The syntax of correlatives in New Testament Greek*

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1. Introduction

This paper focuses on the structure of the correlative construction in the Koiné Greek of the New Testament. Example (1) from New Testament Greek (NT Greek) illustrates a correlative sentence. ²

(1) **líthon hòn** apedokímasan
stone.ACC.SG.M REL.ACC.SG.M reject.3PL.AOR.IND.ACT
hoi oikodomoûntes,
the.NOM.PL.M builders.NOM.PL.M
hoûtos egené:the: ...
DEM.NOM.SG.M became.3SG.AOR.IND.PAS
'The stone which the builders rejected, this one became (the head of the corner).' (matthew 21:42; mark 12:10; Luke 20:17)

In this example, the relative clause (RC) precedes the matrix clause (MC) which contains a co-referential demonstrative (DEM), here in italics. These are the typical properties of correlatives (cf. Downing 1978; Keenan 1985). What is not so typical about NT Greek correlatives is the availability of various spell-out positions for the NP with which the relative pronoun (REL) is associated. For example, in (1) the NP lithon 'stone' appears preceding the REL, both typed in bold. I will show that although the NP linearly precedes the REL, it is not an external head under which the RC is embedded. Rather, the NP starts out internal to the RC, and is dislocated to a Left Periphery position above the operator projection occupied by the REL. This forms a parallel with other related Indo-European languages as discussed, for example, in Kiparsky (1995). The availability of autonomous spell-out of the REL and the NP is also observed in wh-questions. Further, NPs are found topicalized to the left of wh-interrogatives. The derivation of the RC in a correlative construction is then similar to that of a wh-question in this language.

These categories contrast with head external RCs, which are embedded under an argument or adjunct of the MC. At this point, it is not completely clear how head external RCs are derived (but see Kirk, in progress). The present paper focuses on RCs in correlative sentences, showing that the *wh*-CP and the unembedded RC CP are structurally alike.

The breakdown of the paper is as follows. In Section 2 I give some background concerning relative clause formation in NT Greek. Section 3 provides the correlative data. In Section 4, I turn to the structure of the NT Greek correlative construction. The points of focus are the structure of the sentence, and the internal structure of the RC. Concerning the first, in 4.1 I argue that pre-posed RCs are base generated below the highest C projection of the MC, and show that RCs in correlatives have the interpretation of topics. Concerning the internal structure of the RC, in 4.2 I highlight the many properties that RCs share with *wh*-questions in terms of word order. First I show that RELs and *wh*-items occupy the same projection in the Left Periphery, based on their relative position with respect to particles. Other parallels include the high position of the finite verbs and the existence of discontinuous relative and *wh*-DPs, and the possibility of topicalization to the left of the operators. Section 5 summarizes the paper.

NT Greek finite relative clauses

Alongside correlatives, head external and head internal RCs occupying argument positions are found in the NT corpus. All finite RCs share the following properties. They contain a relative pronoun, REL, and a finite verb or other predicate. The REL declines for gender, number and case. Within the RC, the REL undergoes fronting, appearing at or near the left edge of its clause.

What differs among the RC constructions is how the RCs are linked to the MCs. Head-external RCs are embedded under an argument or adjunct of the MC. For example, the RC given in (2) is embedded under the subject of the MC.

(2) íde he: sukê: hè:n
behold the.nom.sg.f figtree.nom.sg.f rel.acc.sg.f
kate:ráso: exé:rantai
curse.2sg.aor.ind.act wither.3sg.perf.ind.mp
'Behold, the fig tree which you cursed has withered.' (Mark 11:21)

In (2), the REL agrees with the external DP, 'the fig tree', in number and gender. The accusative case on the REL reflects its status as the object of the embedded verb 'cursed', while the nominative case on the external NP and D reflects the DP's status as subject of the matrix clause. I will refer to the case that the embedded verb

assigns as r-case, and the case that the matrix verb assigns as m-case. Thus in (2), the REL shows r-case and the DP m-case. This is quite common in the NT, however shared case is also frequently attested in environments where r-case and m-case are distinct. If the REL takes m-case, it is traditionally referred to as attraction, and if the DP takes r-case, it is called inverse attraction (cf. Smyth 1956: 567–569; Blass & Debrunner 1961: 153–155).

