific correlative* (*častnokorreljativnaja*), has a similar form, but the subordinate clause carries the indirect question or uncertainty suffix *-il* (and morphophonological variants thereof). The origin of the indirect question marker and its original function, as well as its relationship to other similar suffies including the conditional suffix, is unclear.

- (57) specific correlative
 [*darsli-či či q’ani?ubl-il*], *il ajzab*
 lesson-SUPER[LAT] REL.ANIM be.late.PFV:CVB-IQ that M:stand.up:OPT[3]
 ‘**Who** is late to the lesson, let **him** stand up.’ (Mutalov 2017, 73)

According to Mutalov, the difference between the two constructions is that general correlatives always have a universal reading, while specific correlatives refer to definite individuals. Unfortunately, all examples provided for specific correlatives have an ambiguous interpretation, so in this case we can only rely on the author's intuition as a native speaker. It is possible, however, that specific correlatives actually allow both readings, but gives the impression of being definite-only through opposition to the universal construction.¹⁰

Interrogative-indefinite affinity In the same article, Mutalov (2017) demonstrates that so-called general correlatives are formally no different from normal conditional clauses. In particular, they can function without a correlate, as in the following example:

- (58) [č̣i wak'-alra] iš raziʔirar
 who M:come.IPFV-CONC.3 this be.happy.IPFV:HAB.3
 'Whoever_i comes, he_{j/*i} (this one) is happy.' (Mutalov 2017, 73)

The pronoun *iš* used in the main clause in (58) is a proximal demonstrative that can only have a deictic meaning and cannot refer to a referent mentioned earlier in the discourse. Therefore, it refers to a different person than the one who enters the room. This example shows that conditional clauses license the indefinite reading of interrogatives in Standard Dargwa.

9 Sino-Tibetan

9.1 Chinese [WH]

Readings It is well-known that Chinese possesses a correlative-like construction where both NP_{rel} and NP_{mat} are interrogative:

- (59) [shuí xiān lái], shuí xiān chī
 who first come who first eat
 'Whoever first comes first eats.' (Luo and Crain 2011, 756)

It is not clear whether such constructions belong to the class of correlatives proper. In any event, they are outside of the scope of this paper because they clearly result from a different diachronic scenario, unless one assumes that interrogatives replaced demonstratives/personal pronouns at some stage (for which there is no evidence). However, Chinese does also allow a more conventional kind of correlative structure:

- (60) [kàn shuí kěwù], jiù duǒkāi tā
 see who hateful then avoid him
 'I avoid whomever is hateful.' (Lu 2002, 94, via Baek 2016, 198)

Two features of this structure are important for our analysis. First, these correlatives only have a universal reading; in fact, Cheng and Huang (1996, 150) analyze them as a subtype of conditionals with *ruguo* 'if' omitted. This is related to the second important observation, namely, that it is obligatory to use *jiù* 'then' in the main clause in such correlative sentences. This

10. Tamil correlatives might be treated as universal-only in Lakshmi Bai (1985) for a similar reason, viz. due to their opposition to definite-only participial relative clauses; in fact, correlatives in Tamil can have both readings. For more information, see section 7.

means that these correlatives are either historically derived from or synchronically identical to conditional sentences; the interrogative serves as an indefinite element.

Interrogative-indefinite affinity Chinese is listed in Gärtner (2009, 13) as a [%i=i] language.

9.2 Tibetan [WH]

Readings Tibetan correlatives are based on interrogatives in the subordinate clause and necessarily involve the marker *na* ‘if’ (Cable 2009). Cable shows that Tibetan correlatives can have both the definite and the universal readings. The sentence in (61), for instance, is translated in the universal sense; yet Cable also notes that this is only a convention that he follows, and that the sentence ‘is reported as felicitous in contexts in which there is a single yak which the addressee has purchased, and the speaker wishes to communicate that they have killed that particular yak’ (Cable 2009, 199).

