The syntax of wh-phrases, narrow foci, and neg-words in Georgian

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Abstract

This paper demonstrates that narrow foci and wh-phrases, even in a language where they have (nearly-)identical surface distribution, do not have the same syntax – and, as such, are not a uniform category. Specifically, it shows that foci and wh-phrases in Georgian appear immediately preverbally but are derived differently. The evidence comes from standard syntactic tests and language-specific ones. I show that, in Georgian, neg-words can serve as a tool for determining the structural positions of other constituents, and foci and wh-phrases have different distributional properties with respect to neg-words. Based on this, I demonstrate that wh-phrases in Georgian undergo A-bar movement to the specifier of a dedicated projection, accompanied by verb raising. Preverbal foci remain in situ, while the material intervening between the narrow focus and the verb undergoes displacement. This demonstrates that what looks like unified preverbal placement of foci and wh-phrases corresponds to the outcomes of two independent syntactic processes. The Georgian facts, I argue, support the hypothesis that syntactic/semantic notions (e.g., [+Q]) are encoded as syntactic features that drive movement. On the other hand, purely information-structural notions (e.g., semantically non-exhaustive focus) are not encoded syntactically, and, as such, cannot trigger syntactic movement, contrary to prevalent cartographic approaches.

Keywords: Georgian, focus, wh-phrases, n(eg)-words, preverbal focus, syntactic movement, prosody.

1. Introduction

This paper investigates the syntactic properties of narrow focus and wh-expressions in Georgian, a Kartvelian language of the Caucasus. The immediately preverbal position (henceforth IPrP) in Georgian, like in numerous other OV languages (Kim 1988; Kidwai 1999; van der Wal 2012, a.o.), is where narrow foci and wh-phrases are found, as shown in (1):

(1) A: *Guʃin* *dila-s* *bebia* ***ra-s*** *a-lag-eb-d-a*?[1]
yesterday morning-DAT grandma.NOM what-DAT VER-clean-SF-SM-IPFV.3SG
'What did grandma clean yesterday morning?'

B: *Guʃin* *dila-s* *bebia* ***SAMZAREULO-S*** *a-lag-eb-d-a*.
yesterday morning-DAT grandma.NOM kitchen-DAT VER-clean-SF-SM-IPFV.3SG
'Grandma cleaned **THE KITCHEN** yesterday morning.'

Following Rooth's (1985; 1992; 1996) Alternative Semantics, focus here is understood as indicating "the presence of alternatives that are relevant for the interpretation of linguistic expressions" (Krifka 2008: 247). This includes new information foci, contrastive foci, and those modified by focus-inducing particles *even* and *only*. According to the same definition, wh-expressions also constitute a type of focus, since they act as substitutes for sets of individuals for which the proposition is true (Dik 1997: 331; Romero 1998; Eckardt 2007).[2] Consequently, it is not surprising that wh-phrases pattern with foci in some of their properties: e.g., in languages with preverbal focus placement, wh-phrases are often similarly found in the IPrP (Primus 2001).

[1] Glosses follow the Leipzig glossing conventions, with the following additions: AOR – aorist, CONJ – conjugation marker, EMPH – emphatic, EV – epenthetic vowel, MOD – modal, OPT – optative, PRV – preverb, SF – stem formant, SM – stem marker, TS – thematic suffix, VER – version marker. Unless indicated otherwise, the data used here comes from the author's fieldwork in Georgia and consultant work with Georgian speakers abroad.

[2] Though cf. Erteschik-Shir (1986), Aboh (2007), and Cable (2008) for a view that wh-phrases may but do not necessarily carry focus.

There are two main syntactic approaches to deriving adjacency between the verb and an element in IPrP: (i) via a Spec-Head configuration and (ii) via displacement of the intervening material.[3] According to the Spec-Head approach, the focal/wh-element undergoes (A-bar) movement to a specifier of XP, and the verb moves to X^0, thereby creating adjacency (Bhatt 1999 on Kashmiri; Karimi 2008; Toosarvandani 2008 on Persian; Jayaseelan 2001 on Malayalam, a.o.). As motivation for movement, alignment of the focused constituent with main sentence-level prominence, coinciding with the Spec, XP position, has been invoked (Szendrői 2003 on Hungarian). According to the other approach, focus-verb adjacency may be derived in situ, via displacement of the intervening material. The displacement may be motivated either by the information-structural properties of the displaced material (Şener 2010 on Turkish) or by the need for the focused constituent to carry nuclear stress (Arregi 2002 on Basque; cf. also Cheng & Downing 2012 for Zulu).

This paper shows that both processes are found in Georgian. A Spec-Head analysis best accounts for the IPrP placement of wh-phrases, based on evidence from island effects and weak crossover facts. In contrast, preverbal narrow foci in Georgian remain in situ, while would-be interveners evacuate to the left or right periphery. One of the key diagnostics for the structural positions of wh-phrases and narrow foci proposed in this paper is their relative positioning with respect to n(eg)-words – constituents that exhibit negative concord and occur in the presence of negation (*nothing, nowhere,* etc.). First, I show that neg-words in Georgian cannot displace into the left or right periphery. This is not unexpected from the point of view of information structure (IS): such displacement into the peripheries is typical of topical/given material in Georgian, while neg-words are non-referential, which means that they resist topicalization. This fact, coupled with the fact that Georgian does not have A-movement for case assignment, means that neg-words in Georgian are necessarily found in situ. At the same time, like wh-phrases and preverbal narrow foci, neg-words in Georgian obligatorily appear in the IPrP.[4] Importantly, this is only true in broad focus contexts. In wh-questions and utterances containing narrow foci, neg-words can abandon their IPrP requirement in favor of the focused constituent/wh-phrase occupying the IPrP. They do so differently in the two contexts though: in wh-questions, neg-words can only occur postverbally; in narrow focus contexts, neg-words can either precede or follow the Foc+V complex, depending on the theta roles of the neg-word and the narrow focus. Given that neg-words cannot leave their base position, these distributional facts provide evidence about the structural positions of wh-phrases and narrow foci.

I propose that the reason for why wh-phrases – but not narrow foci – undergo movement is that syntactic features, like [+Q], can trigger movement, but purely information-structural notions, like semantically non-exhaustive focus, cannot (Horvath 2007; 2010). In Georgian, [+Q] is responsible for movement of wh-phrases and the accompanying movement of the verb. Narrow foci, not carrying a syntactic feature, cannot trigger movement. At the same time, narrow foci call for a particular prosodic realization. Their interface requirements are implemented as violable constraints, Optimality Theory-style, and cause word order permutations that lead to immediately preverbal placement of narrow foci. Specifically, I argue that narrow foci in Georgian should be right-aligned with a prosodic boundary, according to the Focus-as-Alignment approach proposed by Féry (2013), and part of the core Intonational Phrase (*ι*). This is fulfilled via the displacement of the non-focal material that can be topicalized to the left periphery or the prosodically external post-verbal domain. The verb does not undergo topicalization in the context of narrow focus on one of the constituents and stays in-situ, incurring a violation of the constraint that ensures right-adjacency, but it is not fatal in the proposed constraint ranking. This means that focus-verb adjacency is achieved in situ: neither foci nor verbs in the context of narrow foci move to a dedicated projection.

[3] The term 'displacement' is used here as an umbrella term and includes both syntactic movement to the left and right peripheries and base-generation of material in the peripheral positions.

[4] This is expected from the point of view of Roothian focus semantics, since neg-words also refer to contextual alternatives: they eliminate all of them (Drubig 2003).

Additionally, Georgian also allows for postverbal placement of narrow foci. This is shown in (2), which is intended to serve as another reply to the question in (1):

(2) *Guʃin* *dila-s* *bebia* *a-lag-eb-d-a* ***SAMZAREULO-S***.
yesterday morning-DAT grandma.NOM VER-clean-SF-SM-IPFV.3SG kitchen-DAT
'Grandma cleaned THE KITCHEN yesterday morning.'

Postverbal foci are not common in verb-final languages; the known cases described have also been subject to different analyses. Postverbal foci in Basque have been derived in the same way as preverbal ones (a Spec-Head configuration), but accompanied by remnant movement of post-focal clausal material to the left periphery (Ortiz de Urbina 2002). In contrast, postverbal foci in Old High German and Early New High German have been derived via right-adjunction (Bies 1996; Fuß 2018; Hinterhölzl & Petrova 2018). I show that postverbal foci in Georgian, too, are derived via right-adjunction, as an alternative way of satisfying the prosodic requirements of focused constituents (right-alignment with a prosodic boundary and being part of the core *ι*). Important support for this analysis also comes from the relative distribution of postverbal foci and neg-words.

This paper is structured as follows. Section 2 highlights the properties of Georgian grammar that are relevant for the argument. Section 3 introduces the distributional properties of wh-phrases. Section 4 does the same for narrow foci, preverbal and postverbal. Section 5 is dedicated to the properties of neg-words in Georgian: first, it outlines the general properties of topicalized constituents (5.1), and then introduces the distributional (5.2) and structural (5.3) properties of neg-words. Sections 6 and 7 provide argumentation about the structural positions of wh-phrases and narrow foci (preverbal, 7.1, and postverbal, 7.2), respectively, and show that they do not have the same underlying syntax. Section 7.3 provides an account of the prosodic realization of narrow foci, which motivates their placement. Section 8 concludes.

2. Relevant aspects of Georgian grammar

Georgian is a head-final language, though not consistently so, in contrast with prototypical head-final languages like Korean and Japanese. On the one hand, numerous constructions provide evidence for head-finality. Post-positional phrases, genitive+noun combinations, participial relative clauses, and small clauses only allow for a head-final word order, as illustrated in (3)-(6). Similarly, object+verb idioms are preferably verb-final, and, for some speakers, lose their idiomatic meaning in VO, as shown in (7).

(3) a. *alkimik'os-eb-is-**tvis***
alchemist-PL-GEN-for
'for the alchemists'

b. * ***tvis*** *alkimik'os-eb-is*
for alchemist-PL-GEN
('for the alchemists')

(4) a. ***Amerik'-is*** *ʃe-ert-eb-ul-i* *ʃt'at'-eb-i*
America-GEN PRV-one-SF-PTCP-NOM state-PL-NOM
'United States of America'

b. * *ʃe-ert-eb-ul-i* *ʃt'at'-eb-i* ***Amerik'-is***
PRV-one-SF-PTCP-NOM state-PL-NOM America-GEN
('United States of America')

(5) a. [$_{PtcpP}$ *Ek'a-s* ***ts'a-k'itx-ul-i***] *ts'ign-i*
Eka-GEN PRV-read.PRF-PTCP-NOM book-NOM
'the book that Eka read' (Foley 2013: 8)

b. * [$_{PtcpP}$ ***Ts'a-k'itx-ul-i*** *Ek'a-s*] *ts'ign-i*
PRV-read.PRF-PTCP-NOM Eka-GEN book-NOM
('the book that Eka read')

(6) a. *Manana* [$_{SC}$ *Gela-s* ***ʧ'k'vian-ad***] *tvl-i-s.*
M.NOM G.-DAT smart-as consider-SM-PRS.3SG
'Manana considers Gela smart.'

b. * *Manana* [$_{SC}$ ***ʧ'k'vian-ad*** *Gela-s*] *tvl-i-s.*
M.NOM smart-as G.-DAT consider-SM-PRS.3SG
('Manana considers Gela smart.')