Contrast (2) with the head internal RC in (3).

(3) Oi oûn ánt^hro:poi idóntes
the.NOM.PL.M so men.NOM.PL.M seeing.NOM.PL.M
hò epoíe:sen se:meîon (Jes.)
REL.ACC.SG.N make.3SG.AOR.IND.ACT sign.ACC.SG.N
'So the men, seeing the sign that (Jesus) made, (said...)' (John 6:14)

In head internal RCs, the NP and REL always share case, unlike in head external RCs. Another difference is that head internal RCs never show determiners preceding the NPs, while DPs are frequently found as external heads. Finally, as (3) shows, the NP in head internal RCs can be stranded from the REL in postverbal position, while in head external RCs, the NP precedes the REL by definition. I return to these properties in Section 4.2, in my discussion of the internal structure of the RC in NT Greek correlative RCs.

3. Correlatives: The data

As stated in the introduction, correlatives are distinguished through the pre-posed nature of the RC, and the co-referential demonstrative in the MC (cf. the introduction in Lipták (2009) for a recent survey of the literature). In many languages, in cases where an NP is present, it immediately follows the REL in the surface string, as in the Hindi example in (4), taken from Keenan (1985: 164). Note that the relative morpheme is glossed COREL.

(4) Jis a:dmi ka kutta bema:r hai,

COREL man GEN dog sick is,

us a:dmi ko mai ne dikha

that man DO I ERG saw

'I saw the man whose dog is sick.'

(lit: 'Which man's dog is sick, that man I saw.')

In the NT Greek corpus there are no attestations of such typical correlatives familiar to modern correlative languages, where the NP directly follows the REL in the string. Consider (5) below, a correlative sentence with an NP internal to the RC.

(5) hô:n gàr eisp^héretai

REL.GEN.PL.N for in-brought.3sG.PRES.IND.MP

zó:io:n tò haîma ...

animal.GEN.PL.N the.NOM.SG.N blood.NOM.SG.N

toúto:n tà só:mata

DEM.GEN.PL.N the.NOM.PL.N body.NOM.PL.N

katakaíetai ...

burn.3SG.PRES.IND.MP

'For, the bodies of the animals whose blood is brought in (for sin into the holies through the high priest) are burned (without the camp).' (lit.: 'For, of which animals the blood is brought in (for sin into the holies through the high priest), of these the bodies are burned (without the

through the high priest), of these the bodies are burned (without the camp).') (Hebrews 13:11)

Like the Hindi example in (4), (5) is a possessive RC. The relevant difference between (4) and (5) is that in NT Greek (5), the NP is pronounced in a position discontinuous from the REL, following the verb in the surface string. This pattern is familiar from the head internal RC in (3), in Section 2.

As shown in the introduction, there is also a correlative construction in which the NP precedes the REL, repeated here as (6).

(6) Iíthon hòn apedokímasan stone.ACC.SG.M REL.ACC.SG.M reject.3PL.AOR.IND.ACT hoi oikodomoûntes, the.NOM.PL.M builders.NOM.PL.M hoûtos egené:the: ...

DEM.NOM.SG.M became.3SG.AOR.IND.PAS 'The stone which the builders rejected, this one became (the head of the corner).' (Matthew 21:42; Mark 12:10; Luke 20:17)

Although the NP linearly precedes the REL, the RC is not externally headed for two reasons. First, the case on the NP is internal accusative r-case, rather than nominative m-case.³ Second, the overt demonstrative in the matrix clause is the subject of the matrix clause verb 'become'. I then suggest that the sentence is composed of two adjoined clauses.⁴

4. The structure of NT Greek correlatives

4.1 Sentential structure

Concerning the structure of the correlative sentence, the first question is whether the RC in a correlative sentence is base-generated in the left peripheral position where it surfaces, or whether it starts out lower and moves in the syntax. The former has been proposed, for example, in Dayal (1996) for Hindi correlatives, Davison (2009) for Sanskrit and Hindi correlatives, and Lipták (2005) for Hungarian correlatives. A relatively recent proposal of the latter is found in Bhatt (2003), where (simple) correlatives are argued to be generated adjoined to the main clause demonstrative and then moved to their dislocated position. Yet another proposal put forth in Mahajan (2000) takes correlatives to be derived through a Kaynean head raising approach.