- (61) [*Khyodra-s gyag gare nyos yod na*] *nga-s de bsad pa yin*.
 you-ERG yak what buy AUX if I-ERG that kill PRF AUX
 ‘I killed whatever yak you bought.’
 ‘I killed the (particular) yak you bought.’ (Cable 2009, 198)

Interrogative-indefinite affinity There is no conclusive data on interrogative-indefinites in Tibetan. However, since Tibetan correlatives use an explicit conditional element *na* ‘if’, the link to conditional-licensed interrogatives is transparent. Also worth noting is that Gärtner lists Newari, another Tibeto-Burman language, as a [%i=i] language.

10 Niger-Congo

Correlatives are a dominant strategy in several West African languages belonging to the Mande and Gur language families. In principle, correlatives in these languages have both definite and universal readings, but the way the universal reading is expressed supports our hypothesis.

10.1 Mande [DEM]

10.1.1 Both readings available

In **Kita** (Mande > Niger-Congo), the correlative marker *mín* is derived from a demonstrative, according to Creissels (2009). The universal reading is possible, but only in the presence of the ‘if’ marker, otherwise absent:

- (62) definite
 [*ídi wori mín tà*] *à dú n mà!*
 2ACP.POS money.DEF REL take 3 give 1SG POSTP
 ‘Return to me the money that you’ve taken!’ (Creissels 2009, ex. 14d)

(63) universal

[**ní min** *bòyi-da*] à *b'* **ó** *tà*
if REL fall-ACP.POS 3 INACP.POS DEM gather

‘He gathers **whatever** falls down.’

(lit. ‘If **which** falls down, he gathers **that**.’)

(Creissels 2009, ex. 22b)

The same situation obtains in Mandinka (Mande), where the correlative is marked by cognate *ménj*. Unmarked correlatives only have a definite reading, and the subordinator ‘if’ must be used to get the universal reading:

(64) definite

[**Mus-ôo ménj** *ηa nins-ôo jé*], **wo** *táa-tá a ñiniη*
woman-D REL ACP.POS COW-DEF see DEM go-ACP.POS 3SG search

‘The woman **who** had seen the cow went looking for it.’

(Creissels and Sambou 2013, 465)

(65) universal

[**Niη mōo ménj** *kó a lafi-ta η jé-la*], **a** *ñiniηkaa fólóo*
if person.DEF REL QUOT 3SG want-ACP.POS 1SG see-INF 3SG ask first
a tóo la
3SG name.DEF OBL

‘**Whoever** says s/he wants to see me, ask **him** his name first.’

(Creissels and Sambou 2013, 475)

Thus we find that in all these languages, basic correlatives only have a definite reading. Universal ‘correlatives’ are effectively a subtype of conditionals, and their grammaticalization represents a subtype of the scenario that we are proposing in the paper. Namely, a full, non-pronominal NP is interpreted as an indefinite within the scope of a conditional, and resumed by a demonstrative or another referring expression in the main clause. The only difference from *wh*-correlatives is that in the latter, only the indefinite reading is available and only in the scope of a conditional, making the universal reading primary. No such constraint applies to noun phrases, therefore, in such languages both definite and indefinite readings are possible; they are only distinguished by the marking of the subordinate clause.

10.1.2 Definite reading only

While most Mande languages of West Africa allow both definite and universal readings for correlatives, but the latter require additional conditional marking. But in some languages of this family, the universal reading seems to be altogether unavailable for correlatives, and it is expressed using entirely different constructions. A case in point is Bambara:¹¹

(66) definite

[**nègε mín** *díra à mà*], **ò** *dè yè nìn yé*

‘The ring **which** was given to him, it is this one.’

(Dumestre 2003, 367)

11. Dumestre (2003) and Welmers (1976) do not provide any gloss, and we have decided to refrain from providing our own due to insufficient knowledge of Bambara. However, the identification of the relevant components of the correlative construction (highlighted in bold) is secure enough.

