

Focus in Georgian and the expression of contrast

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Abstract

This paper examines the impact of contrastive focus in Georgian syntax. In a semi-naturalistic production study, we elicited spontaneous answers to questions which have shown that contexts involving contrastive focus induce placement of the focused constituent at the immediately preverbal position more frequently than other contexts. Based on this observation we investigate the properties of Georgian grammar which may account for the different impact of contrastive vs. non-contrastive contexts on word order. We first examine the involved syntactic structures and present evidence that preverbal focus is a result of movement to the specifier position of a functional projection whose head attracts the finite verb. We then address the question whether there is evidence for an association between contrast and movement to this position and we provide evidence that the correlation between context and order in the behavioral data does not result from a biunique form-function association of the kind ‘contrast ↔ movement to the specifier position’, but from an asymmetry at a discourse level such that contexts involving contrast induce answers in which focused constituents occupy the stressed position in the clause more often than contexts that do not.

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1. Preliminaries

The central question of this paper is whether contrastive focus constitutes a proper information structural category on its own or is a property of particular contexts which is not bi-uniquely identified with a particular linguistic form (see Horvath, 2008; Zimmermann, 2007). Looking at the syntactic reflexes of information structure, contrastive focus has been analyzed as associated with particular forms especially for languages that display focus movement (see, e.g., Rumanian in Kiss, 1998, Finnish and Hungarian in Vallduví and Vilkuna, 1998, Italian, Spanish, Russian, Greek, etc. in Molnár, 2002²). These languages display an opposition between an *in situ* and an *ex situ* realization of the focused constituent. This formal opposition is assumed to correlate with the difference between two different types of focus: *ex situ* focus is expected to be contrastive or exhaustive, while *in situ* focus is expected to be new information focus (see Drubig, 2003; Kiss, 1998). In this paper, we examine the question of form-to-function association in Georgian, which arguably belongs to the languages in which word order is influenced by information structure.

Georgian is a ‘free word order’ language, i.e. all permutations of major constituents are grammatical. The issue of canonical word order is a matter of debate:

² Note, however, that the definition of contrastive focus is not identical in these accounts. Vallduví and Vilkuna (1998) characterize movement to the focus position in Hungarian as an instance of contrastive focus, while Kiss (1998) analyzes the same phenomenon as involving a feature of exhaustivity.

subject constituents precede VPs in the canonical word order, while objects may scramble over subjects when the former but not the latter are part of the given information (see Skopeteas and Fanselow, 2008b). Within the VP we find considerable variation; both VO and OV orders (see (1a-b)) occur very frequently in discourse and are possible in all-new contexts, which gives rise to conflicting assumptions in the literature about canonical word order within the V projections (see discussion in section 3).

- (1) (a) *kal-i kotan-s u-q'ur-eb-s.*
 woman-NOM pot-DAT PV(IO.3)-look.at-THM-PRS.S.3.SG
- (b) *kal-i u-q'ur-eb-s kotan-s.*
 woman-NOM PV(IO.3)-look.at-THM-PRS.S.3.SG pot-DAT
- ‘The woman looks at the pot.’

Narrowly focused constituents are encountered in two domains of the Georgian clause: either in the immediately preverbal position or in a postverbal position. I.e. the object in (1a) and the object and the subject in (1b) can be narrowly focused. The availability of two alternative ways of encoding focus raises the following question about their functional identity: Do preverbal and postverbal foci in Georgian have the same distribution in contexts? Semi-naturalistic data show that the contextual property of contrast has a (non-categorical) effect on the choice among preverbal and postverbal position of the focused argument (see section 2). In order to account for the asymmetry between the two alternative encodings of focused constituents, we first address the question of the structural configurations that are involved in the two constructions (section 3). We provide evidence that the adjacency between preverbal focused constituents and the verb is a result of movement: focused constituent move to the specifier position of a functional projection and the V is attracted by the head of this

projection. We then argue that ‘postverbal focus’ is focus *in situ* which appears in sentences involving optional V-fronting.

After having established the structural facts, we discuss the properties of the preverbal position in section 4. We show that the specifier position at issue may be occupied by a range of constituents such as *wh*-pronouns and negative words. This evidence clearly shows that contrastive focus is not a necessary condition for movement to the preverbal position. Finally, we provide evidence from speakers’ intuitions that shows that preverbal and postverbal foci do not crucially differ in interpretation. Both types of foci may trigger the inference of exhaustive identification in particular contexts.

By means of this evidence we conclude that the feature of contrast is not associated with a particular syntactic position in Georgian, which is in line with the non-categorical effect of contrast in the production data (see section 5). The observed asymmetry may be explained with reference to discourse principles without requiring the assumption of a feature [contrast] encoded in grammar.

2. Semi-naturalistic evidence on focus placement

The elicitation task presented in this section is part of the *Questionnaire on Information Structure*.³ The aim of this elicitation task is to examine if several types of narrow focus (confirmative, completive, selective, and corrective) on one of the two main arguments of transitive verbs (agent and patient) have a distinct impact on the choice of construction in the object language.

³ The *Questionnaire on Information Structure* is a collaborative product of the project ‘Typology of Information Structure’ (University of Potsdam and Humboldt University of Berlin), see Skopeteas et al. (2006).

2.1. Method

The procedure of data elicitation simulates a memory test in order to distract the speaker from the actual purposes of the elicitation. Four pictures presenting simple actions that involve an agent and a patient are presented to the informant. He/she is instructed to observe the stimuli and memorize the details of the figures and the presented events. When he/she is ready, the stimuli are removed, and four pre-recorded questions are played back on a computer. The informant is instructed to reply to the questions ‘in full’, and not with short answers like “yes”, “no”, “a woman”, etc.

The questions are designed to induce different types of focus on the answer. In particular two factors are crossed in the design of the task: (a) the factor ‘focus type’ (contrastive focus vs. non-contrastive focus)⁴ and (b) the factor ‘focus domain’ (subject focus vs. object focus). Non-contrastive focus is elicited through answers to *wh*-questions. Contrastive focus is elicited through a context that invokes correction. We assume that a context of correction invokes expressions that identify the referent(s) for which the predicate holds and excludes a set of activated referents for which it does not (which fits to the definition of contrastive focus in Kiss, 1998); if the language at issue has an expression that is used for contrastive focus, then this expression is expected to occur in the context of correction too (see also the classification of ‘corrective focus’ as subtype of contrastive focus in Dik, 1997, Krifka 2008). Crossing the two factors results in four conditions that are implemented through different question types as exemplified in (2).

(2) Stimulus: ‘in front of a well, a man is pushing a car’

⁴ The elicitation task includes two further levels of the factor ‘focus type’, that are not reported here: confirmative answer and selective answer.

Condition N/Sbj: non-contrastive, subject

Q: 'In front of the well, who is pushing the car?'