In NT Greek there is no evidence for locality constraints in correlatives, nor is there evidence for any kind of constituency between the demonstrative and the RC. Unfortunately, the lack of native speaker judgments excludes the relevant tests. In the absence of contrary evidence, I take the RCs to be base-generated in their pre-posed positions. This leads to the question of to which projection the RCs are adjoined. Dayal (1996) and Davison (2009) argue that Hindi correlatives are adjoined to IP, while Davison (2009) and Hock (1989) claim that Sanskrit correlative CPs are symmetrically adjoined to MC CPs.

One difference between NT Greek and Sanskrit correlatives concerns the distribution of second position, or Wackernagel's Law particles (Wackernagel 1892). In Sanskrit, correlative sentences are found with particles in both the MC and RC. For example, in (7), *u* 'and', *ha* 'certainly' and *evá* 'indeed' each occur in both the RC and the MC. Davison (2009:231) argues that these conjunctive and speaker-oriented particles must be C heads. This, among other facts that space does not permit discussion of, indicates that Sanskrit shows symmetric adjunction of the RC CP to the MC CP.

evá tát pasávo (7) yám ha manuşyèşu REL.ACC PTCL PTCL PTCL that cattle.PL.NOM man.PL.LOC tám kắmam árohams ha desire.ACC obtain.PRES.3PL that.ACC PTCL PTCL PTCL kåmam rohati paśúsu cattle.PL.LOC desire.ACC obtain.PRES.3S 'The desire which the cattle obtained among men, he obtains the same desire among the cattle.' (S.B.2.1.2.7 Davison 2009: 231). In NT Greek correlatives, Wackernagel's Law particles are only found in the preposed RC, and never in the MC. They take scope over the whole sentence. Some NT Greek particles found in pre-posed RCs are the conjunctive particles $d\acute{e}$, 'and' or 'but' (cf. (8)) and $g\acute{a}r$, 'for' in the conjunctive sense (cf. (5)), necessarily C elements. I will return to the precise syntactic position of the particles below in Subsection 4.2. The point I wish to make now is that if adjunction were symmetric in NT Greek, we would expect to find correlative sentences with one particle in each clause.⁵ In the absense of this data, I conclude that the RC must be adjoined to a MC projection that is lower than the position of the particles.

An anonymous reviewer notes that in older Classical Greek, particles can be found in both the MC and the RC in correlative sentences (cf. Denniston 1950: 224–225). Thus, older Greek appears to pattern more with Sanskrit. Davison (2009) links the difference between symmetric adjunction to CP in Sanskrit and asymmetric adjunction to TP in Modern Hindi to the fact that Sanskrit did not encode syntactic subordination (cf. Kiparsky 1995; Lehmann 1980), rather it was a later development. The Greek facts could indicate something similar, but this outscopes the current paper.

The distribution of particles in NT Greek correlatives tells us that the RC is adjoined lower than the C domain particle projection, however it does not reveal the precise adjunction site. The interpretation of RCs in correlative sentences suggests that they are adjoined as topics. In examples (5) and (6) above, the RCs serve as aboutness topics, with the MCs constituting the comments. Other RCs in correlatives, when taken in context, seem to function as contrastive topics (cf. Büring 1997 on the notion of a contrastive topic). Consider the correlative in (8) below. The referent of the RC in this example, 'who should do (and teach)' is contrasted with the referent of an RC in the preceding context, 'who should break one of these least commandments and teach thus'. The material in two MCs is also in direct opposition; one will be called least, and one most in the kingdom of heaven. I suggest then that these two parallel correlative sentences contain two contrastive topics, namely the pre-posed RCs.

(8) hòs d' àn poié:se:i

REL.NOM.SG.M but IRR do.3SG.AOR.SUBJ.ACT hoûtos mégas klé:t^he:setai

DEM.NOM.SG.M great.NOM.SG.M call.3SG.FUT.IND.PAS

'But who should do (and teach), this one will be called great (in the kingdom of heaven)'.

(Matthew 5:19)

Preceding context: 'Therefore, who should break one of these least commandments, and teaches thus, (he) will be called the least in the kingdom of heaven'.