(7) a. *Nino-m ena* ***mi-u-tan-a*** *Dat'o-s.*
N.-ERG tongue.NOM PRV-VER-bring-AOR.3SG D.DAT
'Nino spilled the beans to Dato.' (Lit.: brought her tongue to Dato)

b. %*Nino-m* ***mi-u-tan-a*** *ena Dat'o-s.*
N.-ERG PRV-VER-bring-AOR.3SG tongue.NOM D.DAT
'Nino spilled the beans to Dato.' (Lit.: brought her tongue to Dato)

On the other hand, AuxP and CP exhibit head-initial properties. In particular, all complementizers in Georgian are initial or second-position, (8), and the modal *unda* 'have to, must', in contrast with finite verbs, can only be found clause-medially and not clause-finally, (9). This is contrary to what would be expected in a strictly head-final language. I take this to mean that the clausal spine in Georgian above the VP is head-initial, which makes Georgian clausal syntax similar to that of German (Haider 2010), except for the lack of V2.

(8) *Marik'a pikrob-s* [***rom*** *Giorgi-m* (****rom***) *mankana-s* (****rom***) *i-q'id-a*
M.NOM think-PRS.3SG COMP G.ERG COMP car-DAT COMP VER-buy-AOR.3SG
(****rom***)].
COMP
'Marika thinks that Giorgi bought a car.'

(9) a. *Xval P'raɣa-ʃi K'arl-is xid-i* ***unda*** *v-nax-o-t.*
tomorrow Prague-in Charles-GEN bridge-NOM MOD 1-see-OPT.1-PL
'We have to see Charles Bridge in Prague tomorrow.'

b. * *Xval P'raɣa-ʃi K'arl-is xid-i v-nax-o-t* ***unda.***
tomorrow Prague-in Charles-GEN bridge-NOM 1-see-OPT.1-PL MOD
('We have to see Charles Bridge in Prague tomorrow.')

At the same time, there is considerable flexibility with respect to the order of the elements within the VP, with both VO and OV widely attested, as shown in (10). Both word orders are frequently found in discourse and can be found in all-new contexts (Tuite 1998: 42). Most authors agree that OV is underlying (Pochkhua 1962; Nash 1995; McGinnis 1997a; 1997b; Harris 2000: 141; Boeder 2005: 64; Skopeteas & Fanselow 2010; Aronson 1990). This view is adopted here as well.

(10) a. *Giorg-i vaʃl-s ʧ'am-s.*
G.-NOM apple-DAT eat-PRS.3SG
'Giorgi is eating an apple.'

b. *Giorg-i ʧ'am-s vaʃl-s.*
G.-NOM eat-PRS.3SG apple-DAT
'Giorgi is eating an apple.'

This, however, raises questions about the syntactic underpinnings of the frequently attested VO. Both OV and VO in Georgian can be information-structurally neutral. Preverbal and postverbal direct objects (DO) do not differ in their definiteness or specificity. The fact that VO orders are possible as neutral contexts points to their syntactic organization: as argued in Neeleman (2015), neutral word orders are derived by X^0-movement (which is always leftward), as opposed to phrasal movement to the right. Accordingly, I take Georgian VO to be derived by short V^0-to-v^0 movement of the verb (as opposed to e.g., displacement of the DO to the right). This is in line with Skopeteas & Fanselow (2010), who also derive neutral Georgian VO by verb raising, and emphasize that this head-movement is semantically vacuous. Accordingly, the derivations of the examples in (10) are schematized in (11):

(11) a. [$_{VP}$ apple eats]

b. [$_{vP}$ eats$_i$ [$_{VP}$ apple t_i]

The availability of V^0-to-v^0 movement means that there is a suitable head position on the left side of the clausal spine for the verb to move to, which fits well with the analysis of the clausal spine above the VP as head-initial. Furthermore, deriving VO via verb movement means that the two object positions in OV and VO orders are one and the same syntactic position, which explains lack of interpretational differences between the two. This hypothesis is further supported by the fact that both preverbal and postverbal DOs exhibit a strong preference for narrow/surface scope of the DO with respect to the material in the left periphery.

There is evidence that the verb in Georgian does not leave the VP in OV clauses (vP in VO clauses). The tests commonly used for determining the position of the verb are based on the relative scope of verbal negation and elements such as NPIs and quantifiers associated with verbal arguments (Han, Lidz & Musolino 2007; Simpson & Syed 2014, a.o.). The condition that they rely on is that the exponent of negation and the verb form a constituent and, were the verb to move, the exponent of negation would move too – e.g., after cliticizing to the verb. This condition is obtained in Georgian. Verbal negation in Georgian is merged and interpreted low in the clause, below the base position of the external argument. The exponent of negation is a clitic on the verb and cannot be separated from it by any other material, including adverbs, as shown in (12), similarly to Romance languages (Cinque 1999).

(12)	**Me*	***ar***	***namdvil-ad***	*mo-m-c'on-s*	*es*	*p'rocedura.*
	1SG.DAT	NEG	really-ADV	PRV-1SG-like-3SG	this	procedure.NOM

('I don't really like this procedure.')

This serves as evidence that the negative exponent and the verb combine into a single unit that cannot be broken up. This can be achieved either if negation is a head and combines with the verb (via syntactic head movement, m-merger, or a combination of both), or if negation is phrasal/adverbial and cliticizes to the verb. To avoid postulating an unusual architecture with a low NegP projection, I take Georgian negation to be adverbial, and therefore phrasal, and a clitic in the phonology; see also Erschler (2015: 47).

Now, let us consider the interaction of a quantified subject and a negated verb. There are two possible readings that such a clause can have, depending on the relative scope of the two elements: NUM > NEG, NEG > NUM. The availability of the NEG > NUM reading would be indicative of the negation + verb complex (covertly) raising past the subject to a higher position, while the availability NUM > NEG would indicate lack of such movement. In Georgian, a quantifier subject scopes over verbal negation, which suggests that negation is generated and interpreted below the position of the subject and, consequently, that the negation + verb complex does not raise past it from its low position in the VP/vP. In particular, (13) can be used to describe a very bright group of students in which everyone knows the answer, save for one or two (=fewer than three) students (NUM > NEG). On the other hand, it cannot be used to describe a situation in which it is not the case that fewer than three students know the answer (*NEG > NUM). Note that, because (13) is a

VO-clause, the verb has undergone V^0-to-v^0 movement, but the scope facts demonstrate lack of further movement.

(13) ***Sam-ze*** ***nak'leb*** *st'udent'-s* ***ar*** *e-tsodin-eb-a* *es* *p'asuxi.*
three-on less student-DAT NEG ver-know-SF-FUT.3SG DEM answer
'Fewer than three students will not know the answer.'
NOT: 'It won't be the case that fewer than three students will know the answer.'
(NUM > NEG; *NEG > NUM)

Similarly, the position of the negation + verb complex can be diagnosed by using a verbal argument that contains disjunction. A disjoint reading is only predicted to be felicitous if it scopes over negation (or > NEG), whereas a conjoint reading should be available if the disjunction scopes below negation (NEG > or) (Shibata 2015), as shown in (14):

(14) *Mary does**n't** like wine **or** beer.* (*…so, we will have to get something else to drink*; NEG > or)
(*…but I can't remember which one*; or > NEG)

In Georgian, in contrast with English, when a direct object contains a disjunction, it scopes over verbal negation, which is manifested by the availability of the disjoint reading, and the unavailability of the conjoint reading, as shown in (15). The means that the verb is generated and interpreted below the position of the disjunction. The evidence from these two tests indicates that the verb does not raise from its base position in broad-focus declarative verb-final clauses. I assume that verbal morphology is assembled via m-merger as opposed to head movement (Matushansky 2006; Harizanov 2014).[5]

(15) *Dato-s* ***(an)*** *ɣvino* ***an*** *lud-i* ***ar*** *u-q'var-s.*
D.-DAT or wine.NOM or beer-NOM NEG VER-love-PRS.3SG
'Dato doesn't like wine or beer.' (or > NEG, * NEG > or)

Case marking of verbal arguments in Georgian varies between nominative, ergative, and dative, depending on the tense category of the verb (known as 'series' in the Kartvelological tradition), as illustrated in Table 1. Because case-related facts in Georgian are complex, and in-situ case licensing plays an important role in the argument, these facts are discussed in detail below.

Table 1. Case marking by series

Series	**'Active' subjects (transitive & unergative)**	**'Inactive' subjects (unaccusative)**	**Objects**
Present	Nominative		Dative
Aorist	Ergative	Nominative	
Perfect	Dative		

With respect to the structural positions and case licensing of verbal arguments, I follow the existing proposals by Legate (2008) and Nash (2017). According to both, case licensing in Georgian is achieved in situ – though, depending on the series of the verb, arguments are generated in different projections. The two analyses differ in some important respects – e.g., in treating ergative case as dependent (Nash 2017) or inherent (Legate 2008). Furthermore, Nash's (2017) account is a hybrid one, in that some cases are assigned by functional heads and others via dependent case assignment (Marantz 1991; Bobaljik 2008; Baker & Vinokurova 2010). I refrain from proposing a dedicated approach to case licensing in Georgian and, instead, summarize Legate (2008) and Nash (2017) below: most importantly for the present purposes, they align on

[5] Lomashvili (2011) proposes that Georgian verbs raise through a series of head positions on the right in order to allow for the assembly of verbal morphology; her analysis, however, does not take into account scope tests such as those used here.

the structural positions of nominals, while diverging in the mechanics of case assignment. Nothing in the current proposal depends on the latter.

In the present series, subjects (transitive and intransitive) carry nominative, as shown in (16). According to both Legate (2008) and Nash (2017), nominative case is licensed by T^0 via c-command. Evidence for T^0 as the licenser comes from the regular absence of nominative in the absence of T^0: e.g., *masdar* nominalizations, which do not have a TP, cannot have a nominative argument, as shown in (17). The nominative argument, therefore, is always found in the scope of T^0, though its thematic role and structural position vary by series. A dedicated $Voice^0$-head (Kratzer (1994); cf. Nash's (2017) $Event^0$) is also merged above the vP in the present series. It combines two functions: thematically licensing the external argument of vP and expressing the eventuality with respect to the reference time in T^0. The nominative subject is merged in Spec, VoiceP – and case-marked by the c-commanding head T^0. In transitive clauses in the present series, the direct object is located in the VP and is assigned dative case: either by the v^0 head (Legate 2008) or the $Voice^0$ head (Nash 2017).