Condition N/Obj: non-contrastive, object

Q: 'In front of the well, what is the man pushing?'

Condition C/Sbj: contrastive, subject

Q: 'In front of the well, is a woman pushing a car?'

Condition C/Obj: contrastive, object

Q: 'In front of the well, is the man pushing a bicycle?'

The conditions above were implemented in 16 items and were presented within a large field session containing pseudo-randomized tasks of different production experiments. Each speaker was confronted with each condition twice, each time with a different item. 20 native speakers participated to this experiment which resulted in a dataset of 20 (speakers) \times 4 (conditions) \times 2 (tokens) = 160 tokens (i.e., answers).⁵

2.2. Results

Some answers scored as 'non-valid' since they either did not realize the intended condition, e.g., the speaker did not remember the stimulus or gave a confirmative answer instead of a corrective one. A subset of successful answers contained either VP ellipsis (answers to subject questions, see (3)) or Subject-V ellipsis (answers to object questions). Though these sentences are natural spontaneous reactions to the stimulus,

⁵ A first dataset with 4 speakers was recorded, transcribed, and glossed by Rusudan Asatiani (January-June 2005). A second dataset containing 16 further speakers was collected by S. Skopeteas and transcribed by Sh. Bartaia and N. Tsereteli (September 2005). All participants were native speakers of Georgian, residents of Tbilisi, and students in different Faculties at the University of Tbilisi (11 women, 9 men, age range: 18-26, average: 21.9).

they are also considered as ‘non-valid’ with respect to the research objective examined in this paper, namely the identification of factors that induce placement in the preverbal or postverbal position in Georgian.

- (3) Q: {In front of the well: Who is pushing a/the man?}

bič’-i.

boy-NOM

‘A/the boy.’ (Condition N/Sbj)

The valid dataset for examining the related hypotheses contains 96 tokens (60% of the obtained answers). The following word orders have been encountered in the valid sentences: SOV (see (4)), SVO (see (5)), OSV (see (6)), OVS (see (7)) and two orders containing argument ellipsis, SV (see (8)) and OV (see (9)).

- (4) Q: {In the scene, in front of the well: is a/the boy pushing a/the bus?}

ara, bič’-i mankana-s a-c’v-eb-a.

no boy-NOM car-DAT (IO.3)PV-push-THM-PRS.S.3.SG

‘No, a/the boy is pushing a/the car.’ (Condition C/Obj)

- (5) Q: {In the scene, in front of the fence: what is a/the girl hitting?}

gogo u-rt’q’-am-s mankana-s.

girl(NOM) PV(IO.3)-hit-THM-PRS.S.3.SG car-DAT

‘A/the girl is hitting a/the car.’ (Condition N/Obj)

- (6) Q: {In the scene with the blue sky: who is looking at a/the lamp?}

lamp’a-s k’ac-i u-q’ur-eb-s.

lamp-DAT man-NOM PV(IO.3)-ear-THM-PRS.S.3.SG

‘No, a/the man and not a/the woman is cutting a/the melon.’ (Condition N/Sbj)

- (7) Q: {In the scene in the room: what is a/the man kicking?}

sk’am-s u-rt’q’-am-s igi.

chair-DAT PV(IO.3)-hit-THM-PRS.S.3.SG 3.SG.DIST:NOM

‘He is hitting a/the chair.’ (Condition N/Obj)

- (8) Q: {In the scene, inside the house: is a/the woman cutting the melon?}

ara, k’ac-i č’r-i-s.

no man-NOM cut-THM-PRS.S.3SG

‘No, a/the man is cutting it.’ (Condition C/Sbj)

- (9) Q: {In the scene, in front of the blue wall: whom is the man pulling?}

kal-s e-kač-eb-a.

woman-DAT PV(IO.3)-pull-THM-PRS.S.3.SG

‘(She) is pulling a/the woman.’ (Condition N/Obj)

Table 1 shows the distribution of the above answers in the four examined question types. Non-valid tokens contain answers that either do not realize the intended condition or display verb ellipsis.

Table 1: Obtained answers to questions^a

	non-contrastive				contrastive				total	
	object		subject		object		subject			
	n	%	n	%	n	%	n	%	n	%
total	40		40		40		40		160	
non-valid	16		19		14		15		64	
valid	24		21		26		25		96	
SVO	12	50.0	11	52.4	7	26.9	20	80.0	50	52.1
SOV	6	25.0	-	-	13	50.0	-	-	19	19.8
OVS	3	12.5	6	28.6	-	-	1	4.0	10	10.4
OSV	-	-	3	14.3	-	-	2	8.0	5	5.2
OV	3	12.5	-	-	6	23.1	-	-	9	9.4
SV	-	-	1	4.8	-	-	2	8.0	3	3.1

^a Percentages (%) are calculated on the basis of valid sentences.

Table 1 shows that there are two possible placements of the argument in focus:

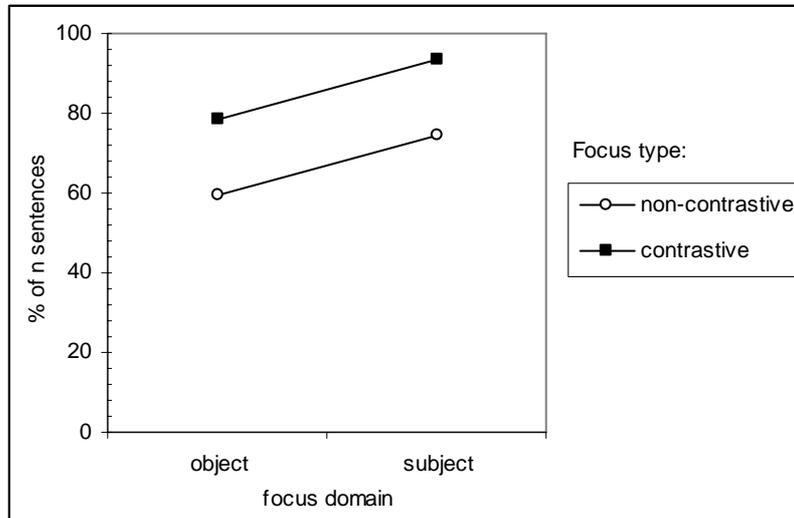
- (a) either preverbally: occurrences of S_FVO , OS_FV , and S_FV in subject focus and occurrences of SO_FV , O_FVS , and O_FV in object focus;
- (b) or postverbally: occurrences of SVO_F in object focus and OVS_F in subject focus.