The idea that an entire RC may be a topic is supported by cross-linguistic evidence. The topic status of pre-posed RCs in related old Indo-European languages has been long noted. For example, see Garrett (1994) concerning Hittite and Lycian. Outside of Indo-European, Lipták (2005) shows that correlatives in Hungarian have the interpretation of aboutness topics.

In sum, NT Greek RC topics are adjoined as topics, to a projection lower than the projection of C particles. The question remains, as to whether the RC topics are adjoined to a CP or IP Topic projection.

4.2 The internal structure of the RC

We turn now to the internal structure of RCs in correlative sentences. These RCs share many properties with *wh*-questions, with respect to word order patterns and possibilities. Let us take the *wh*-question in (9) below as a representative of *wh*-questions in our comparison with RCs. We will use (5) above as a representative of the RC, using the reduced version given in (10) for convenience.

- (9) Tí oûn poieîs
 what.ACC.SG.N so make.2SG.PRES.IND.ACT
 sù se:meîon
 you.NOM.SG sign.ACC.SG.N
 'So, what sign do you make (that we may see and believe you)?' (John 6:30)
- (10) hô:n gàr eisp^héretai

 REL.GEN.PL.N for in-brought.3SG.PRES.IND.MP

 zó:io:n tò haîma ...

 animal.GEN.PL.N the.NOM.SG.N blood.NOM.SG.N

As mentioned in Section 2, Ds may precede NPs in head-external RCs, but not in head-internal and correlative RCs. That is, Ds are unattested following RELs, either continuous or split in the string. Similarly, Ds are not found internal to *wh*-phrases. This indicates that RELs (and *wh*-s) are D°s, as is commonly assumed (Bianchi 1999; de Vries 2002). Following these authors, I refer to the constituent formed of the REL and the NP as DPrel.

Another parallel concerns the possibility of NP stranding. In (9) and (10) above, the operators have undergone movement to the left edge of the clause, while the NPs appear post-verbally. This is commonly attested in *wh*-questions in the NT.⁶ Note that this is a property unique to *wh*-questions and head-internal RCs. Although split DPs are found with quantifiers (Qs) and topicalized demonstratives, the stranded element is a DP rather than an NP, i.e., Q...DN (cf. Luke 2:19) or DEM...DN (cf. Acts 19:27).⁷

One difference between (9) and (10) is that in (10) the relativized NP is the possessor of another DP, and therefore starts out embedded in a larger possessive DP, whatever the structure of that may be. It is important to note that the NP in (10) does undergo movement, surfacing in a position to the left of the possessum, 'the blood'. Such discontinuous constituents could be derived through head movement of the REL to Spec-CP, along the lines of Donati (2006), followed by remnant movement of DPrel to a position intermediate between Spec-CP and the one in which the possessum is spelled out, presumably the Spec-IP subject position. Alternatively, the NP may first evacuate from DPrel, followed by remnant movement of DPrel to Spec-CP. I am agnostic as to which type of analysis is most theoretically and empirically desirable, however the mechanism for splitting *wh*-s from NPs and RELs from NPs must be the same.

The third parallel concerns the position of the finite verb in the RC. There is a strong tendency for the finite verbs in object *wh*-questions to appear preceding the subjects, and near string-adjacent to the *wh*-words, as in (9).⁸ This has been analyzed in Kirk (to appear) as verb movement to C°, triggered by *wh*-movement, a residual V2 phenomenon as discussed in Rizzi (1996). The high position of the verbs in the RCs seen here likely represents a more general process of verb movement co-occurring with operator movement.

We turn now to the position of the operators in the Left Periphery of RCs and wh-questions, and here we depart from the examples in (9) and (10) above. We turn to the wh-question in (11) below, and the reduced version of (8), given below as (12). In each of these there is one second position particle ($g\acute{a}r$ and $d\acute{e}$, respectively), and one irrealis particle $\acute{a}n$, which typically occurs with non-indicative verbs. ⁹

- (11) Pô:s gàr àn dunaíme:n how for IRR can.1sg.pres.opt.mp 'For how could I?' (Acts 8:31)
- (12) hòs d' àn poié:se:i

 REL.NOM.SG.M but IRR do.3SG.AOR.SUBJ.ACT

In both the wh-question in (11) and the RC in the correlative construction in (12), the operators appear at the left edge, followed by the second position particles. The particle $\acute{a}n$ occurs directly following these particles. There are two important facts to be drawn from this pattern. First, the particle $\acute{a}n$ constitutes a landmark of the Left Periphery. When an indefinite pronoun undergoes movement past $\acute{a}n$, it obtains wh-force (cf. Roussou 1999). The position of the REL in correlatives, then, is also an operator position in the Left Periphery.