(16) a. *Giorg-i* *cur-av-s.*
G.-NOM swim-SF-PRS.3SG
'Giorgi is swimming.'

b. *Giorg-i* *lobian-s* *ʧ'am-s.*
G.-NOM lobiani-DAT eat-PRS.3SG
'Giorgi is eating lobiani.'

(17) (**Giorg-i*) *lobian-is* *ʧ'am-a.*
G.-NOM lobiani-GEN eat-NMLZ
('Giorgi's eating of lobiani.')

The structural positions of the arguments in the present series are illustrated in (18) below, based on (16b). An intransitive subject would likewise be found in Spec, VoiceP in the present series.

(18) $[_{VoiceP}$ $Giorgi_{NOM}$ $[_{vP}$ $[_{VP}$ $lobiani_{DAT}$ eats]]]

Next, in the aorist series, 'active' subjects carry ergative, and 'inactive' subjects and objects carry nominative. In the absence of $Voice^0$ ($Event^0$) in ergative constructions, T^0 directly takes vP as its complement (other functional projections, like AspP, notwithstanding). If the verbal domain contains one argument, its case is checked against T^0 and is nominative, as is illustrated in (19). This is the case for unaccusative verbs in the aorist series.

(19) *Giorg-i* *da-brun-d-a.*
G.-NOM PRV-return-SM-AOR.3SG
'Giorgi returned.'

For Georgian unergatives, I am adopting Nash's (2017) covert causative analysis, in the spirit of Hale and Keyser (1993), which groups them together with transitives. Both are illustrated in (20). In transitive contexts in the aorist series, where two arguments need to have their case checked, the lower one of the two, the direct object, receives nominative from T^0.

(20) a. *Giorgi-m* *magrad* *i-muʃ-av-a.*
G.-ERG hard VER-work-SF-AOR.3SG
'Giorgi worked hard.'

b. *Giorgi-m* *lobiani* *ʃe-ʧ'am-a.*
G.-ERG lobiani-NOM PRV-eat-AOR.3SG
'Giorgi ate lobiani.'

Ergative, according to Nash (2017), is assigned in Spec, vP via dependent case mechanism. It is assigned in the absence of VoiceP (EventP), which would have allowed the subject to receive nominative from T^0. Instead, ergative appears in configurations where T^0 'sees' two arguments with unvalued case features in the same vP domain and marks the higher one with dependent case. The presence of the ergative is therefore a sign that VoiceP is absent and the dependent case algorithm tracks the higher argument. Legate (2008) also takes ergative to be assigned in Spec, vP but treats ergative as inherent case. Accordingly, an illustration of a transitive clause in the aorist series (with an ergative subject) is provided in (21), based on the example in (20):

(21) [$_{vP}$ Giorgi$_{ERG}$ [$_{VP}$ lobiani$_{NOM}$ eats]]

Finally, in the perfect series, 'active' subjects carry dative, and 'inactive' subjects and objects carry nominative. The evidence that dative subjects are true subjects comes from binding: dative subjects can serve as antecedents for *tav*-reflexivization, which in other series is a property unambiguously characteristic of subjects (Harris 1981: 117; McGinnis 1995; 1997a; Thivierge 2019). Thivierge (2019) takes perfect series verbs to be (dyadic) unaccusatives; accordingly, they lack VoiceP (Kratzer 1994). Following Thivierge's (2019) analysis of Georgian dative subjects, based on the distributional properties of verbal agreement and the formation of causatives, I take dative subjects to be generated in Spec, ApplP (the same position as dative indirect objects in transitive clauses; Lomashvili 2011). This is shown in (22) and (23) below. Being case-licensed by Appl^0, dative subjects do not enter the dependent case calculation.

(22) *Giorgi-s* *Nino* *u-q'var-s.*
G.-DAT N.NOM VER-love-PRS.3SG
'Giorgi loves Nino.'

(23) [$_{ApplP}$ Giorgis$_{DAT}$ [$_{VP}$ Nino$_{NOM}$ likes]]

To recap, subjects and objects in Georgian vary in their case-marking properties and structural positions based on the series of the verb, but they do not leave the vP/VoiceP domain of the clause for the reasons of case assignment – instead, they are case-licensed in situ. This means that Georgian does not have movement for case assignment.

3. Wh-phrases: the facts

Wh-expressions in Georgian are obligatorily found in the IPrP. In this, they descriptively pattern together with narrow foci, which, if found in the preverbal domain, also occupy the IPrP. No material can intervene between the wh-expression and the verb, except for verbal negation, as shown in (24). Postverbal placement of wh-phrases is infelicitous unless they receive an echo interpretation.

(24) a. *Bebia* ***ra-s*** *a-lag-eb-d-a*?
grandma.NOM what-DAT VER-clean-SF-SM-IPFV.3SG
'What did grandma clean?'

b. ****Ra-s*** *bebia* *a-lag-eb-d-a*?
what-DAT grandma.NOM VER-clean-SF-SM-IPFV.3SG
('What did grandma clean?')

c. ***Vin*** ***ar*** *i-q'id-a* *xil-i* *guʃin?*
who NEG VER-buy-AOR.3SG fruit-NOM yesterday
'Who didn't buy fruit yesterday?'

If there are multiple wh-expressions, they form a single cluster that must be placed preverbally, as shown in (25).

(25) a. ***V-is-tvis*** ***sad*** *i-mɣer-a* *Levan-ma* *simɣer-a*?
who-GEN-for where VER-sing.AOR.3SG L.-ERG song-NOM
('Where did Levani sing a song for whom?')

b. ****V-is-tvis*** *i-mɣer-a* ***sad*** *Levan-ma* *simɣer-a*?
who-GEN-for VER-sing.AOR.3SG where L.-ERG song-NOM
('Where did Levani sing a song for whom?')

Finally, wh-phrases are confined to the clause that they are merged in: they must be found in the IPrP of the clause-mate verb (as opposed to any verb). If a wh-phrase merged in an embedded clause needs to take scope in the matrix clause, long-distance wh-movement is disallowed, as illustrated in (26a).[6] Instead, Georgian employs a strategy known as wh-scope marking (Dayal 1993 et seq., Fanselow 2006, a.o.), in which the true wh-phrase is found in the embedded clause, while another wh-phrase signals its scope in the matrix clause, as shown in (26b).

(26) a. * ***Vi-s$_i$/vin$_i$*** *tkv-a* *Nino-m* [$_{CP}$ *(rom)* t_i *unda* *v-u-q'ur-o-t*]?
who-DAT/who say-AOR.3SG N.-ERG COMP MOD 1-VER-watch-OPT.1-PL
('Whom did Nino say (that) we must watch?')

b. ***Ra*** *tkv-a* *Nino-m,* [$_{CP}$ *(rom)* ***vi-s*** *unda* *v-u-q'ur-o-t*]?
what.NOM say-AOR.3SG N.-ERG COMP who-DAT MOD 1-VER-watch-OPT.1-PL
'Whom did Nino say that we must watch?'

4. Narrow foci: the facts

Like wh-phrases, narrow foci that are found in the preverbal part of the clause require IPrP placement. Separating the focused constituent further from the verb results in infelicity, as shown in (27):

(27) ('What did grandma clean yesterday morning?')
a. *Guʃin* *dila-s* *bebia* ***SAMZAREULO-S*** *a-lag-eb-d-a*.
yesterday morning-DAT grandma.NOM kitchen-DAT VER-clean-SF-SM-IPFV.3SG
'Grandma cleaned **THE KITCHEN** yesterday morning.'

b. **Guʃin* *dila-s* ***SAMZAREULO-S*** *bebia* *a-lag-eb-d-a*.
yesterday morning-DAT kitchen-DAT grandma.NOM VER-clean-SF-SM-IPFV.3SG
'Grandma cleaned **THE KITCHEN** yesterday morning.'

On the other hand, unlike wh-phrases, narrow foci of all types (both arguments and adjuncts) can also be found in the immediately postverbal position (IPoP). Separating the focused constituent from the verb in such contexts is also infelicitous, as (28) shows.

(28) ('What did grandma clean yesterday morning?')
a. *Guʃin* *dila-s* *bebi-a* *a-lag-eb-d-a* ***SAMZAREULO-S.***
yesterday morning-DAT grandma.NOM VER-clean-SF-SM-IPFV.3SG kitchen-DAT
'Yesterday morning grandma cleaned **THE KITCHEN**.'

[6] Certain contexts in Georgian allow for cross-clausal wh-movement: (i) complex clauses with matrix verbs *unda* 'want' (not to be confused with the modal *unda* 'have to, must' mentioned in Section 2), *ʃeudzlia* 'be able to', and *sʃ'irdeba* 'need' (Harris 1981: 18) and finite embedded clauses, and (ii) certain other matrix lexical verbs, which do not form a coherent class; see Borise (2019) for details.

b. **Guʃin* *dila-s* *a-lag-eb-d-a* *bebia* ***SAMZAREULO-S.***
yesterday morning-DAT VER-clean-SF-SM-IPFV.3SG grandma.NOM kitchen-DAT
'Yesterday morning grandma cleaned **THE KITCHEN**.'

Furthermore, if a narrowly focused constituent is placed postverbally, there is a strong preference for it to be the only one in the postverbal domain, as illustrated in (29). Taken together, (28) and (29) show that Georgian postverbal focus must be both immediately postverbal and clause-final.

(29) ('What did grandma clean yesterday morning?')
??? *Guʃin* *dila-s* *a-lag-eb-d-a* ***SAMZAREULO-S*** *bebi-a.*
yesterday morning-DAT VER-clean-SF-SM-IPFV.3SG kitchen-DAT grandma.NOM
('Yesterday morning grandma cleaned **THE KITCHEN**.')

In allowing for postverbal focus placement, Georgian differs from most other verb-final languages, which, even if allowing for some postverbal elements, commonly ban foci/new information from the postverbal domain. Other than Georgian, some dialects of Basque (Ortiz de Urbina 2002; Elordieta 2003; Etxepare & Ortiz de Urbina 2011; Elordieta & Hualde 2014), earlier varieties of German (Bies 1996; Fuß 2018; Hinterhölzl & Petrova 2018), and Iron Ossetic (Borise & Erschler under review) have been reported to allow for postverbal placement of foci in additional to immediately preverbal.

No major interpretational differences, such as contrastiveness or exhaustivity, differentiate preverbal and postverbal foci in Georgian. Contrastive foci most often arise in corrective contexts[7] and can be expressed both preverbally and postverbally, as in (30); see also experimental evidence in Skopeteas & Fanselow (2010).