In order to measure the impact of the experimental conditions on the choice among preverbal/postverbal focus, we calculated the percentage of preverbal focus out of the number of valid sentences for every speaker and condition. Five speakers had to be excluded from further consideration because they only produced non-valid sentences.⁶ The means of the percentages for the further fifteen speakers are presented in Figure 1 (object focus, non-contrastive 59.4%, contrastive 78.4%; subject focus, non-contrastive 74.7%, contrastive 93.3%). A repeated analysis of variance on the proportions obtained by each speaker separately (transformed through the *arcsin-square root* transformation in order to meet the normality requirements of parametric tests) revealed a significant main effect of focus domain ($F_{1,14} = 8.44, p < .01$) and of focus type ($F_{1,14} = 5.05, p < .04$) and no interaction between the two factors.⁷

⁶ The 40 answers elicited by these speakers (8 answers per speaker) contained 31 elliptical sentences and 9 answers that did not correspond to the intended discourse condition.

⁷ Our experimental design was based on the assumption that the speakers' sample does not display dialectal differences (all participants are inhabitants of Tbilisi and belong to the same social and age group). Hence, we did not expect to find a subgroup of speakers that prefer preverbal placement of contrastive focus and another subgroup that prefers postverbal placement (as the anonymous reviewer suggests). Descriptively, our data shows that the proportion of $XP_{FOC}V$ clauses is higher in the contrastive context for 9 speakers (four observations per speaker), it is equal in both types of focus for 4 speakers, and it is higher in the non-contrastive focus for 2 speakers. A closer view on the data of the latter two speakers does not show a categorical pattern: both speakers used 50% clauses of the $X_{FOC}V$ type in the contrastive context and 75% in the non-contrastive context. Hence, we speculate that this result is an

Figure 1: Percentage of preverbal focus (averages of speakers' means)



The results in Table 1 show that a string of the type $\langle XP_F YP V \rangle$ does not occur: independently of focus-type, when the focused constituent is preverbal, it always appears left adjacent to the verb. This finding reflects a strong preference for the adjacency of the focused constituent to the verb. Rating experiments on Georgian word orders (see Skopeteas et al. 2008) confirm this preference: SO_2O_1V order got a significantly higher score than O_2O_1SV in O_1 focus; in S-focus, SO_2O_1V was less felicitous than O_2O_1SV , but remained at a level of felicity which is higher than the O_2O_1SV order in O_1 focus (probably reflecting the fact that the canonical order is less contextually restricted). This asymmetry between canonical and non-canonical word orders is not reflected in our data: no instances of SOV order have been encountered in the conditions involving subject focus. The difference is probably due to the nature of

effect of the random choice of focus placement and does not reflect a consistent preference of these speakers to place the contrastive focus postverbally.

the production experiment: speakers tend to select the optimal word order among the paradigmatically available options, such that suboptimal alternatives are not reflected at all in the obtained dataset (see Featherston, 2005).

Table 1 reveals a different pattern for the order of VPs in elliptical sentences. When the S is elided, which occurs in the conditions involving object focus in our experiment, only the OV order occurs (compare the occurrence of both OV and VO orders in non-elliptical sentences in the same conditions). This difference is in line with corpus data showing that V fronting is less likely in clauses with two constituents (see section 3.3).

The analysis of variance has shown that the factor focus domain has a significant main effect which implies a subject/object asymmetry in the expression of focus. Independently of focus type, the proportion of sentences in which the focused constituent is placed left adjacent to the V is greater for subjects than for objects. This finding is a consequence of the asymmetry between the orders that instantiate postverbal focus for the two arguments: SVO_F vs. OVS_F . The former is an unmarked order (it may also occur in all-new contexts) and has been obtained very frequently across conditions, while the latter is a marked option.

Finally, an effect has been found for focus type too: in the context that induces contrastive focus, the frequency of preverbal occurrence of the constituent in focus increases. The results in Table 1 reveal a gradient effect of contrast on word order which implies a non-biunique association: contrastive focus may be encoded postverbally too (see occurrences of OVS_F in contrastive subject focus and SVO_F in contrastive object focus) and non-contrastive focus may be encoded in the preverbal position (see S_FVO/OS_FV in non-contrastive subject focus and O_FVS in non-contrastive object focus). This finding is the main question in the remaining of this article. First, we

address the question which structural configurations underlie the observed word orders. Then, we discuss the distributional and interpretational properties of these orders in order to find out whether the preference for preverbal placement results from an association of particular constituent structures with the feature of contrast.

3. Syntax of pre- and postverbal focus

The aim of the current section is to shed light on the syntactic configurations that underlie the word order patterns reported in section 2. The following questions are due:

- (10) (a) What is the canonical word order in Georgian (see section 3.1) ?
- (b) Which syntactic operation accounts for the preverbal placement of focused XPs? (see section 3.2)
- (c) Which syntactic structure is involved in the examples with postverbal focused XPs? (see section 3.3)

3.1. Canonical word order

Previous accounts are unanimous with respect to the canonical position of the subject: it precedes the predicate. By hypothesis, the subject originates in the specifier position of a higher verb projection (spec vP) and surfaces in the specifier position of a tense projection (TP) which is formed by merging a T-bar projection containing the tensed predicate with the subject constituent (see previous analysis of Georgian constituent structure in McGinnis, 1995, 1999).

The internal order within the VP is a matter of debate. Most accounts assume V-final word order (see Aronson, 1982:47; Boeder, 2005:64; Harris, 2000:141; McGinnis, 1997a, 1997b; Nash, 1995; Počxua, 1962), while some authors assume V-medial order (see Amiridze, 2006 for mono-transitive verbs) and others argue that the order within the VP is unspecified (see Anderson, 1984:186; Harris, 1981:22). The uncertainty with

respect to the basic order within VPs reflects the fact that the linear order between the V and the internal arguments is very flexible. Light asymmetries in the saliency of the constituents may affect the choice between VO and OV, such that both orders may occur out of the blue (see Tuite, 1998:42). Corpus studies show a clear preference for OV orders in written discourse (see Apridonidze, 1986:136-143; Vogt, 1971:222) and same frequency for OV and VO in texts that originate in oral tradition (fairy tails). However, this evidence is not conclusive since the corpus studies do not consider the contextual conditions in which the respective orders occur, hence they do not disentangle whether a frequent order is contextually unrestricted or it is licensed by particular discourse conditions that are very frequent themselves.

In line with the major part of the previous literature, we assume that the basic word order is V final as represented in (11), though positive evidence for this assumption is admittedly weak.

(11) [TP subject [T' [VP object [verb]]]]

Some evidence for V-final word order comes from idioms. The semantics of the idiomatic string is not compositional which implies that there are no contexts which would license an information structural feature on a single component of it. Under this assumption, word order variation which is determined by information structure is not expected to apply to the individual parts of non-compositional strings. As expected from this rationale, VP-idioms in Georgian do not display the word order flexibility that we observe in compositional VPs. Crucially, the non-compositional reading of VP idioms is

only available in the OV order in (12a) and but not in the VO order in (12b), which suggests canonical V-final order.⁸

- (12)⁹ (a) *p'it'er-ma pex-eb-i ga-č'im-a.*
Peter-ERG leg-PL-NOM PR-stretch-AOR.S.3.SG
'Peter stretched the legs.' / 'Peter died.'
- (b) *p'it'er-ma ga-č'im-a pex-eb-i.*
'Peter stretched the legs.' / *'Peter died.'