The second fact concerns the placement of the second position particles. As mentioned in Subsection 4.1, a correlative sentence may contain only one such

particle, and it takes scope over the whole sentence. I suggest that these particles originate in the highest sentential projection, and due to the prosodic constraint of leaning on a host to their left, may not surface as the first phonological word. They undergo a post-syntactic prosodic flip à la Halpern (1992), and are pronounced following the first word of the constituent which is hierarchically lower in the syntax (cf. Hale 2007: 204–212, concerning Vedic Sanskrit particle placement). In *wh*questions and pre-posed RCs, this is very often a *wh*-item or a REL (cf. (11) and (12), respectively).

Finally, let us turn to topicalization. Consider example (13) below. In this *wh*-question, a topicalized constituent appears preceding the *wh*-word. If it is indeed true that a REL occupies the same position as a *wh*-item, as it seems to be, then there is room in the Left Periphery of the RC to host one dislocated element. This then accounts for example (1) (=(6)), the relevant part in (14)), where the NP lit^hon appears to the left of the REL.

- (13) sù dè tí kríneis ...
 you.nom.sg but why judge.2sg.pres.ind.act
 'But you, why do you judge (your brother)?' (Romans 14:10)
- (14) líthon hòn apedokímasan ... stone.ACC.SG.M REL.ACC.SG.M reject.3PL.AOR.IND.ACT

That is to say, during the derivation, the NP is split from the REL, in either of the ways described above, and can then move independently to the pre-operator position. The fronting of constituents around RELs and *wh*-s is also found in related Indo-European languages (cf. Hale 1987; Garrett 1994; Kiparsky 1995).

Putting all of these pieces together, we reach the proposed architecture of the NT Greek RC in a correlative sentence, given in (15). This is equivalent to that of the *wh*-question, in which the *wh*- occupies Spec-CP.

(15)
$$[_{PRTP} d\acute{e} / g\acute{a}r / [_{TopP} NP [_{CP} REL [C^{\circ} V [_{XP} NP]]]]]$$

In this depiction, PRTP refers to the highest sentential projection, which hosts the second position particles, $d\acute{e}$ and $g\acute{a}r$. These will end up following the first phonological word of that constituent which is hierarchically lower, be it a topic (cf. (13) and (14)), or the REL/wh- (cf. (11) and (12)). The NP stranded post-verbally in a projection labeled XP represents either the remnant wh- or relative DP in a head movement approach, or the NP already having been extracted from DPrel (cf. (5) = (10)).

In this paper, I have concentrated on correlative RCs, which as I have shown, are structurally head-internal in the sense that even if the NP precedes the REL, the RC is not embedded under the NP. Now briefly consider head-external RCs. They too show some properties familiar to correlative RCs and *wh*-questions.

Specifically, Vs in head-external RCs such as that in (2) above often directly follow the REL, suggesting that V-fronting occurs there as well. The particle $\acute{a}n$ also appears directly following the REL in head-external RCs, indicating that the landing site for REL movement is the same. It may be the case that head-external RCs have a derivation in which the NP originates inside the RC, in a similar fashion to wh-questions and RCs in correlatives. The difference would be that the NP has to raise to a position preceding the REL. Under a raising analysis such as Kayne's (1994, Chapter 8), this might be due to a featural requirement of the external D of the matrix clause (cf. Bianchi 2000). This would indicate that the CP that ends up as head-external RC is the same as the CP that ends up as a wh-question or a correlative RC. The real structural difference would be the presence or absense of a matrix D selecting the relative CP, and forcing movement of the NP, essentially the difference between an embedded and an unembedded CP. Further research will show whether such an account can be sustained for head-external RCs.