- (67) universal
 [*màrifà bé mǎḡǎ ó mǎḡǎ dè bólo*], *í bé màrifà cì í fàso dè kóson*
 ‘Every person who has a gun uses it for their homeland.’ (Dumestre 2003, 369)

According to Dumestre’s description, definite restrictive relative clauses are usually encoded by correlatives (66). Relative clauses with the semantics of universal quantification, however, utilize a distinct construction which the author calls ‘proposition impliquante à relateur intra-propositionnel *ó*’ (implicative propositions with the inter-propositional connective *ó*). The syntax of these latter is completely different from that of correlatives: they use a different marker *ó*, which connects two tokens of the same noun (e.g. *mǎḡǎ ó mǎḡǎ* ‘every person’ in 67 above). From this description and the examples provided one can conclude that correlatives in Bambara cannot have the universal reading.

According to Diagana (1995, 465–466), correlative relative clauses in Soninke (Mande), whose marker is also derived from a demonstrative, are always definite, both formally and semantically:

- (68) [*ó gǎ dà góllè ké bé dàbári lẹ’ki*] *á xòté n yà ní*
 we SUB PRED the.work DEM REL do today it difficult DEF be PRED
 ‘The work that we have done today is difficult.’ (Diagana 1995, 463)

Finally, while it is not stated explicitly, the description of Vai (Welmers 1976) strongly indicates that correlatives in this language are only used in definite contexts:

- (69) [*kài mú ’à à mà*], *à bè níè*
 ‘The man who did it is here.’ (lit. ‘Man TOP did it, he is here.’) (Welmers 1976, 124)

The marker of relativization *mú* is a topic particle, but the relative NP itself is generally left unmarked, i.e. it is identical to an ordinary nominal NP. Welmers (1976) states that ‘[t]he relative construction (...) is a ‘suspended topic’, which is then recapitulated by a subject pronoun’ (pp.123–124). If this is indeed the case, it follows that such correlatives cannot have a universal reading, as topics are normally definite or, at most, indefinite specific.

10.2 Senufo: Supyire [DEM]

Correlatives in Supyire (Senufo) are almost identical to those in Kita and Mandinka.¹² Here, as well, unmarked correlatives have only a definite reading, and universal sentences must use the conditional¹³ marker *ká*:

12. Carlson (1994, 488) links the correlative marker *ké* to the identical locative question marker *ké* ‘where’. However, he also notes that ‘[b]oth the relative *ké* and interrogative *ké* are quite likely derived from the gender 2 singular demonstrative *ḡké*’. Considering the data of other languages of the region with similar constructions, including Bambara, a direct diachronic connection between the relative and demonstrative marker seems more likely than a development from interrogative ‘where’ to relative.

13. Carlson actually distinguishes between ‘conditional’ and ‘distributive’ relativization; the latter, he claims, may be expressed by the normal correlative construction. However, all of the examples provided can be construed as being definite. Truly universal relative structures seem to require conditional marking. A good case in point is 71, where the interpretations ‘Whatever child she got would die’ and ‘Those children she got used to die’ have rather different implications.

- (70) definite
 [Yaagé ka a ù bò ké], mu a kùrù cé.
 thing.DEF it PRF him kill REL you PRF it(EMPH) know
 ‘You know **the thing that** killed him.’ (Carlson 1994, 488)
- (71) universal
 [U ahá pyàŋi ògé-mù tà ké], ura asi ñ-tòrò.
 she COND child.DEF DEM-REL get REL it(EMPH) HAB.SEQ INTR-pass
 ‘**Whatever** child she got would die.’ (Carlson 1994, 508)

Thus, just as in the Mande case described above, basic correlatives in Supyire only have the definite reading, and the universal correlatives are a subtype of conditional clauses.