Furthermore, Georgian has some typological properties in common with V-final languages (see Skopeteas and Fanselow 2008a). It is shown that object preposing is an instance of A-movement (scrambling) (see McGinnis, 1999a, 1999b; Skopeteas and Fanselow, 2008b), since it yields new binding possibilities. Cross-linguistically, this property is expected to occur in V-final languages as argued for conceptual reasons and shown by means of evidence from Germanic languages in Haider and Rosengren (2003).

Finally, deviations from V-final orders may be accounted for through two word order operations that involve the placement of the V in a higher clausal position and are discussed in the following sections (see 3.2 and 3.3), while V-final order could not be derived in a similar reasoning (it would have to involve the fronting of the arguments and adjuncts rather than head movement).

In the following, we adopt the view that Georgian is a V-final language as represented in (11) for the reasons mentioned in this section. It should be noticed that

⁸ The VO order is only possible in the idiomatic reading when a reordering is licensed by a feature on a constituent exterior to the non-compositional VP (see 3.2.4).

⁹ The grammaticality judgments presented in sections 3 and 4 are elicited by Rusudan Asatiani (Tbilisi), Shorena Bartaia (Tbilisi), Tamar Kvakhvadze (Berlin), and Tamar Khizanishvili (Bremen).

the question of canonical word order is ultimately independent of the main issue of this paper, namely the realization of contrast in Georgian and its association with the syntactic structures that are presented in the next two sections.

3.2. Preverbal focus

The experimental data in section 2 shows that there is a preference for focused XPs to occur in a position that is left adjacent to the verb (see S_FVO , O_FV , O_FVS , and OS_FV orders). The occurrence of these word orders may be explained if we assume that the focused argument moves to the specifier position of a functional projection (FP) that is formed by merging an intermediate projection containing the presupposed part of the clause with a specifier position containing the target XP. As we will show in section 4.1, different types of constituents, among them focused XPs, interrogative pronouns, etc. appear in this position. It is a functional projection hosting arguments and non-arguments, hence we label it FP (=functional projection). This implies that we do not assume an association of this position with a particular information structure; this empirical question is dealt with in 4. In line with previous approaches to focus movement (see Kiss, 1998), we assume that the head of this projection attracts the finite verb, which results in the $XP_{FOC}V$ adjacency in our data.

(13) $[_{FP} XP [_{F'} verb \dots [_{VP} XP verb]]]$

The following sections provide ample evidence for V attraction as observed in (a) sequences of finite and non-finite verbs, (b) auxiliary clitics, (c) adverb-verb orders, and (d) the properties of idioms. The last subsection is devoted on verb focus and shows that this information structural configuration induces verb movement too. So far we have not addressed the question, where FP is located. We undertake this discussion after establishing the facts of V attraction in 3.2.6.

3.2.1. Finite and non-finite verbs

The order of finite and non-finite verb sequences in Georgian has been dealt with in Harris (2000:145), who claims – using examples from periphrastic perfects and passives – that the unmarked order is $V_{\text{fin}} > V_{\text{non-fin}}$, but the opposite order is not unusual.

- (14) (a) *es movlena še-nišn-ul-i*
 3.SG.PROX.NOM phenomenon(NOM) PR-note-PTCP-NOM
a-kv-s.
 PV(S.INV.3)-have-IO.INV.3
 ‘He has noted this phenomenon.’

- (b) *es movlena a-kv-s še-nišn-ul-i.*

Though both orders are possible in Georgian, they crucially differ in information structure. (14b) is judged as expressing focus on the object constituent *movlena* ‘phenomenon’, while the same intuition is not evoked by (14a). This difference in interpretation implies that the focused constituent triggers an operation that attracts the finite verb. Furthermore, V-attraction is obligatory with *wh*- constituents as (15a-b) show.

- (15) (a) *ra a-kv-s še-nišn-ul-i?*
 what(NOM) PV(S.INV.3)-have-IO.INV.3 PR-note-PTCP-NOM
 ‘What has he noted?’
- (b) **ra še-nišn-ul-i a-kv-s?*

3.2.2. Auxiliary clitics

The third person copula displays two alternate forms, a strong form *a-r-i-s* ‘PV-be-THM-PRS.S.3.SG’ and a weak form *=a* ‘be.PRS.S.3.SG’. The weak form of the

auxiliary is an enclitic that always cliticizes to a phonological host at its left.¹⁰ The position of this clitic is sensitive to information structure. In an all-new context illustrated in (16), the weak pronoun cliticizes at the end of the clause (see A₁). It is also possible for the enclitic to cliticize at the right edge of the prepositional constituent as in A₂, but A₁ is judged as better than A₂ in the context of the question in (16). When the subject constituent is in focus as in (17), A₂ is judged as incongruent with the context. When the prepositional constituent is in focus as in (18), only A₂ is judged as felicitous, while A₁ does not. Hence, these examples provide additional evidence that focused constituents occupy a position that attracts the V.

(16) Q: {‘What happens?’}

A₁: *γor-is marjvn-iv zebra=a.*
 pig-GEN right-ADVR zebra(NOM)=be.PRS.3.SG
 ‘The zebra is on the right of the pig.’

A₂: *γor-is marjvn-iv-a=a zebra.*
 pig-GEN right-ADVR-∅=be.PRS.3.SG zebra(NOM)
 ‘The zebra is on the right of the pig.’

(17) Q: {What is on the right side of the pig?}

A₁: *γor-is marjvn-iv zebra=a.*

A₂: *#γor-is marjvn-iv-a=a zebra.*

(18) Q: {Where is the zebra?}

A₁: *#γor-is marjvn-iv zebra=a.*

A₂: *γor-is marjvn-iv-a=a zebra.*

¹⁰ See similar evidence from Armenian in Comrie (1985).

3.2.3. *Low adverbs*

The neutral position of low adverbs is – similar to German – immediately in front of the verb as illustrated in (19a). Placing the adverb above the VP as in (19b) has an effect on the interpretation of the utterance, namely it invokes the expectation of a subsequent utterance conveying the information ‘what Peter did slowly?’. This interpretation involves a list of adverb-object pairs in which the adverbs have the function of contrastive topics and the objects the function of contrastive foci. The important issue for the discussion of this section is that adverbs are not in their base position in the adverb-object order, but in a position that is licensed by special semantic properties.

- (19) (a) *p'it'er-ma es p'roblema čkara*
 Peter-ERG 3.SG.PROX.NOM problem(NOM) quickly
gada-č'r-a.
 PR-(IO.3)solve-AOR.S.3.SG
 ‘Peter solved this problem quickly.’