(30) ('Mariami grew poor last year.')
a. *Ara,* ***LEVAN-I*** *ga-ɣarib-d-a* *ʃarʃan.*
no L.-NOM PRV-grow_poor-SM-AOR.3SG last_year
'No, LEVANI grew poor last year.'

b. *Ara,* *ʃarʃan* *ga-ɣarib-d-a* ***LEVAN-I.***
no last_year PRV-grow_poor-SM-AOR.3SG L.-NOM
'No, LEVANI grew poor last year.'

The next factor to consider is exhaustivity. Exhaustive interpretation of focus means that the focused constituent contributes new information and simultaneously rejects other alternatives as untrue. This can be achieved both preverbally and postverbally in Georgian. To illustrate, both reponses in (32) are felicitous corrective replies to the exchange in (31). See also Skopeteas and Fanselow (2010: 1388), who also conclude that both focus types in Georgian allow for an exhaustive interpretation but do not require it.

(31) (The speakers are shown a picture of a girl holding an apple and a banana):
A: 'What does Marika have?'
B: 'Marika has **A BANANA**.'

(32) a. *Ara,* *Marik'a-s* ***BANANI*** ***DA*** ***VAʃLI(-TS)*** *a-kv-s.*
no M.-DAT banana.NOM and apple.NOM(-EMPH) VER-have-PRS.3SG
'No, Marika has **A BANANA AND AN APPLE**.'

b. *Ara,* *Marik'a-s* *a-kv-s* ***BANANI*** ***DA*** ***VAʃLI(-TS)***
no M.-DAT VER-have-PRS.3SG banana-NOM and apple-NOM(-EMPH)
'No, Marika has **A BANANA AND AN APPLE**.'

[7] Cf. van der Wal (2016) on different types of corrective focus.

Nevertheless, there are some subtle differences between Georgian preverbal and postverbal foci. First, individual speakers have strong preferences for preverbal or postverbal focus placement. Second, certain contexts strongly favor preverbal focus placement over postverbal. This is the case for constituents modified by focus-inducing particles *only* and *even*, which, at least for some speakers, strongly favor preverbal placement:

(33) a. *Manana-m* ***MXOLOD*** ***GIORG-I*** *a-k'ots-a.*
M.-ERG only G.-NOM VER-kiss-AOR.3SG
'Manana **ONLY** kissed **GIORGI**.' (*only* scopes over *Giorgi*)

b.% *Manana-m* *a-k'ots-a* ***MXOLOD*** ***GIORG-I.***
M.-ERG VER-kiss-AOR.3SG only G.-NOM
'Manana **ONLY** kissed **GIORGI**.' (*only* scopes over *Giorgi*)

(34) a. *Manana-m* ***GIORG-I-TS*** ***K'I*** *a-k'ots-a.*
M.-ERG G.-NOM-also EMPH VER-kiss-AOR.3SG
'Manana **EVEN** kissed **GIORGI**.' (*even* scopes over *Giorgi*)

b.% *Manana-m* *a-k'ots-a* ***GIORG-I-TS*** ***K'I.***
M.-ERG VER-kiss-AOR.3SG G.-NOM-also EMPH
'Manana **EVEN** kissed **GIORGI**.' (*even* scopes over *Giorgi*)

5. Neg-words: interpretation and in-situ status

Now that the distributional properties of wh-phrases and narrow foci have been established, Section 5.1 shows that, in utterances containing narrow focus or a wh-phrase, other material receives topical interpretation. Syntactically, this is manifested as displacement of non-focal material into the left and/or right periphery. Not all constituents can undergo it, though. Due to their non-referential nature, neg-words cannot be topicalized in either of the peripheries, as illustrated in Section 5.2. This has important consequences for the syntax of wh-phrases and narrow foci. Specifically, recall that there is no movement for case assignment, as discussed in Section 2. Taken together, these facts – ban on topicalization of neg-words, and absence of obligatory case-related A-movement – mean that neg-words in Georgian are necessarily found in situ. Section 5.3 shows that the in-situ status of neg-words can be used as a diagnostic for determining the structural properties of wh-phrases and narrow foci.

5.1 Non-focal material: distribution

Topicalized constituents in Georgian appear in the left and right peripheries of a clause. In terms of their interpretational properties, there are two types of topics: contrastive topics, which are found in the left-periphery, and familiarity topics, which may be found either in the left periphery (typically following a contrastive topic) or postverbally. Contrastive topics either introduce or change the main topic of the utterance.[8] Familiarity topics, in turn, refer to given discourse material but cannot introduce new referents (Givón 1983; Frascarelli & Hinterhölzl 2007; Şener 2010). In the left periphery, contrastive topics typically precede familiarity topics, and both types of topics necessarily precede wh-phrases/narrow foci in the IPrP.

Topical status of a constituent can be shown in the following way. The appearance of a new (contrastive) topic may result from deliberately replacing an element in a contrast set: the explicit juxtaposition of two constituents attests to the presence of a contrast between the two. The availability of a contrastive reading can only obtain with topicalized or focused constituents (Lambrecht 1994); therefore,

[8] In adopting this use of the term, I am lumping together two types of topics: aboutness topics, which serve as the main topic that the sentence is about (Strawson 1964; Reinhart 1981; Givón 1983; Lambrecht 1994, a.o.), and contrastive topics proper, which "create oppositional pairs with respect to other topics" (Frascarelli & Hinterhölzl 2007: 87; cf. also Kuno 1976; Büring 1999). Doing so highlights the fundamental interpretational similarity of the two: they introduce the main topic of the utterance, whether it is specified as contrastive or not.

if the same clause also contains a narrowly focused constituent, the constituent with a contrastive interpretation must be a topic. To illustrate, in (35a), the contrastive topic *Giorgi* is substituted by another one, *Mariamma* (cf. Neeleman & Van de Koot 2008; Şener 2010). Note also that the contrastive topic *Mariamma* obligatorily precedes the narrowly focused constituent *xaʧ'ap'uri* 'khachapuri', as manifested by the ungrammaticality of (35b):

(35) ('And Giorgi? What did he eat at the party?')

a. *Giorg-i* *ar* *v-i-ts-i,* *magram* ***Mariam-ma*** ***XATʃ'AP'UR-I***
G.-NOM NEG 1SG-VER-know-PRS.1SG but M.-ERG khachapuri-NOM
ʧ'am-a.
eat-AOR.3SG
'I don't know about Giorgi, but **Mariami** ate **KHACHAPURI**.'

b. **Giorg-i* *ar* *v-i-ts-i,* *magram* ***XATʃ'AP'UR-I*** ***Mariam-ma***
G.-NOM NEG 1SG-VER-know-PRS.1SG but khachapuri-NOM M.-ERG
ʧ'am-a.
eat-AOR.3SG
('I don't know about Giorgi, but **KHACHAPURI**, **Mariami** ate.')

I do not assume dedicated positions for topical constituents, in line with the work that shows that topics do not occupy syntactic positions available only for a particular topic type (Zwart 2007; Neeleman, Titov, Van de Koot, et al. 2009). Instead, I adopt the view that left-peripheral topics that receive either interpretation are housed in the CP projection, while the preference for contrastive topics to precede familiarity topics is an IS property that is not directly rooted in syntax. In the absence of dedicated projections, such ordering results from the communicative preference to present the main topic or contrastive material first, followed by backgrounded/familiar material (cf. Zwart 2007; Neeleman & Van de Koot 2008; Neeleman, Titov, Van de Koot, et al. 2009). I take the housing projection to be CP as opposed to e.g. TP, given that there is no explicit evidence in Georgian that topics may be available in CP-less structures (cf. Iatridou & Kroch 1992).

There is conflicting evidence with respect to whether left-peripheral topicalized constituents come to occupy their positions by movement or base-generation. This issue requires further scrutiny, which goes beyond the scope of this paper. Nothing in the current account hinges on the mechanisms that underly displacement of topical/given material.

5.2 Neg-words: distributional properties

Neg-words (also referred to as n-words; Laka 1990) in Georgian are also required to appear in the IPrP (Aronson 1990: 47). Placing neg-words further to the left of the verb results in ungrammaticality (regardless of the thematic role of the neg-word). This is shown in (36) and (37):[9]

(36) a. ***Ara-vin*** ***(ar)*** *ʧ'am-a* *xaʧ'ap'uri* *dɣesasts'aul-ze*.
NEG-who NEG eat-AOR.3SG khachapuri party-at
'No-one ate khachapuri at the party.'

b. * ***Ara-vin*** *xaʧ'ap'uri* ***(ar)*** *ʧ'am-a* *dɣesasts'aul-ze*.
NEG-who khachapuri NEG eat-AOR.3SG party-at
('No-one ate khachapuri at the party.')

[9] Neg-words in Georgian, when placed preverbally, are optionally accompanied by the exponent of verbal negation (according to a prescriptive rule, it should be omitted in the presence of a preverbal neg-word). This makes Georgian a non-strict negative concord language, but one in which the preverbal exponent of negation is optional, like Catalan (Zanuttini 1991). According to Giannakidou's (2000) classification of negative concord languages, this combination of properties is typologically unusual: non-strict negative concord languages typically ban exponents of verbal negation if a neg-word is placed in the preverbal domain and require them if a neg-word is in the postverbal domain.

(37) a. *Mariam-ma* *dɣesasts'aul-ze* ***ara-per-i*** ***(ar)*** *ʧ'am-a*.
M.-ERG party-at NEG-thing-NOM NEG eat-AOR.3SG
'Mariami didn't eat anything at the party.'

b. * *Mariam-ma* ***ara-per-i*** *dɣesasts'aul-ze* ***(ar)*** *ʧ'am-a*.
M.-ERG NEG-thing-NOM party-at NEG eat-AOR.3SG
'Mariami didn't eat anything at the party.'

Direct object neg-words, such as e.g., *araperi* 'nothing', for some speakers, can occur postverbally as well, as shown in (38a). Neg-words other than direct objects, in contrast, are considerably more resistant to postverbal placement, as shown in (38b-c).

(38) a. %*Mariam-ma* **(ar)* *ʧ'am-a* ***ara-per-i***.
M-ERG NEG eat-AOR.3SG NEG-thing-NOM
'Mariami didn't eat anything.'

b. ???*Levani* *ar* *ts'a-vid-a* ***ar-sad.***
L.-NOM NEG PRV-go-AOR.3SG NEG-where
'Levani didn't go anywhere.'

c. ???*Mariam-ma* *naq'in-i* *ar* *i-q'id-a* ***ara-vi-s-tvis.***
M-ERG ice-cream-NOM NEG VER-buy-AOR3.SG NEG-who-GEN-for
'Mariami didn't buy ice-cream for anyone.'