5. Summary

In sum, correlative clauses are attested in the Koiné Greek of the NT, alongside head-external RCs, and what I have called head-internal relatives, where the NP occurs following the REL. Head-internal RCs share the following properties with correlatives. The REL and NP form a constituent, DPrel, in which the REL and NP always agree in case. In an RC, the REL always undergoes fronting, however the NP may be spelled out in a post-verbal position within the RC.

In 4.1 I suggested that the RCs are base-generated in their pre-posed position, given the absence of observed locality constraints typical of movement. Contrasting with Sanskrit, adjunction of the RC is asymmetric in NT Greek, below the C position occupied by second position particles. The preposed RCs serve as topics, which could indicate either that they are adjoined to a C level TopP, or an I level TopP.

Based on many observed parallels, in 4.2 I analyzed the RC in a correlative sentence as equivalent to that of the NT Greek *wh*-question. Unlike correlatives in familiar modern languages, NT Greek correlatives pattern with *wh*-questions in terms of the availability of autonomous spell-out of the REL and the NP, and of a Left Periphery Topic projection to the left of the position of the REL. In an RC, this projection may host the NP which originated as the internal head, after it is 'freed' from the DPrel. NT Greek then patterns similarly to old Indo-European languages, such as Sanskrit and Hittite with respect to RC structure.

Notes

- * I thank Lisa Cheng, Ineke Sluiter and two anonymous reviewers for very helpful comments on an earlier draft of this paper.
- 1. The Greek NT was composed in Koiné Greek in the first to second century, beginning at approximately 50 AD. The latest composition is taken to be no later than mid-second century AD. It was composed by various authors at different times, and later put together as a whole, consisting of 27 books. I use the 27th Nestle-Aland edition with consultation of the Westcott-Hort edition.
- 2. The transliteration is a Romanization of the Greek. Pitch accents as seen in the Greek text are included and long vowels are indicated through the colon. The translations are my own, having consulted the major English Bible translations. Glossing abbreviations go as follows: ACC=accusative, ACT=active, AOR=aorist, DAT=dative, F=feminine, GEN=genitive, IMPF=imperfect, IND=indicative, IRR=irrealis particle, M=masculine, MP=medio-passive, N=neuter, NOM=nominative, OPT=optative, PL=plural, PAS=passive, PERF=perfect, PRES=present, SG=singular, SUBJ=subjunctive.
- 3. This is the case pattern traditionally referred to as inverse attraction (cf. Smyth 1956:569, §2533; Blass & Debrunner 1961:154, §295).
- 4. Bianchi (2000) analyzes a parallel construction in Latin as a left-dislocated head-external RC, with the MC demonstrative being reanalyzed as a resumptive pronoun. In this diachronic analysis, the head-external RC is proposed to have emerged from the previous correlative system. I make no claim as to the possibility of this in the history of Greek, however I note that strong demonstratives are not employed in any other left-dislocation constructions in older Greek.
- 5. Having searched all instances of the REL in the digital Thesaurus Lingua Graeca, I find a total of 28 correlatives with RELs from the *hós* paradigm and DEMs from the *hoûtos* paradigm. There are also 6 locative correlatives with the locative relative *hopoû* and the adverb *ekeî* in the MC. I find two degree correlatives with *hoîos*, 'in as much as' and *toioûtos*, 'by that much', and one with *hôsos* 'how much' and *hoútos*, 'thus'. If they contain particles, they are in the pre-posed RC.
- **6.** Split *wh*-phrases appear consistently through the history of Greek, however the conditions on splitting have undergone significant changes from the Koiné period to Modern Greek (see Mathieu & Sitaridou 2005 for details on splitting in Classical and Modern Greek).
- 7. This contrasts with older Classical Greek, where fronting of a demonstrative or quantifier may strand an NP (see Kirk 2007, examples (48) and (58)). Thus, the possibility of stranding an NP seems to be a more general property of A' dependencies in this period.
- **8.** The only element intervening between the finite V and the wh- is the second position particle $o\hat{u}n$, 'therefore'. As discussed below in the main text, the placement of these is partly due to a post-syntactic operation, therefore the particle is not an intervener in the syntax.
- 9. If the irrealis particle $\acute{a}n$ is present, as in (8)=(12), the reading is roughly equivalent to that of an English free relative. If it is not present, the reading of a headless correlative may be universal, or definite.

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