- (b) *p'it'er-ma čkara es p'roblema gada-č'r-a.*

Relevant for the discussion on V-attraction is the postverbal position of the adverbs, as illustrated in (20a). This order is possible but contextually restricted: it may occur as an answer to a question inducing object focus. Similarly, the order S-Adv-V-O is felicitous in a context that licenses focus on the adverb, see (20b). These examples give further support to the view that the V moves to a position which is adjacent to the focused XP.

- (20) (a) {What did Peter solve quickly?}
p'it'er-ma es p'roblema gada-č'r-a
 Peter-ERG 3.SG.PROX.NOM problem(NOM) PR-(IO.3)solve-AOR.S.3.SG

čkara.

quickly

- (b) {How did Peter solve this problem?}

p'it'er-ma čkara gada-č'r-a es p'roblema.

3.2.4. Idioms

The examples in section 3.1 show that the idiomatic meaning of non-compositional strings is only available in the OV order. This phenomenon is evidence for basic head-final order under the assumption that the individual parts of a non-compositional VP cannot themselves bear information structural features that induce changes of word order. However, the examples in the previous section show that head (verb) movement is triggered not by a property of the head itself, but through a structural operation induced by a property of another constituent. Given that the external arguments of idiomatic VPs are not part of the non-compositional string, they are eligible for focusing. Hence, we may hypothesize that subject movement will be accompanied by V-attraction which will result to deviations from the base word order of non-compositional VPs. This prediction is borne out, as illustrated in (21). These examples show that the non-acceptability of word order deviations with idiomatic VPs (when presented out of context) is not due to the fact that the order within the non-compositional string is “frozen”, but due to the fact that the parts of a non-compositional string may not themselves bear information structural features.

- (21) (a) *vi-n ga-č'im-a pex-eb-i?*

who-ERG PR-stretch-AOR.S.3.SG leg-PL-NOM

‘Who stretched the legs?’ / ‘Who died?’

- (b) *mart'o p'it'er-ma ga-č'im-a pex-eb-i.*

only Peter-ERG PR-stretch-AOR.S.3.SG leg-PL-NOM

‘Only Peter stretched the legs.’ / ‘Only Peter died.’

3.2.5. *Vfocus*

In the previous sections, we presented evidence that a variety of non-canonical orders is licensed when the V is adjacent to a focused constituent. These empirical facts could be also accounted for through a rule requiring focus-to-verb adjacency without assuming focus movement. Evidence that the phenomenon at issue involves movement to a higher position and not simple adjacency comes from V-focus: when a V is in focus, then it (preferably but not obligatorily) surfaces in a position which precedes all further material in the VP, as is exemplified for object constituents in (22a) and adverbs in (22b).¹¹

- (22) (a) A: {Peter ate apples.}
- B: *ara. P'et'er-ma GA-TAL-A vašl-eb-i.*
- NEG Peter-ERG PR-peel-AOR.S.3.SG apple-PL-NOM
- ‘No, Peter peeled apples.’
- (b) A: {Peter ate quickly.}
- B: *ara. P'et'er-ma GA-TAL-A čkara.*
- NEG Peter-ERG PR-peel-AOR.S.3.SG quickly
- ‘No, Peter peeled quickly.’

¹¹ By hypothesis, focused verbs do not occupy the same position as focus arguments (see Bródy 1990 for the view that focus verbs in Hungarian are located in F' and not in spec-FP). For the purposes of our account, the important issue is that verb focus involves fronting which provides evidence that focused elements target a higher projection in Georgian.

3.2.6. *Where do the focused constituents land?*

The previous sections presented the facts that prove that preverbal focused constituents occupy the specifier position of a functional projection whose head attracts the finite verb. The question is where this functional projection is. The fact that the verb appears before its complements when it undergoes a movement operation induced by focus indicates that this position is above the verb projections. Following standard assumptions about the left periphery we may assume a complementizer layer (CP) that is situated above TP and hosts different types of constituents: complementizers, topicalized constituents, *wh*- elements, focused constituents (see Rizzi, 1997). However, we do not *a priori* assume an association of these projections with information structural functions (without excluding it as a theoretical possibility). The related discussion is the main issue of section 4. The structural question to be dealt with in this section is where the landing site of the leftwards moving heads is situated with respect to the Georgian constituent structure.

The crucial empirical generalization is that constituents in the specifier of FP may be preceded by material that does not necessarily have the properties of pragmatic topics. Beginning with the behavioral data, we observe that the examined discourse conditions also induce XY_FV orders. For $X=S$, we do not need to assume movement at all, since the corresponding linearization is identical to the basic configuration (SO_FV : 25% in the non-contrastive context and 50% in the contrastive context, see section 2.2, Table 1). For $X=O$, the crucial question is which operation accounts for the placement of the object in a prefocal position and accordingly what the properties of this position are (OS_FV : 14.3% in the non-contrastive context and 8% in the contrastive context). The context in which the examined sentences are produced is ‘answer to immediately preceding question’. In terms of Krifka (2002), the presupposed information of the

answer corresponds to the background of the question. At the critical point in discourse at which the speaker formulates his/her answer, the presupposed information is highly accessible, which is reflected to the fact that it may be elided. We assume that a structural position qualifies as a ‘topic’ position if material that appears in this position is used to identify an address in the common ground in which the comment should be stored (see Reinhart, 1982:24, Jacobs, 2001:650-655, Krifka, 2008). Under this assumption, it is expected that not every constituent that forms part of the presupposed information will undergoes topicalization, but only these constituents that are used to indicate (or create) addresses in the common ground. Turning back to the experimental findings, the prefocal material in the OS_FV orders is not necessarily induced by an operation that articulates addresses in the common ground, since in the examined question-answer context the address is ‘obvious’ (as is evinced from the fact that it is frequently elided). The implication of this view is that the prefocal object in OS_FV order does not occupy a topic position.

The view that prefocal constituents do not occupy a focus position is further supported from competence data. Example (21) above shows that idiomatic VPs allow for deviations from the canonical order, when an operation outside the idiom triggers V-attraction. Crucially, the non-compositional interpretation is also available when the internal argument precedes the constituent at the FP, as illustrated in (23a).¹² Further evidence is found in SV idioms: The *only*-phrase in (23b) arguably occupies the spec FP position and the subject constituent, which is part of the idiomatic string, appears to the

¹² Similar data with idiomatic VPs is presented in Nunberg et al. (1994: 513) from German. Referring to the difference between English and German, the authors claim that object fronting in German targets a lower position than in English in which the same construction is not possible.

left of this position. The question that is discussed in the following is which assumptions about constituent structure are necessary in order to account for the positional properties of the material preceding spec FP. Does the assumption of a spec TP suffice for this data or is it necessary to assume that the prefocal material is located in a layer higher than the TP?