The obligatory IPrP-placement of neg-words makes their distribution similar to that of narrow foci and wh-phrases. This is not surprising, given that there is a robust semantic connection between these types of constituents: focusing and questioning pick a particular entity from a set of alternatives, while neg-words "eliminate entire sets of contextual alternatives" (Drubig 2003: 15). The requirement for immediately preverbal placement of neg-words, found in Georgian, also has some cross-linguistics parallels. In Iron Ossetic, an Iranian language of the Caucasus that has been influenced by Kartvelian, neg-words are also obligatorily immediately preverbal; in contrast with Georgian, no neg-words can be placed postverbally in Iron Ossetic (Erschler 2010; 2012; 2013; Borise & Erschler under review). Neg-words in Pamiri, another Iranian language, not in contact with Kartvelian, have the same distribution (Erschler & Volk 2010). In Hittite, an extinct Anatolian language, neg-words together with relative pronouns, wh-phrases and indefinites formed a cluster that had to be adjacent to the verb, either by preceding or following it (Sideltsev 2014; 2016; 2017; Huggard 2015).

5.3 Non-topical status of neg-words

One of the main syntactic properties of neg-words in Georgian is their inability to displace, since they cannot receive a topical interpretation. The reason for this is the non-referential status of neg-words: since they refer to empty sets and do not pick out any referent, they cannot act as topics.[10] This is shown in (39) and (40) (the felicitous non-IPrP placement of the neg-words in (40) is discussed in detail in Sections 6 and 7).

(39) ('And lobiani? Did anyone eat [any]?')
****Lobian-ze*** *ar* *v-its-i,* *magram* ***ara-per-i*** *(ar)* *ʧ'am-a*
lobiani-about NEG 1SG-know-SM but NEG-thing-NOM NEG eat-AOR.3SG
MARIAM-MA.
M.-ERG
('I don't know about lobiani, but **MARIAMI** ate nothing.')

[10] In this, neg-words align with non-specific indefinites, another class of non-referential constituents that avoid topical interpretation (Reinhart 1991; Lambrecht 1994; Şener 2010, a.o.) Though see Cresti (1995) on the notion of indefinite topics.

(40) A: *Dɣes* ***vin*** *ar* *i-q'id-a* ***ara-per-i****?*
today who NEG VER-buy-AOR.3SG NEG-thing-NOM
'Who bought nothing today?'

A':* *Dɣes* ***ara-per-i*** ***vin*** *ar* *i-q'id-a?*
today NEG-thing-NOM who NEG VER-buy-AOR.3SG
('Who bought nothing today?')

B: *Dɣes* ***MARIAM-MA*** *ar* *i-q'id-a* ***ara-per-i****.*
today M.-ERG NEG VER-buy-AOR.3SG NEG-thing-NOM
'**MARIAMI** bought nothing today.'

B':* *Dɣes* ***ara-per-i*** ***MARIAM-MA*** *ar* *i-q'id-a.*
today NEG-thing-NOM M.-ERG NEG VER-buy-AOR.3SG
('**MARIAMI** bought nothing today.')

In avoiding topical interpretation, neg-words in Georgian pattern together with their counterparts in some other languages, such as Italian, in which they similarly have been demonstrated to avoid topicalization in Clitic Left Dislocation (CLLD) structures (Alexiadou 2006), as shown in (41):

(41) **Nessuno* *lo* *ho* *visto.*
Nobody him have seen
('No-one has seen him.') (Alexiadou 2006)

Based on the examples in Section 5.2 and 5.3, the following generalization emerges: given their non-referential nature, neg-words cannot receive a topical interpretation and displace into the left periphery. Because neg-words cannot surface postverbally, right-peripheral placement is also excluded. Based on these conclusions, and the fact that non-IS-motivated movement, such as movement for case, does not exist in Georgian, the logical conclusion is that neg-words are always found in situ. As such, they can provide useful evidence about the structural positions of wh-phrases and narrow foci, as shown in Sections 6 and 7, respectively.

Before turning to using neg-words as a diagnostic for the position of other constituents in a clause, recall from Section 5.2 that some speakers allow for direct object neg-words in the postverbal domain:

(42) %*Mariam-ma* ***ar*** *ʧ'am-a* ***ara-peri****.*
M-ERG NEG eat-AOR.3SG NEG-thing
'Mariamma didn't eat anything.'

At first sight, it might seem that this violates the generalization derived above, that neg-words are necessarily found in situ. This is only an apparent problem, however. In Section 2 it was shown that VO is possible as a neutral word order in broad-focus contexts, and that it is derived by short movement of the verb, which means that the direct object in VO orders, like in OV ones, is found in situ. Accordingly, it is not surprising that direct object neg-words may be found in the postverbal domain: such placement corresponds to their in-situ position, after the verb undergoes movement to v^0. Postverbal object neg-words, then, behave like any other postverbal objects. Also, because neg-word direct objects are allowed in the postverbal domain, an alternative analysis of obligatory adjacency between neg-words and verbs – one based on the presence of a NegP projection, the specifier of which would host the neg-word, with the verb raised to Neg^0 – is moot. Such an analysis would not explain the dual behavior of direct object neg-words.[11]

[11] It is unclear why only some speakers allow for postverbal placement of object neg-words. What is important for our purposes, though, is the contrast between the behavior of object neg-words and all other neg-words: the latter uniformly resist postverbal placement.

6. Structural status of wh-phrases: Spec-Head configuration

As compared to narrow foci (and neg-words), wh-phrases have the simplest distribution: they can only occur in IPrP, as illustrated by (43) and (44). This is the reason why wh-words are often picked to exemplify the behavior of constituents with the IPrP-requirement, since their distribution is the most consistent.

(43) a. *Bebi-a* ***ra-s*** *a-lag-eb-d-a*? =(24)
grandma.NOM what-DAT VER-clean-SF-SM-IPFV.3SG
'What did grandma clean?'

b. ****Ra-s*** *bebia* *a-lag-eb-d-a*?
what-DAT grandma.NOM VER-clean-SF-SM-IPFV.3SG
('What did grandma clean?')

(44) * *Bebia* *a-lag-eb-d-a* ***ra-s****?*
grandma.NOM VER-clean-SF-SM-IPFV.3SG what-DAT
('What did grandma clean?')

By extension, preverbal occurrences of narrow foci (and neg-words) may be assumed to have the same underlying syntax, while also, for some independent reason, allowing for more flexibility. However, the remainder of this paper shows that this is not the case, since wh-expressions in Georgian differ in their syntactic properties from both narrow foci and neg-words. Specifically, wh-expressions undergo A-bar movement to the specifier of a dedicated projection between the vP/VoiceP and TP, accompanied by raising of the verb to the head of the same projection (QP). The schematic representation of the structure underlying wh-questions is provided in (45), based on (43a):

(45) $[_{CP}$ Grandma$_k$ … $[_{QP}$ what$_i$ cleaned$_j$ $[_{VoiceP}$ t$_k$ … $[_{VP}$ t$_i$ t$_j$]]]]

The movement analysis for wh-phrases is a type of a Spec-Head configuration that creates adjacency between the preverbal element and the verb. The alternative would be for the wh-phrase to stay in situ, and for any material intervening between the wh-expression and the verb to be displaced. A range of evidence supports the Spec-Head configuration as underlying wh-question (WHQ) formation in Georgian. These include island effects, weak crossover (WCO) effects, and interaction of wh-expressions with neg-words. More specifically, island and WCO facts show that wh-question formation involves movement of the wh-expression, though it does not show us whether the movement is overt or covert (since island effects and WCO effects are sensitive to both overt and covert movement). Next, the interaction of wh-expressions with neg-words shows that the movement that wh-phrases undergo is overt but does not identify the height of its landing site. Finally, interaction of wh-expressions and interrogative complementizers shows that the landing site for wh-constituents is above the thematic domain but below the CP-area.

First, consider island effects. Island effects are robustly present in wh-questions in Georgian, which can be demonstrated with relative clause (RC) islands, both externally- and internally-headed ones, as shown in (46), and complex NP islands (47).[12] This is commonly taken to mean that a wh-phrase moves to the left periphery of the clause, and this movement is blocked when it is embedded in RC or complex NP. Island effects, however, do not differentiate between overt and covert movement – they only signal the presence

[12] This generalization contrasts with the claim made in Borise & Polinsky (2018), that Georgian does not have island effects with RCs and complex NPs. The current analysis is based on more types of island data obtained from more speakers. Nevertheless, there is a wh-construction which does not exhibit island effects, shown in (i), as discussed in Borise & Polinsky (2018). Such constructions might involve a resumption-like dependency between the two wh-expressions and require further investigation.

(i) ***Vis-ze***$_i$ *ga-i-g-o* [$_{NP}$ *ǯ'ori* *rom* ***vin***$_i$ *u-q'var-s*
Who-about PRV-VER-hear-AOR.3SG rumor.NOM COMP who.NOM VER-love-PRS.3SG

Marik'a-s]?
M.-DAT
lit.: 'Who$_i$ did you hear the rumor about, that Marika loves who$_i$?'

of either kind of movement to the periphery of the clause in which the wh-phrase is merged. Therefore, (46) and (47) do not yet tell us about the location of the overt wh-phrases in the embedded clauses.

(46) a. **Marik'a-m i-q'id-a ts'ind-eb-i [RC romeli-ts **vin** mo-ksov-a]?*
M.-ERG VER-buy-AOR.3SG socks-PL-NOM which-COMP who PRV-knit-AOR.3SG
(Lit.: 'Marika bought the socks that who knitted?')

b. * *Marik'a-m i-q'id-a [RC **vin** rom mo-ksov-a ts'ind-eb-i]?*
M.-ERG VER-buy-AOR.3SG who COMP PRV-knit-AOR.3SG socks-PL-NOM
(Lit.: 'Marika bought the socks that who knitted?')

(47) *[NP *T͡sʼori,* *rom* *Lali* ***vin*** *a-kʼots-a* *tsʼina* *kʼvira-s*] *martali* *ar*
rumor.NOM COMP L.NOM who PRV-kiss-AOR.3SG last week-DAT true NEG
aris?
be.PRS.3SG
('The rumor that who kissed Lali last week is not true?')

The next factor to consider are weak crossover (WCO) facts. WCO configurations can help distinguish in-situ interpretation from A-bar movement that would be involved in a Spec-Head configuration (or LF movement). WCO effects in languages like English, where wh-expressions undergo overt A-bar movement to Spec, CP, are thought to result from the wh-expression crossing a variable that it is coindexed with on its way to Spec, CP (Chomsky 1976: 19; Higginbotham 1980; Koopman & Sportiche 1982; Reinhart 1983; Safir 1984). In (48), a WCO effect between a pronominal subject and a wh-phrase object is illustrated. In languages with wh-in-situ there is no overt 'crossing', since the wh-expression does not leave its base position, but WCO effects may still be present – arguably, due to LF movement of the wh-expression over the variable to the CP domain (cf. Huang 1982; Aoun & Li 1993 for Mandarin Chinese).