References

- Arsenijević, Boban. 2009. “{Relative {conditional {correlative clauses}}}. In Lipták 2009, 131–156.
- Authier, Gilles. 2009. *Grammaire kryz, langue caucasique d’Azerbaïdjan, dialecte d’Alik*. Leuven: Peeters.
- Baek, Sangyub. 2016. “Tungusic from the perspective of areal linguistics.” PhD diss., Hokkaido University.
- Bashir, Elena L. 1988. “Topics in Kalasha syntax: an areal and typological perspective.” PhD diss., University of Michigan.
- Bauer, Jaroslav. 1972. “Phénomènes centraux et périphériques dans l’évolution du système syntaxique de la langue tchèque.” In *Syntactica slavica: vybrané práce ze slovanské skladby*, 1:35–46. Brno: Universita J. E. Purkyně.
- Belyaev, Oleg. 2014a. “Anaphora in Ossetic correlatives and the typology of clause combining.” In *On diversity and complexity of languages spoken in Europe and North and Central Asia*, ed. by Pirkko Suihkonen and Lindsay Whaley, 275–310. Studies in Language Companion Series 164. Amsterdam and Philadelphia: John Benjamins.
- Belyaev, Oleg I. 2012. “Korreljativnaja konstrukcija i konstrukcija otnositel’nogo predloženijsa s vnutrennej veršinoj v besermjanskom dialekte udmurtskogo jazyka” [Correlatives and internally-headed relatives in Beserman Udmurt]. In *Finno-ugorskije jazyki: fragmenty grammatičeskogo opisanija: Formal’nyj i funkcional’nyj podxody*, [Finno-Ugric languages: elements of grammatical description. Formal and functional approaches], ed. by Ariadna I. Kuznecova, Natalia V. Serdobolskaya, Svetlana Ju. Toldova, Sergey S. Say, and Elena Ju. Kalinina. *Studia philologica*. Moscow: Jazyki slavjanskix kul’tur.
- . 2014b. “Korreljativnaja konstrukcija v osetinskom jazyke v tipologičeskom osveščeni” [Ossetic correlatives in typological perspective]. Cand. thesis, Lomonosov Moscow State University.
- Bende-Farkas, Ágnes. 2015. “The landscape of universal quantification in Old Hungarian.” *Acta Linguistica Hungarica* 62 (3): 223–261.

- Bittner, Maria. 2001. "Topical Referents for Individuals and Possibilities." In *Proceedings of SALT 11*, ed. by Rachel Hastings, 36–55. Ithaca: CLC.
- Cable, Seth. 2009. "The syntax of the Tibetan correlative." In Lipták 2009, 195–222.
- Caldwell, Robert. 1913. *A comparative grammar of the Dravidian or South-Indian family of languages*. 3rd edition. London: K. Paul, Trench, Trübner & Co., Ltd.
- Carlson, Robert. 1994. *A grammar of Supyire*. Mouton Grammar Library 14. Berlin: Mouton de Gruyter.
- Chantraine, Pierre. 1980. Φ – Ω . Vol. IV-2 of *Dictionnaire étymologique de la langue grecque: histoire des mots*. Paris: Klincksieck.
- Cheng, Lisa L. S., and C. T. James Huang. 1996. "Two types of donkey sentences." *Natural Language Semantics* 4 (2): 121–163.
- Creissels, Denis. 2009. "Les relatives corrélatives: le cas du malinké de Kita." *Langages* 174:39–52.
- Creissels, Denis, and Pierre Sambou. 2013. *Le mandinka: phonologie, grammaire, textes*. Paris: Karthala.
- Dayal, Veneeta. 1995. "Quantification in correlatives." In *Quantification in Natural Languages*, ed. by Emmon W. Bach, Eloise Jelinek, Angelika Kratzer, and Barbara H. Partee, 2:179–205. Dordrecht: Kluwer.
- Di Carlo, Pierpaolo. 2010. *I Kalasha del Hindu Kush: ricerche linguistiche e antropologiche* [in Italian]. Florence: Firenze University Press.
- Diagana, Ousmane Moussa. 1995. *La langue soninkée*. Paris: Éditions L'Harmattan.
- Dumestre, Gérard. 2003. *Grammaire fondamentale du bambara*. Paris: Éditions Karthala.
- Erdal, Marcel. 2004. *A Grammar of Old Turkic*. Handbook of Oriental studies. Central Asia. Leiden and Boston: Brill.
- Erschler, David. 2012. "From preverbal focus to preverbal "left periphery": The Ossetic clause architecture in areal and diachronic perspective." *Lingua* 122 (6): 673–699.
- Frisk, Hjalmar. 1954–72. *Griechisches etymologisches Wörterbuch*. Heidelberg: Carl Winter Universitätsverlag.
- Garrett, Andrew. 1994. "Relative clause syntax in Lycian and Hittite." *Die Sprache* 36:29–69.
- Gärtner, Hans-Martin. 2009. "More on the indefinite-interrogative affinity: the view from embedded non-finite interrogatives." *Linguistic Typology* 13:1–37.
- Georg, Stefan. 2007. *Introduction, phonology, morphology*. Vol. 1 of *A descriptive grammar of Ket*. Folkestone.
- Hale, Kenneth L. 1976. "The adjoined relative clause in Australia." In *Grammatical categories in Australian languages*, ed. by R. M. W. Dixon, 78–105. Canberra: Australian Institute of Aboriginal Studies.
- Hale, Mark. 1987. "Notes on Wackernagel's law in the language of the Rigveda." In *Studies in memory of Warren Cowgill*, ed. by Calvert Watkins, 38–50. Berlin: De Gruyter.