- (23) a. *pex-eb-i vi-n ga-č'im-a?*
leg-PL-NOM who-ERG PR-stretch-AOR.S.3.SG
'Who stretched the legs?' / 'Who died?'
- b. *ymert-ma mart'o p'it'er-i c'a-i-q'van-a.*
god-ERG only Peter-NOM PR-PV-take-AOR.S.3.SG
'The god took only Peter.' / 'Only Peter died.'

The evidence in (23) is crucial for the characterization of the material that precedes the specifier of FP. Since the constituent above spec-FP is non-referential in both cases, it cannot be used to depict an address in common ground. It also excludes an aboutness concept of topic: (23a) is certainly not a predication about 'legs' and (23b) not a predication about 'god'.

Taken together, the occurrence of XY_{FV} answers to questions and the possibility to place non-referential constituents in a position earlier than spec-FP suggest that prefocal XPs do not necessarily bear an information structural feature, i.e., they do not result from a feature-driven operation such as topicalization. By consequence, there is no reason to assume further positions at the left periphery than the spec-TP in order to accommodate the linearization options illustrated so far; assuming that the FP node is projected below TP accommodates the full range of data. The consequence of this view is that the FP is not part of the CP layer, but it is located below TP (as proposed by

Ndayiragije, 1999:401 for Kirundi and Icelandic). Hence, the constituent structure of (23a) is represented as follows:

(24) [CP ... [TP object [FP *wh*- [F' verb ... [vP ~~wh~~ object verb]]]]

The analysis in (24) for examples like (23a) does not exclude the theoretical possibility for further positions in the left side of spec-TP. A case at issue is exemplified in (25). The quantifier occupies the specifier position of the FP whose head attracts the verb. The subject constituent occupies spec-TP, while the sentence initial NP occupies an earlier position. Assuming that the discontinuity between the quantifier and the noun reflects the fact that they bear conflicting information structural features that trigger movement to distinct specifier positions (see Fanselow and Čavar, 2002), we conclude that the noun *c'inadadeba* occupies a specifier position within the CP layer.

(25) [CP *c'in-a-da-d-eb-a* [TP *p'it'er-s* [FP *bevr-i*
front-Ø-PV-put-THM-INF Peter-DAT many-NOM
[F' *a-kv-s* [vP *ga-rče-ul-i*.]]]]
PV(S.INV.3)-have-IO.INV.3 PR-analyze-PTCP-NOM
‘Peter has analyzed many sentences.’

We observed that spec-TP may be occupied by a variety of constituents and not always the subject. This finding is fully in line with our preliminary assumptions. We assumed that all verbal arguments originate in V projections and we referred to previous research that shows that Georgian is a scrambling language. In line with previous analyses on scrambling in German (see Fanselow, 2003; Frey, 2004; Haider and Rosengren, 2003), the order of the material within the scrambling domain, i.e. the lexical layer (vP), is determined by an array of interacting hierarchies, such as the hierarchy of thematic roles, the givenness hierarchy, the animacy hierarchy, etc. The winner of this competition surfaces in the highest position within the lexical layer.

Movement from this layer to spec-TP is a formal type of movement that simply selects the highest constituent within the lexical layer following locality constraints. Hence, this position is not reserved for subjects and the fact that subjects typically occur in it is the result of their thematic prominence.

3.3. Postverbal focus

Section 3.2 presented ample evidence for verb movement through attraction. However, this is not the only source of non-verb-final orders in Georgian. We already mentioned that VO orders may also occur out of the blue and we observed in the production data in section 2 that focus is not a sufficient condition for fronting, postverbal arguments may be focused too. These observations lead to the question about the syntactic structure of sentences with non-final verbs that do not involve the structural requirements for V-attraction. Theoretically, there are two possibilities for the derivation of these constructions: either they involve an operation that extraposes preverbal XPs to the right of the verb or they involve some operation that fronts the verb above the preverbal XPs:

(26) (a) V fronting

[_{TP} subject [_{T'} verb [_{VP} object [~~verb~~]]]]

(b) object extraposition

[_{TP} subject [_{T'} [~~object~~] [_{VP} [verb]] object]]

There is no reason to exclude that both types of operations may be applicable in Georgian. Extraposition to the right is a common type of adjunction occurring in many languages, typical examples being cases of heavy shift. The example (27b) with a heavy object is preferred to the VO order, while the corresponding example without a heavy object is preferably realized in the OV order, see (27a).

- (27) (a) *p'eter-i mankana-s q'idul-ob-s.*
 Peter-NOM car-DAT buy-THM-PRS.S.3.SG
 'Peter buys a car.'
- (b) *p'eter-i q'idul-ob-s did panjřr-eb-ian*
 Peter-NOM buy-THM-PRS.S.3.SG big(DAT) window-PL-with
mankana-s.
 car-DAT
 'Peter buys a car with big windows.'

However, extraposition does not account for the type of data that we presented in section 2. For instance, 50% of the clauses with non-contrastive object focus and 26.9% of the clauses with contrastive object focus display the SVO_F order. Given that extraposition is rightwards movement to a position created through adjunction, and that positions adjoined to VP are extrametrical which implies that they cannot bear the nuclear stress of the clause (see Szendrői, 2003:46), it is not plausible that these utterances involve extraposition.

Second, extraposition does not account for the instances of SVO orders with light objects in all-new context. The examples under (28) are elicited in all-new context through picture description. Next to examples with V-final word order like (28a), we elicited examples with V-medial order in this condition, as illustrated in (28b).

- (28) (a) Q: {What is happening here?}
 A: *kal-i cxen-s mi-a-č'en-eb-s.*
 woman-NOM horse-DAT PR-PV-gallop-THM-PRS.S.3.SG
 'A woman is riding a horse.'
- (b) Q: {What is happening here?}
 A: *bič'-i čex-av-s šeša-s.*

boy-NOM cut-THM-PRS.S.3.SG firewood-DAT

‘A boy is cutting a tree.’

These phenomena suggest that it should be possible to derive VO structures through a purely formal operation that is not licensed by particular information structural properties. We assume that the operation at issue is optional V-fronting. Positive evidence for this view comes from the order of the arguments in sentences with non-final verbs. Leftwards movement of the verb implies preservation of the order of the further constituents within the verb projection, while this does not hold for extraposition. The order of preverbal arguments is $O_{ind} < O_{dir}$ and in accordance with the assumptions of verb-fronting, lower (direct) objects are more likely than higher (indirect) objects to occur postverbally (see Tuite, 1998:41, based on Apridonidze, 1986).