(48) ??*Who$_i$ did her$_i$ husband describe* t$_i$ *to Giorgi?*

In Georgian, the equivalent of (48) is ungrammatical, as shown in (49). This indicates that the wh-phrase crosses a coindexed pronominal on the way to its landing site.[13] The word order in (49), parallel to the English example, suggests that wh-phrases in Georgian undergo overt movement.

(49) ****Vin$_i$*** *aɣ-u-tsʼer-a* ***tavis-ma$_i$*** ***kmar-ma*** *Giorgi-s?*
who PRV-VER-write-AOR.3SG 3SG.REFL.POSS-ERG husband-ERG G.-DAT
('Who$_i$ did her$_i$ husband describe to Giorgi?')

Note that the ungrammaticality of (49) is not due to a more general factor – placing a reflexive possessive pronoun within a subject coindexed with the direct object is grammatical in Georgian. There is one provision though – the binding object must A-scramble above the subject that contains a coindexed possessor (McGinnis 1999a; 1999b; Amiridze 2006), as shown in (50b). Lack of A-scrambling in this context, as in (50a), leads to ungrammaticality.

(50) a. * ***Tavis-i$_i$*** *deida* ***Nino-s$_i$*** *xat'-av-s.*
3REFL.GEN.SG-NOM aunt.NOM N.-DAT draw-SF-PRS.3SG
('Her$_i$ aunt is drawing Nino$_i$.')

b. ***Nino-s*** ***tavis-i*** *deida* *xat'-av-s.*
N.-DAT 3REFL.GEN.SG-NOM aunt.NOM draw-SF-PRS.3SG
'Her$_i$ aunt is drawing Nino$_i$.' (McGinnis 1999a: 283)

[13] Amiridze (2006: 62) discusses parallel structures as not giving rise to WCO effects, though she uses examples with complex/d-linked wh-phrases ('*which X*') instead of simple ones. This may be a relevant factor with respect to the variability in judgements in WCO constructions.

The grammaticality of (50b) means that the ungrammaticality of (49) is due to the fact that (49) is derived by movement of the wh-phrase, and this movement is distinct from A-scrambling, which derives (50b).

The interaction of wh-phrases and neg-words provides further support for the (overt) movement analysis. First, all neg-words, regardless of their argument/adjunct status, obligatorily surface postverbally in WHQs. (51) shows that neg-word direct objects must surface postverbally in WHQs with wh-subjects:

(51) a. *Dɣes* ***vin*** *ar* *i-q'id-a* ***ara-peri****?* =(40)
today who NEG VER-buy-AOR.3SG NEG-what
'Who bought nothing today?'

b. * *Dɣes* ***ara-peri*** ***vin*** *(ar)* *i-q'id-a?*
today NEG-what who NEG VER-buy-AOR.3SG
('Who bought nothing today?')

In a parallel fashion, a neg-word subject must be placed postverbally in a WHQ with a wh-object, as shown in (52).

(52) a. *Dɣes* ***ra*** *ar* *i-q'id-a* ***ara-vin****?*
today what NEG VER-buy-AOR.3SG NEG-who
'What did no-one buy today?'

b. * *Dɣes* ***ara-vin*** ***ra*** *(ar)* *i-q'id-a?*
today NEG-who what NEG VER-buy-AOR.3SG
('What did no-one buy today?')

The fact that wh+verb complex can only surface to the left of a (postverbal) subject neg-word, as shown in (52), combined with the fact that neg-words are found in situ in Georgian, suggests that the wh-expression and the verb surface in derived positions, as demonstrated in (53). If so, wh-phrases must occupy these derived positions in a Spec-Head configuration. Anticipating the discussion of the interaction between neg-words and narrow foci in Section 7, note that they contrast with the picture found in WHQs: postverbal placement of negative subjects, as shown in (52a) for WHQs, is strongly degraded in the context of a narrowly focused object in the IPrP.

(53) $[_{XP}$ *wh-object*$_i$ $[_{X'}$ *verb*$_j$ … $[_{vP/VoiceP/ApplP}$ *neg-subject* … $[_{YP}$ t$_i$ $[_{Y'}$ t$_j$]]]]]

The next step is to determine the height in the clause at which the wh+verb configuration is obtained. To do that, note that in WHQs with a neg-word subject, like (52), the wh+verb complex is located higher than the subject position. The subject position, depending on the series of the verb, is either Spec, vP (for ergative subjects), Spec, VoiceP (for nominative subjects), or Spec, ApplP (for dative subjects), as discussed in Section 2. Accordingly, in WHQs with a neg-word subject, the movements that the wh-object and the verb undergo take them to a projection above the base position of the subject.

Next, evidence that wh-movement targets a position below the CP in Georgian comes from embedded wh-questions. In embedded wh-questions, the interrogative complementizer *tu*, a C^0, precedes the wh-phrase. As (54) shows, *tu* cannot follow a wh-phrase, which means that the wh-phrase is located below the CP (cf. also Erschler 2015: 62).

(54) *Marik'a-s* *u-nda* *i-ts-od-es* $[_{CP}$ <***tu***> ***ra*** <**tu*> *tkv-a*
M.DAT VER-want VER-know-SM-SM-3SG COMP.Q what COMP.Q say-AOR.3SG
Manana-m].
M.-ERG
'Marika wants to know what Manana said.'

Bringing everything together, WCO effects provide evidence for overt A-bar movement of wh-phrases, which I take to be driven by a syntactic feature [+Q]. Island effects signal the presence of further (covert) movement of the wh-phrase/its subpart to the CP-domain, required for its correct interpretation. Interaction with neg-words shows that wh-phrases move above the position of the subject, but interaction with interrogative complementizers shows that they land in a projection below CP. I propose that this projection is QP, located on the top of the VoiceP, as was shown in (45). The height of this projection explains why wh-phrases do not raise all the way to the left periphery in Georgian. Lack of wh-movement all the way to the left periphery explains why there is no cross-clausal wh-movement, as was shown in (26): wh-phrases simply do not raise high enough (overtly) in their clause to move into the higher clause.

7. Structural status of narrow foci

7.1 Preverbal narrow foci: in-situ placement

Narrow foci in Georgian, if found in the preverbal part of the clause, obligatorily surface in the IPrP. This is shown in (55) for narrow focus in a reply to a WHQ, contrastive focus in (56), and for a constituent modified by *only* in (57).

(55) ('What did grandma clean?') =(27)
Bebi-a ***SAMZAREULO-S*** *a-lag-eb-d-a.*
grandma.NOM kitchen-DAT VER-clean-SF-SM-IPFV.3SG
'Grandma cleaned **THE KITCHEN**.'

(56) ('Mariami grew poor last year.') =(30)
Ara, ***LEVAN-I*** *ga-ɣarib-d-a* *ʃarʃan.*
no L.-NOM PRV-grow_poor-SM-AOR.3SG last_year
'No, **LEVANI** grew poor last year.'

(57) *Manana-m* ***MXOLOD*** ***GIORG-I*** *a-k'ots-a.* =(33)
M.-ERG only G.-NOM VER-kiss-AOR.3SG
'Manana **ONLY** kissed **GIORGI**.' (*only* scopes over *Giorgi*)

As was the case for wh-phrases, there are two possible ways that the adjacency between the focused constituent and the verb in (55)-(57) may be derived in: the movement-based Spec-Head configuration (which proved to apply to wh-phrases), and the in-situ adjacency, made possible by the displacement of intervening material to the right or left periphery.

Several pieces of evidence favor in-situ placement of narrow foci in the IPrP over the Spec-Head configuration analysis. These include quantifier scope facts, island facts, and interaction of narrow focus with neg-words. The syntactic structure that these facts motivate is shown in (58), based on (55):

(58) $[_{CP}$ Grandma$_k$ … $[_{VoiceP}$ t$_k$ … $[_{VP}$ **KITCHEN** cleaned]]]

First, let us look into quantifier scope facts. With respect to their scope properties, narrowly focused constituents align with their in-situ counterparts, which suggests that they, too, are found in situ. Accordingly, direct objects in broad focus contexts take narrow scope with respect to structurally higher adverbs.[14] Specifically, quantified direct objects scope below the position of low adverbs like *seldom*. To illustrate, (59) is more naturally interpreted as describing the situation in which a professor usually calls on more than three students (i.e., rarely calls on less than three; ADV > NUM), as opposed to the situation in which there are less than three students such that the professor rarely calls on them ($^{??}$NUM > ADV).

[14] Surface scope is generally preferred in Georgian. Inverse scope may be available in a context that favors it and/or if it is accompanied by particular prosodic cues that signal inverse scope. Pending a dedicated study, these observations are best thought of as tendencies.

(59) *Masts'avlebel-i* ***ifviatad*** ***sam-ze*** ***nak'leb*** ***st'udent'-s*** *mo-u-ts'od-eb-s.*
teacher-NOM seldom three-on less student-DAT PRV-VER-call-SF-PRS.3SG
'The teacher seldom calls on fewer than three students.'
(ADV > NUM; ??NUM > ADV)

Similarly, a narrowly focused constituent in (60) takes narrow scope as compared to the adverb *ifviatad* 'seldom':

(60) ('How many students does the teacher seldom call on?')
Masts'avlebel-i *ifviatad* ***SAM-ZE*** ***NAK'LEB*** ***ST'UDENT'-S*** *mo-u-ts'od-eb-s.*
teacher-NOM seldom three-on less student-DAT PRV-VER-call-SF-PRS.3SG
'The teacher seldom calls on **FEWER THAN THREE STUDENTS**.'
(ADV > NUM; *NUM > ADV)

The fact that narrowly focused objects align in their scope properties with their in-situ counterparts in broad focus declaratives suggests that narrowly focused objects, too, are found in situ. The scope reading of (60) speaks against a Spec-Head configuration: given the low position of the adverb and it scoping over the object, a Spec-Head configuration would need to be postulated very low in the clause. Given that there is no independent evidence for that, it is more parsimonious to assume that the focused object is found in situ. Note also that narrow foci take narrow scope with respect to the material in the left periphery, which also signals absence of movement.

Next, let us consider relative clause (RC) islands. (61) and (62) illustrate corrective focus and *only*-focus in RCs, respectively. These examples also provide evidence against movement of narrow foci to the left periphery: if such movement was involved, placing foci inside a strong island, like a RC, would result in ungrammaticality.

(61) ('Marika bought the socks that Nino knitted.')
Ara, *Marik'a-m* *i-q'id-a* *ts'ind-eb-i* [$_{RC}$ *romeli-ts* ***NANA-M***
no M.-ERG VER-buy-AOR.3SG socks-PL-NOM which-COMP N.-ERG
mo-ksov-a].
PRV-knit-AOR.3SG
'No, Marika bought the socks that **NANA** knitted.'