- Harris, Alice C. 1994. "On the history of relative clauses in Georgian." In *Non-Slavic languages of the USSR: papers from the Fourth Conference*, ed. by Howard I. Aronson, 130–142. Columbus, OH: Slavica.
- . 2000. "Word order harmonies and word order change in Georgian." In *Stability, variation and change of word-order patterns over time*, ed. by Rosanna Sornicola, Erich Poppe, and Ariel Shisha-Halevy, 133–163. *Current Issues in Linguistic Theory* 213. Amsterdam: John Benjamins.
- Held, Jr., Warren H. 1957. *The Hittite relative sentence*. Language Dissertations 55. Baltimore, MD: Linguistic Society of America.
- Hendery, Rachel. 2012. *Relative clauses in time and space*. Typological Studies in Language 101. Amsterdam: John Benjamins.
- Hewitt, Brian George. 1987. *The Typology of Subordination in Georgian and Abkhaz*. Empirical Approaches to Language Typology 5. Berlin: Mouton de Gruyter.
- Hoffner, Harry A. Jr., and H. Craig Melchert. 2008. *Reference Grammar*. Bk. 1 of *A Grammar of the Hittite Language*. Winona Lake, IN: Eisenbraus.
- Hook, Peter Edwin. 1997. "Relative clauses in Eastern Shina." In *Indo-European, Nostratic and beyond: Festschrift for Vitalij V. Shevoroshkin*, ed. by Peter Michalove, Irèn Hegedüs, and Alexis Manaster-Ramer, 140–154. Washington, DC: Institute for the Study of Man.
- Izvorski, Roumyana. 1996. "The syntax and semantics of correlative proforms." In *Proceedings of NELS 26*, ed. by Kiyomi Kusumoto, 133–147. Amherst, MA: GLSA.
- Khalilova, Zaira. 2009. *A grammar of Khwarshi*. Utrecht: LOT.
- Kholodilova, Maria A. 2014. "Otnositel'nye pridatočnye." In *Materials for a corpus-based Russian grammar* (<http://rusgram.ru>), As manuscript.
- Lakshmi Bai, B. 1985. "Some notes on correlative constructions in Dravidian." In "For Gordon H. Fairbanks." *Oceanic Linguistics Special Publications*, no. 20, 181–190.
- Lehmann, Thomas. 1993. *A grammar of Modern Tamil*. Pondicherry Institute of Linguistics and Culture Publication 1. Pondicherry: Pondicherry Institute of Linguistics / Culture.
- . 1998. "Old Tamil." In *The Dravidian languages*, ed. by Sanford Steever, 75–99. London: Routledge.
- Lipták, Anikó. 2008. "On the correlative nature of Hungarian left peripheral relatives." In *Dislocation: syntactic, semantic and discourse perspectives*, ed. by Benjamin Shaer, Philippa Cook, Werner Frey, and Claudia Maienborn, 398–430. London: Routledge.
- , ed. 2009. *Correlatives cross-linguistically*. Language Faculty and Beyond 1. Amsterdam: John Benjamins.
- Lu, Shuxiang. 2002. *Hanyu yufa lunwenxuji* [Collection of papers on Chinese grammar]. Liaoning: Liaoningjiaoyuchubanshe.
- Luo, Qiong-Peng, and Stephen Crain. 2011. "Do Chinese wh-conditionals have relatives in other languages?" *Language and Linguistics* 12 (4): 753–798.
- McCawley, James D. 1976. "Relativization." In *Japanese generative grammar*, ed. by Masayoshi Shibatani, 295–306. *Syntax and Semantics* 5. New York: Academic Press.