In general, head movement is not necessarily driven by a semantic/pragmatic feature, as it holds for V-to-C movement in German and V-to-T movement in French. This equally holds for Georgian with the difference that verb fronting in this language is optional. ‘Optional’ means in this case that this operation simply generates alternative linearizations that are selected in discourse in order to satisfy stylistic or accentual preferences. For instance, weak asymmetries in the predictability of the arguments may influence the choice of verb position.¹³ A sentence with a non-predictable or “salient”

¹³ The concept of predictability has in common with the proper instances of contrastive focus that the set of non-predictable referents relates to a set of referents that are expected by the hearer. However, the introduction of a non-predictable referent does not have the effect of excluding the involvement of a predicted one. Our background assumption is that if a language provides evidence that non-predictable referents undergo the same syntactic operation as contrasted constituents, then the syntactic operation at

verb as exemplified in (29b) would preferably surface in the SVO order, while for a sentence with three equally predictable items the SOV order is the preferred ‘neutral’ linearization, see (29a). Some subtle difference of this type may have influenced the spontaneous choice of (29b) above.

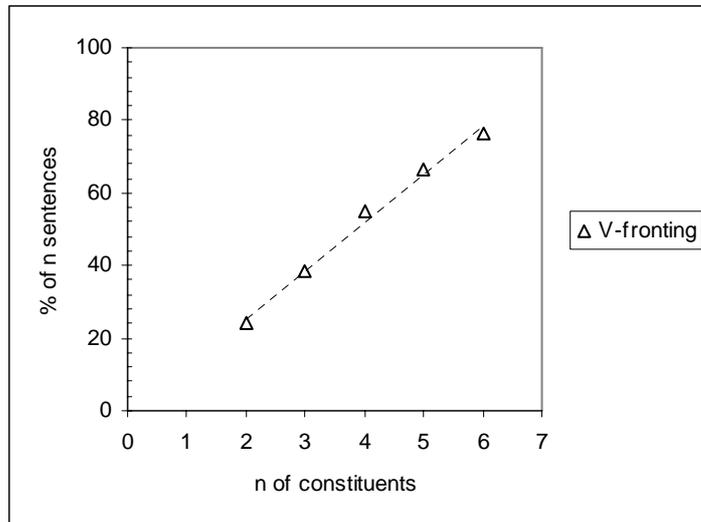
- (29) (a) *meba ye-m t’it’a mo-rc’q’-a.*
 gardener-ERG tulip(NOM) PR-water-AOR.S.3.SG
 ‘A/the gardener watered a/the tulip.’
- (b) *meba ye-m mo-glij-a t’it’a.*
 gardener-ERG PR-tear.out-AOR.S.3.SG tulip(NOM)
 ‘A/the gardener tore out a/the tulip.’

The last question is which is the landing side of the fronted V. The empirical data shows that verb moves leftwards freely within the verb projections and may occupy any available position within the VP-shell (see corpus data in Apridonidze, 1986:136ff.). The orders that are noticeably different are verb-initial orders that are considerably less frequent and are restricted to discourse initial sentences or presentational contexts (see Apridonidze, 1986:86; Boeder, 2005:64; Tuite, 1998:41-42). Hence, we assume that V-initial sentences are the result of another operation that involves V-movement. The distinct status of V-initial sentences is also indicated by the production data in section 2: in answers involving an O and a V the VO order does not occur at all. Native speakers confirm that the VO example in (30b) is not felicitous in the context of an object focus question, while SVO is possible in the same context.

- (30) Q: {‘Whom is the man pulling?’}

issue does not have quantificational properties (i.e., it does not involve an exhaustive or contrastive operator).

Figure 2: V position and sentence length (data from Apridonidze, 1986:137-140)



Based on this evidence, we conclude that Georgian displays verb fronting. This operation is ‘optional’ in the sense that it is not driven by a discrete structural or pragmatic feature. It is a structural possibility that makes available alternative linearizations that may be selected in discourse according to several kinds of preferences which are different in nature (of pragmatic nature such as the influence of predictability illustrated above or of purely stylistic nature such as a dispreference for linearizations containing a long n of preverbal constituents) and are not determined through the syntactic derivation.

Postverbal arguments of clauses that involve V fronting may be focused by prosodic means, and this configuration applies to the SVO_F and OVS_F data in our experimental study. However, postverbal focus involves a different prosodic realization than preverbal focus: while preverbal focused constituents do not display necessarily any marker of prosodic prominence, postverbal focused constituents are realized with a marked prosodic structure (characterized by low flat pitch accent and a particular tenseness in the articulation of the consonants; see Skopeteas et al. 2008). This

asymmetry suggests that placement of the focused material to the preverbal position involves a linearization in which the focused material is in a prominent position according to the accentuation rules of the language. It is not yet clear, whether these prosodic properties apply for the SVO sentences in all new contexts. But a plausible hypothesis for future research is that the verb fronting is triggered by purely prosodic principles: the verb attaches to the first accented element in situ.

4. Association with focus

The previous section distinguished two types of focused constituents in Georgian: (a) the focused constituent immediately precedes the verb; in this case, movement to the specifier position of a functional projection and V attraction through the head of this projection is involved; (b) the focused constituent is postverbal; in this case, the verb has undergone V fronting and the focus is realized in situ.

The experimental data in section 2.2 shows an asymmetry determined by the context. Contexts involving contrast are more likely to induce an answer involving *ex situ* focus than contexts that do not involve contrast. The question of the current section is how does this asymmetry arise. There are fundamentally two options:

- (a) We may assume that the information structural properties result from formal features that are part of the constituent structure. There are many different ways to implement this assumption: we may assume in spirit of Rizzi (1997) that focused constituents appear in the specifier position of a FocP (Focus Phrase) that involves particular interpretational properties. In order to explain the asymmetry in our behavioral data we have to go a step further and adopt an association of this projection with a semantic feature [+contrastive] as Kiss (1998) does for Rumanian, based on Göbbel (1996, ms.). Moreover, in order to

account for the fact that preverbal focus also occurs in non-contrastive contexts, we may assume a split FocP that projects a ContrastP and a Non-ContrastP hosting contrastively and non-contrastively focused constituents respectively. Focus in situ is not the result of a merging operation, hence association with focus is possible only through abstract agreement with a feature of non-contrastive focus that may be projected in a higher node of the Georgian VP.

- (b) Alternatively, we may assume that constituent structure does not directly bear information structural features (following previous suggestions by Fanselow, 2008, Zimmermann, 2007, Wedgwood, 2003). In this view, the preference for a particular constituent structure in certain contexts results from its linear and accentual properties and independent information structural principles that prime the selection of these properties in a given discourse situation.

The crucial evidence for the decision between (a) and (b) is whether there is a biunique relation between the structural configuration at issue and a particular information structure, hence the question is whether movement to FP is a necessary and sufficient condition for the focus interpretation. This section provides a survey of the properties of this position seeking distributional (see 4.1) and interpretational evidence (see 4.2-4.3) which may support the choice between (a) or (b) above.