(62) *Marik'a-m* *i-q'id-a* *ts'ind-eb-i* [$_{RC}$ *romeli-ts* ***MXOLOD*** ***NANA-M***
M.-ERG VER-buy-AOR.3SG socks-PL-NOM which-COMP only N.-ERG
mo-ksov-a].
PRV-knit-AOR.3SG
'Marika bought the socks that **ONLY NANA** knitted.'

Finally, we should look at the interaction of narrow foci and neg-words. Like wh-phrases or narrow foci, neg-words have a requirement to surface in the IPrP. At the same time, we have seen that neg-words necessarily stay in situ, since they cannot receive a topical interpretation and undergo displacement into a peripheral position. Because of this, neg-words in narrow focus contexts provide evidence about focus placement, as they did for wh-phrases. As shown below, the relative distributions of wh-phrases and narrow foci with respect to neg-words differ.

The first context to consider is one with a narrowly focused subject and a neg-word direct object. As shown in (63a), the neg-word *araperi* 'nothing' cannot precede a narrowly focused subject, because that would involve a derived position of the neg-word, which is disallowed (a referential NP in such a context can precede the narrowly focused subject). Leaving *araperi* 'nothing' in its base position, in contrast, is possible. This is shown in (63b). Note that the neg-word is postverbal in (63b) because neg-objects behave like any other objects: they can be preceded by a verb that underwent V^0-to-v^0 movement.

(63) a. (‘Who bought nothing today?’)
*Dɣes **ara-per-i** **MARIAM-MA** *ar* *i-q’id-a.*
today NEG-thing-NOM M.-ERG NEG VER-buy-AOR.3SG
(‘**MARIAMI** bought nothing today.’)

b. (‘Who bought nothing today?’)
Dɣes ***MARIAM-MA*** *ar* *i-q’id-a* ***ara-per-i****.*
today M.-ERG NEG VER-buy-AOR.3SG NEG-thing-NOM
‘**MARIAMI** bought nothing today.’

The neg-word being interpreted in situ here does not yet provide definitive evidence for the structural position of the focus and the verb: both an in-situ interpretation of focus (accompanied by V-to-v movement of the verb, which derives postverbal placement of the neg-word), and movement of both elements, focus and the verb, to QP would result in the same linearization. With that in mind, a context with a narrowly focused DO and a neg-word subject, as in (64), is more informative. Here, the subject neg-word *aravin* ‘no-one’ can precede a narrowly focused DO. In contrast, postverbal placement of *aravin* in the same context is degraded – even though such placement would mirror the word order in the WHQ, as was shown in (52):

(64) a. (‘What did no-one buy today?’)
Dɣes ***ara-vin*** ***P’AMIDOR-I*** *ar* *i-q’id-a.*
today NEG-who tomato-NOM NEG VER-buy-AOR.3SG
‘No-one bought **TOMATOES** today.’

b. (‘What did no-one buy today?’)
??*Dɣes* ***P’AMIDOR-I*** *ar* *i-q’id-a* ***ara-vin****.*
today tomato-NOM NEG VER-buy-AOR.3SG NEG-who
‘No-one bought **TOMATOES** today.’

The picture that emerges from (63) and (64) contrasts with what we have seen for wh-questions in Section 5: neg-words, regardless of their thematic role, cannot linearly precede wh-phrases. For convenience, the interaction of a wh-subject and a neg-object is shown again in (65), and that of a wh-object and a neg-subject in (66):

(65) a. *Dɣes* ***vin*** *ar* *i-q’id-a* ***ara-peri****?* =(51)
today who NEG VER-buy-AOR.3SG NEG-what
‘Who bought nothing today?’

b. * *Dɣes* ***ara-peri*** ***vin*** *(ar)* *i-q’id-a?*
today NEG-what who NEG VER-buy-AOR.3SG
(‘Who bought nothing today?’)

(66) a. *Dɣes* ***ra*** *ar* *i-q’id-a* ***ara-vin****?* =(52)
today what NEG VER-buy-AOR.3SG NEG-who
‘What did no-one buy today?’

b. * *Dɣes* ***ara-vin*** ***ra*** *(ar)* *i-q’id-a?*
today NEG-who what NEG VER-buy-AOR.3SG
(‘What did no-one buy today?’)

Now, consider (63)-(66) together, keeping in mind that the structural position of the neg-words is identical in narrow focus contexts and wh-questions (given that neg-words stay in-situ). The contrast in (63), to reiterate, is not revealing about the height of the focused constituent: the felicitous response in (b) is compatible both with a raising and an in-situ position for the focused subject. The contrast in (64) is much more telling: given that the neg-word is in situ, narrow focus and the verb also must be structurally low.

Since it would be unexpected to find a discourse projection below the base position of the subject, I take the narrowly focused object and the verb to be in their in-situ positions. Note that the felicitous responses in (63) and (64) correspond to the two neutral, broad-focus word orders in Georgian, with the arguments staying in situ – SVO and SOV respectively. This is expected on the analysis that narrow foci, just like neg-words, do not move: if these two elements co-occur, the resulting word order can only be identical to the neutral one. The derivation of (64a) is provided in (67).

(67) $[_{CP}$ Today … $[_{VoiceP}$ $[_{vP}$ no-one … $[_{VP}$ **TOMATOES** bought]]]]

This is in contrast with the relative distribution of wh-phrases and neg-words: regardless of their thematic role, wh-phrases always 'win over' the IPrP, with neg-words surfacing postverbally, as shown in (63) and (64). These facts would be incompatible with an in-situ analysis of wh-phrases and can only be accounted for in wh-phrases undergo movement.

The idea that narrow foci in Georgian stay in situ is further supported by the finding that some speakers allow for direct object neg-words to intervene between a focused subject and the verb, as shown in (68).[15] The resulting word order, then, corresponds to the unmarked SOV order, and means that both the focused subject and the neg-word are found in their base positions:

(68) ('Who bought nothing?')
%***MANANA-M*** ***ara-per-i*** *ar* *i-q'id-a.*
M.-ERG NEG-thing-NOM NEG VER-buy-AOR.3SG
'**MANANA** bought nothing.'

In contrast, the same word order (narrow focus – neg-word – verb), is impossible when the theta roles are reversed – that is, with a subject neg-word intervening between a focused direct object and the verb, as shown in (69). This is expected under the current proposal, since in this word order neither of the verbal arguments would be found in situ:

(69) ('What did no-one buy?')
* ***YVINO*** ***ara-vin*** *ar* *i-q'id-a.*
wine.NOM NEG-who NEG VER-buy-AOR.3SG
('No-one bought **WINE**.')

The interaction between narrow foci and neg-words, therefore, provides decisive evidence against a uniform structural treatment of preverbal narrow foci and wh-phrases in Georgian. It shows that preverbal narrow foci in Georgian are interpreted in situ. Wh-phrases, in contrast, undergo A-bar movement to Spec, QP, accompanied by head-movement of the verb to Q^0.

7.2 Postverbal narrow foci: right-adjunction

Georgian also allows for placement of some narrowly focused constituents in the immediately postverbal position (henceforth IPoP), in contrast with many languages of the same typological profile (though this is not unprecedented: postverbal contrastively focused constituents are found in Basque, and postverbal new information foci are found in Old High German, Early New High German, and Iron Ossetic). There is no discernable interpretational difference between preverbal and postverbal foci. Narrow foci in replies to WHQs and contrastive foci are often found in the IPoP, as shown in (70) and (71), respectively.[16]

[15] Alternatively, the expected VO word order, with the object neg-word found in the postverbal domain, is also possible for these speakers.

[16] Constituents modified by *even* and *only*, for many speakers, are infelicitous in the IPoP. Other exhaustively interpreted foci (not modified by focus-inducing particles) can appear in the IPoP (Skopeteas & Fanselow 2010; Skopeteas & Féry 2014). Presently, it is unclear what this restriction stems from.

(70) (‘What did grandma clean yesterday morning?’) =(28)
Guʃin *dila-s* *bebi-a* *a-lag-eb-d-a* ***SAMZAREULO-S.***
yesterday morning-DAT grandma.NOM VER-clean-SF-SM-IPFV.3SG kitchen-DAT
‘Yesterday morning grandma cleaned **THE KITCHEN**.’

(71) (‘Mariami grew poor last year.’) =(30)
Ara, ʃarʃan *ga-ɣarib-d-a* ***LEVAN-I.***
no last_year PRV-grow_poor-SM-AOR.3SG L.-NOM
‘No, **LEVANI** grew poor last year.’

There is also a strong preference for no other elements to surface postverbally when the IPoP is filled by a narrowly focused constituent. Therefore, focus in the IPoP is both verb-adjacent and clause-final; violating either of the requirements leads to degraded judgements. This is shown in (72):

(72) (‘Who did you describe to Bakar?’)
a. *Bakar-s* *me* *aɣ-v-u-ts’er-e* ***MARIK’A***.
B.-DAT 1SG PRV-1SG-VER-write-AOR.3SG M.-NOM
‘I described **MARIKA** to Bakar.’

b. ???*Me* *aɣ-v-u-ts’er-e* ***MARIK’A*** *Bakar-s.*
1SG PRV-1SG-VER-write-AOR.3SG M.-NOM B.-DAT
‘I described **MARIKA** to Bakar.’

c. **Me* *aɣ-v-u-ts’er-e* *Bakar-s* ***MARIK’A***.
1SG PRV-1SG-VER-write-AOR.3SG B.-DAT M.-NOM
‘I described **MARIKA** to Bakar.’

The IPrP and IPoP narrow foci behave in a parallel fashion with respect to quantifier scope and island facts. However, the interaction of postverbal foci with neg-words shows that they are not identical with preverbal foci in their syntax. Based on the cumulative evidence, I propose that postverbal foci are (i) adjoined on the right side of the clausal spine, as shown in (73) for the example in (70). The main alternatives to this analysis are the following: (ii) postverbal foci are obtained in a Spec-Head configuration, but with a right-hand specifier, (iii) postverbal foci stay in situ, accompanied by verb raising (in a parallel fashion to the derivation of neutral VO).[17] The reasons for rejecting these alternative analyses are also provided below.

(73) [$_{CP}$ Yesterday morning … [$_{VoiceP}$ grandma … [$_{VP}$ *pro*$_i$ cleaned] [$_{DP}$ the **KITCHEN**$_i$]]]

First, when it comes to quantifier scope, narrow foci in the IPoP behave in a parallel fashion to narrow foci in the IPrP: they scope under a low adverb such as *seldom*; cf. (60) for the parallel IPrP facts.