- Mitrenina, Olga. 2010. "Correlatives: Evidence from Russian." In *Formal Studies in Slavic Linguistics: Proceedings of Formal Description of Slavic Languages 7.5*, ed. by Gerhild Zybatow, Philip Dudchuk, Serge Minor, and Ekaterina Pshehotskaya, 135–152. Linguistik International 25. Frankfurt am Main: Peter Lang.
- Mutalov, Rasul O. 2017. "Korreljativnye konstrukcii v darginskom jazyke" [Correlative clauses in Dargwa]. *Izvestija Dagestanskogo gosudarstvennogo pedagogičeskogo universiteta. Obščestvennye i gumanitarnye nauki* 10 (4): 72–76.
- Nefedov, Andrey. 2012. "Relativization in Ket." In *Clause linkage in cross-linguistic perspective*, ed. by Volker Gast and Holger Diessel, 1–36. Trends in Linguistics 249. Berlin: Mouton de Gruyter.
- Nikolaeva, Irina, and Maria Tolskaya. 2001. *A grammar of Udihe*. Mouton Grammar Library 22. Berlin and New York: Mouton de Gruyter.
- Nikunlassi, Ahti. 2008. *Primestoimenno-otnositel'nye konstrukcii v sovremennom russkom jazyke* [Adpronominal relative clauses in modern Russian]. *Slavica Helsingiensia* 33. Helsinki: Helsinki University Press.
- Nordlinger, Rachel. 2006. "Spearing the emu drinking: subordination and the adjoined relative clause in Wambaya." *Australian Journal of Linguistics* 26, no. 1 (subordination in Australian Aboriginal languages): 5–29.
- Polinsky, Maria. 2015. "Tsez syntax." Draft.
- Probert, Philomen. 2015. *Early Greek relative clauses*. Oxford: Oxford University Press.
- Probert, Philomen, and Eleanor Dickey. 2016. "Six notes on Latin correlatives." In *Early and Late Latin: continuity or change?*, ed. by J. N. Adams and Nigel Vincent, 390–419. Cambridge: Cambridge University Press.
- Ramasamy, K. 1981. "Correlative relative clauses in Tamil." In *Dravidian syntax*, ed. by S. Agesthalingom and N. Rajasekharan Nair, 363–380. Annamalainagar: Annamalai University Publications in Linguistics.
- Rebuschi, Georges. 2009. "Basque correlatives and their kin in the history of Northern Basque." In *Lipták 2009*, 81–130.
- Schmidt, Ruth Laila, and Razwal Kohistani. 2008. *A grammar of the Shina language of Indus Kohistan*. Wiesbaden: Harrassowitz Verlag.
- Šimík, Radek. 2009. "Hamblin pronouns in modal existential wh-constructions." In *Formal Approaches to Slavic Linguistics 17: the Yale meeting 2008*, 187–202. Ann Arbor, MI: Michigan Slavic Publications.
- Srivastav, Veneeta. 1991. "The syntax and semantics of correlatives." *Natural Language and Linguistic Theory* 9 (4): 637–686.
- Sturtevant, Edgar H. 1930. "Relatives in Indo-European and Hittite." In *Curme Volume of Linguistic Studies*, ed. by James Taft Hatfield, Werner F. Leopold, and Andreas Johannes Friedrich Zieglschmid, 141–149. Language Monograph no. 7. Baltimore: Waverly Press.
- Welmers, William E. 1976. *A grammar of Vai*. University of California Publications in Linguistics 84. Berkeley, CA: University of California Press.

Yates, Anthony D. 2014. "Anatolian 'indeterminate' relative clauses revisited." In *41st Österreichische Linguistiktagung*. Vienna.