(i) %*Manana-m* *a-k’ots-a* ***MXOLOD*** ***GIORG-I.*** =(16b)
M.-ERG VER-kiss-AOR.3SG only G.-NOM
‘Manana **ONLY** kissed **GIORGI**.’ (*only* scopes over *Giorgi*)

[17] Another way to derive postverbal foci was proposed for postverbal contrastive foci in Basque by Ortiz de Urbina (2002): the narrowly focused constituent is moved to a specifier of the dedicated projection, on the left side of the clausal spine, as with preverbal focus, followed by remnant movement of the other clausal material to the left periphery. This approach is not discussed here, for two reasons: first, it relies on parallelism with short movement for preverbal foci, but, unlike in Basque, preverbal foci in Georgian are interpreted in situ; second, it is unclear what would motivate the remnant movement under this approach.

(74) ('How many students does the teacher seldom call on?')
Masts'avlebel-i *ifviatad* *mo-u-ts'od-eb-s* ***SAM-ZE*** ***NAK'LEB*** ***ST'UDENT'-S.***
teacher-NOM seldom PRV-VER-call-SF-PRS.3SG three-on less student-DAT
'The teacher seldom calls on **FEWER THAN THREE STUDENTS**.'
(ADV > NUM; * NUM > ADV)

Second, with respect to island constraints, corrective narrow foci placed in the IPoP can be embedded in a strong island, such as a RC, just like preverbal foci:

(75) ('Marika bought the socks that Nana knitted.')
Ara, *Marik'a-m* *i-q'id-a* *ts'ind-eb-i* [$_{RC}$ *romeli-ts* *mo-ksov-a*
no N.-ERG VER-buy-AOR.3SG socks-PL-NOM which-COMP PRV-knit-AOR.3SG
NINI-M].
N.-ERG
'No, Nana bought the socks that **NINI** knitted.'

To recap, quantifier scope and island facts are the same for postverbal foci as for to preverbal foci, which bears on the possible analysis of postverbal foci. First, this means that option (ii), the Spec-Head configuration, is implausible for postverbal foci, for the same reasons that it was implausible for preverbal foci (e.g., lack of reconstruction effects with quantifier scope). Furthermore, to achieve the right word order, the Spec-Head configuration would involve a right-hand specifier, which is not a widely accepted technical concept (Ordóñez 1998; Cinque 2005; Kayne 2013), and one which would only be invoked with postverbal focus. The other two possibilities to keep in mind are (i) postverbal foci adjoined on the right and (iii) postverbal foci as staying in situ, accompanied by verb raising.

When deciding between the two, evidence from the interaction of postverbal foci and neg-words provides support for the (i) adjunct status of postverbal foci.[18] As before, the crucial property of neg-words is that they stay in situ. With respect to preverbal foci, this is reflected in the fact that an object neg-word cannot precede a narrowly focused subject in the IPrP, as was established in Section 7.1. For convenience, this is shown in (76):

(76) ('Who bought nothing today?') =(63)
Dɣes* ***ara-per-i* ***MARIAM-MA*** (*ar*) *i-q'id-a.*
today NEG-thing-NOM M.-ERG NEG VER-buy-AOR.3SG
'**MARIAMI** bought nothing today.'

In a stark contrast, a postverbal narrowly focused subject is felicitous with a preverbal object neg-word, as demonstrated in (77):

(77) ('Who bought nothing today?')
Dɣes ***ara-per-i*** (*ar*) *i-q'id-a* ***MARIAM-MA.***
today NEG-thing-NOM NEG VER-buy-AOR.3SG M.-ERG
'**MARIAMI** bought nothing today.'

Let us unpack the evidence. To recap, (76) is infelicitous, because preverbal narrow foci are interpreted in situ, and consequently, placement of object neg-word to the left of the preverbal narrowly focused subject can only result from topicalization of the neg-word, which is ruled out – hence the infelicity. If (77) also were to rely on *Mariamma* being interpreted in situ, (77) would be infelicitous too, given that such an analysis relies on topicalization of *araperi*, just like (76) attempts to. However, (77) is perfectly acceptable. The reason for that, I propose, is that *araperi* in (77) is interpreted in situ, with *Mariamma* adjoined on the

[18] Some other diagnostics that would help distinguish the two possible analyses, unfortunately, are not available in Georgian: e.g., sub-extraction is not allowed, which means that island constraints cannot be used as a diagnostic.

right side of the clausal spine and resumed by a null pronominal in its thematic position. The syntactic representation of that is provided in (78):

(78) [$_{CP}$ Today … [$_{VoiceP}$ [$_{vP}$ *pro*$_i$ … [$_{VP}$ nothing bought] [$_{DP}$ **MARIAMI**$_i$]]]

The only plausible analysis for Georgian postverbal foci, therefore, is adjunction on the right, and the crucial piece of evidence is, again, provided by the interaction between narrow focus and neg-words. The same right-adjunction strategy has been proposed for postverbal foci in Old High German (Hinterhölzl & Petrova 2018; Fuß 2018) and Early New High German (Bies 1996) – verb-final languages that, like Georgian, and in contrast with most verb-final languages, allow for postverbal foci.

7.3 Prosodic motivation for information-structural displacement

What motivates the adjacency between preverbal foci and the verb? I propose that a prosodic requirement on focus placement is at play. Georgian does not have nuclear stress (Dzidziguri 1954; Alkhazishvili 1959; Zhghenti 1963; 1965), which means that foci do not seek alignment with it. Instead, foci align with a right-edge prosodic boundary, enforced by the constraint ALIGN-FOC-*ι*-R, (79), in line with the Focus-as-Alignment approach (Féry 2013).[19]

(79) a. ALIGN-FOC-*ι*-R
Align focus with the right edge of an intonational phrase.

An important property of syntax-prosody mapping constraints is that they do not call for a particular syntactic implementation – as long as a syntactic configuration is allowed in a given context and satisfies the constraint, it can go through. In narrow focus contexts in Georgian, violations of ALIGN-FOC-*ι*-R are minimized via the displacement of topical material. As described in Section 5.1, this displacement takes topical material either to the left periphery or the postverbal domain. Displacement into the left periphery reduces the number of constituents that separate focus from the right *ι*-edge, indicated by the curly bracket in (80a); note that the verb does not displace, given that verbs do not undergo topicalization in the context of narrow focus.[20] Postverbal placement of topical material also goes towards satisfying (79) (again, *modulo* the position of the verb), as shown in (80b), because post-verbal material in Georgian is prosodically separated from the rest of the clause and is outside the core *ι* (Skopeteas, Féry & Asatiani 2018).

(80) a. XP$_i$ YP$_j$ **Focus** e_i e_j V**}**
b. **Focus** e_i e_j V**}** XP$_i$ YP$_j$}

Like other post-verbal material, post-verbal foci are also prosodically separated from the rest of the clause (Skopeteas, Féry & Asatiani 2018), which leads to the following configuration (argument post-verbal foci are co-indexed with a *pro* in their thematic position):

(81) XP YP *pro*$_k$ V} **Focus**$_k$**}**

In (81), postverbal focus fully satisfies ALIGN-FOC-*ι*-R, at the cost of right-adjunction. I propose that (80a-b) and (81) are all possible in Georgian, because ALIGN-FOC-*ι*-R is unranked with a constraint that bans focus placement outside of the core *ι*, FOCUSINTEGRATION:

(82) FOCUSINTEGRATION
A Focus should be part of the core *ι*.

[19] Note that the analysis of the Georgian facts proposed in Féry (2013) is not adopted here, because adopting the key constraint involved in that analysis (VERBADJACENCY: Focus is adjacent to the verb) would lead to circularity in the current argument.
[20] Georgian allows for contrastive topicalization of verbs, but it is limited to contexts like *As for reading, he didn't read the book.*

The resulting constraint interaction is shown in (83). Candidates (a) and (b) violate ALIGN-FOC-*ι*-R, and candidate (c) violates FOCUSINTEGRATION, but because the two constraints are unranked with respect to each other, candidates (a-c) win. Candidate (d) is excluded due to two violations of ALIGN-FOC-*ι*-R.

(83) *Constraints deriving focus placement*

Focus XP V**}**	ALIGN-FOC-*ι*-R	FOCUSINTEGRATION
a. ☞ XP_j Focus e_j V**}**	*	
b. ☞ Focus e_j V**}** XP_j**}**	*	
c. ☞ XP V**}** Focus**}**		*
d. Focus XP V**}**	**!	

The system of syntax-prosody mapping constraints proposed here, therefore, successfully accounts for focus placement in Georgian, and derives both immediately preverbal and postverbal placement. It also shows that immediately preverbal focus placement differs from that of wh-phrases, in that it is derived by the requirements on the prosodic realization of foci, as opposed to movement to a dedicated projection triggered by a syntactic feature.[21]

8. Conclusion

This paper demonstrated that wh-phrases and narrow foci in Georgian, despite surfacing immediately preverbally, have different syntax. Wh-phrases undergo short A-bar movement to Spec, QP, accompanied by raising of the verb to Q^0, driven by the [+Q] feature, which also results in adjacency between the two elements. In contrast, preverbal narrow foci are interpreted in situ, and their adjacency with the verb is achieved via displacement of the would-be intervening material, motivated by the prosodic requirements of the focused constituent. A key diagnostic used here for establishing the syntactic status of wh-phrases and narrow foci is their interaction with neg-words, since Georgian neg-words are always found in situ. This appears to be a unique tool that Georgian offers: when co-occurring with wh-phrases or narrow foci, neg-words offer evidence about the syntactic positions of these constituents.

The varying syntactic behavior of wh-phrases and narrow foci is explained as follows. Wh-phrases undergo syntactic movement that is driven by a syntactic feature [+Q]. Information-structural notions, like (non-exhaustive) focus, in the absence of a syntactic feature cannot drive syntactic. They might, however, have prosodic requirements, implemented as syntax-prosody mapping constraints. In Georgian, foci require to be aligned with the right *ι*-edge and to be part of the core *ι.* These constraints are unranked with respect to each other and are satisfied via the displacement of topical material. The winning candidates correspond to immediately preverbal and postverbal foci. The Georgian evidence strengthens the case for the hypothesis that only syntactic features, like [+Q], can trigger movement, while purely information-structural notions, like semantically non-exhaustive focus, cannot (Horvath 2007; 2010), which is contrary to prevalent cartographic approaches (Rizzi 1997; 2004; Cinque 2002).

These results have implications for the syntax of focus in verb-final languages, many of which have a requirement/strong preference for left-adjacency between narrow foci/wh-phrases and the verb. The Georgian data shows that, in a single language, this adjacency may have different syntactic sources. The fact that narrow foci and wh-phrases do not have the same syntax means that these two are not as closely related as is often thought. This falls in line with Cable's (2008) re-analysis of wh-phrases and narrow foci in Hungarian, according to which the IPrP-placement of wh-phrases cannot be triggered by the same feature that ensures the IPrP-placement narrow foci.

[21] See also Borise, Schmidt & Surányi (2022) on the details of the OT-analysis of focus placement in Georgian and other languages with immediately preverbal focus.

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