4.1. Distributional properties

V attraction is not an exclusive property of focused or contrasted constituents. Exactly the same operation appears with *wh*- constituents and negative words (see also Harris, 1981:14, 1993:1385; Kvačadze, 1996:250; McGinnis, 1997a citing Nash, 1995). Examples (31a-d) illustrate the word order properties of negative words that exhibit the

same pattern with focused constituents (see examples (15) and (21) for *wh*-constituents).

- (31) (a) *maria aravi-s u-cem-i-a.*
 Maria(NOM) nobody-DAT PV(INV.S.3)-hit-PF-INV.O.3.SG(INV.S.3.SG)
 ‘Nobody has hit Maria.’
- (b) *aravi-s u-cem-i-a maria.*
- (c) **aravi-s maria u-cem-i-a.*
- (d) *maria ar u-cem-i-a aravi-s.*¹⁴

The specifier FP position is unique, i.e. no more than one constituents targeting this position may be accommodated. *Wh*- constituents have priority for movement to FP as exemplified in (32). The context introduces an alternative to the subject constituent of the target sentence, i.e., the *wh*- question. Though this context may license focus on the subject argument, preverbal placement of the subject is judged as non-acceptable, see (32c-d).¹⁵

- (32) {I already know that Nino hit Kote. What I actually want to know is... }
- (a) *...vi-s u-cem-i-a*
 who-DAT PV(INV.S.3)-hit-PF-INV.O.3.SG(INV.S.3.SG)
maria.
 Maria(NOM)
 ‘...who has hit Maria.’
- (b) *...maria vi-s u-cem-i-a.*

¹⁴ Double negation interacts with word order (Rusudan Asatiani, p.c.): in examples (31a-b), double negation is judged as non-standard, while in (31d) the version with double negation is preferred (the ungrammaticality of (31c) does not interact with double negation).

¹⁵ The same pattern results from the conflict between *wh*- constituents and negative words.

(c) #...*maria u-cem-i-a vi-s*.¹⁶

(d) *...*vi-s maria u-cem-i-a*.

Whenever a focused constituent and negative word are available, then it is the focused constituent that occupies the specifier position. This is in line with the view that the fronting of negative words is an instance of focus fronting (see Drubig, 2003). They preferably occupy spec FP, because they are preferably interpreted as the focus of the predication even if presented out of the blue, but they can perfectly be part of the presupposed information, which applies when another constituent is in focus.

(33) {Who has hit nobody?}

(a) *MARIA-S u-cem-i-a aravin.*
 Maria-DAT PV(INV.S.3)-hit-PF-INV.O.3.SG(INV.S.3.SG) nobody(NOM)
 ‘Maria has hit nobody.’

(b) #*MARIA-S aravin u-cem-i-a*.

(34) {Who has nobody hit?}

(a) *MARIA u-cem-i-a aravi-s.*
 Maria(NOM) PV(INV.S.3)-hit-PF-INV.O.3.SG(INV.S.3.SG) nobody-DAT
 ‘Nobody has hit Maria.’

(b) #*aravi-s s-cem-a MARIA*.

The above examples show that the FP position is unique, i.e. the eligible items (*wh*-, negative words, focused constituents) compete for a single position in the clause structure. The same holds for the distinction between contrastive and non-contrastive foci. Assume a stimulus showing ‘Maria eating an apple’. The following question

¹⁶ (32c) is acceptable in an context that licenses *echo* questions (Rusudan Asatiani, p.c.).

licenses contrastive (in particular corrective) focus on the object constituent and non-contrastive focus on the subject. The answer exemplifies the preferred order.

- (35) Q: {Who ate the tomato?}
- A: *vašl-i* *Maria-m* *še-č'am-a*
apple-NOM Maria-ERG PR-eat-AOR.S.3.SG
‘Maria ate an apple.’

The answer in (35) should not be interpreted as evidence for a split FP hosting a ContrastP and a Non-ContrastP. The OSV order in this context invokes the intuition of an answer that does not satisfy the expectations entailed in the question with the literal interpretation ‘concerning apples, it is Maria that ate them, concerning tomatoes, I do not know’. This interpretation indicates that the fronted object constituent is an implicational topic. In a compositional view (see Krifka, 2008), the object constituent in this answer is an aboutness topic embedding a focus feature which creates the inference of a set of alternatives: the assertion is delimited to the alternative that is encoded through the topic constituent.

In sum, the current section provided evidence that the FP is a unique position: contrastive foci, non-contrastive foci, *wh*-constituents, and negative words compete for a single position in the constituent structure. This implies that focus (or a particular variety of it) is not a *necessary* condition for movement to FP. Moreover, and again in line with the semi-spontaneous results, the most robust effect on Georgian word order is that non-V-adjacent preverbal constituents may not bear the focused information of the clause.

4.2. Interpretational properties

The data from language production in 2 has shown that focused constituents may occur in two different positions in Georgian: either in the specifier position (preverbally) or *in situ*, following a V which may have undergone optional fronting. In this sense, Georgian crucially differs from languages such as Hungarian in which prosodic prominence is exclusively derived by constituent structure and applies always and only on the initial constituent of a prosodic phrase (see Szendrői, 2001, 2003). Since Georgian displays two options for the realization of a narrow focus domain, it is a matter of examination whether both positions have identical interpretational properties or they instantiate different focus types. The production data revealed an asymmetry depending on the contrastive vs. non-contrastive contexts. This section addresses the question whether this asymmetry correlates with differences in interpretation.

4.2.1. Exhaustivity

Kiss (1998) has shown that when identificational focus applies to a constituent in Hungarian, the denoted set of referents is interpreted as the exhaustive subset of the relevant referents in discourse for which the presupposed part of the utterance holds. The empirical evidence for this generalization is that a proposition involving an exhaustively identified set of referents contradicts a proposition that contains an expanded set of referents.

The examples (36) and (37) examine the interaction of Georgian word order with exhaustive identification. The word order at issue is contained by the utterance A, which is the SOV order in (36a) and the SOV order in (36b). The utterance B is designed to test the availability of a contradiction: the set of referents that are denoted

by the object constituent of A is entailed in the set of referents that are denoted by the object constituent of B. When the target sentence is articulated with neutral intonation, B does not contradict A and the expression of negation (*ara* ‘no’) is judged as infelicitous.

- (36) (a) A: *k'ac-i sk'am-s a-c'v-eb-a.*
 man-NOM chair-DAT PV(IO.3)-push-THM-PRS.S.3.SG
 ‘A man pushes a chair.’
- B: # *ara, k'ac-i sk'am-s da magida-s*
 no man-NOM chair-DAT and table-DAT
a-c'v-eb-a.
 PV(IO.3)-push-THM-PRS.S.3.SG
 ‘No, the man pushes a chair and a table.’
- (b) A: *k'ac-i a-c'v-eb-a sk'am-s.*
- B: # *ara, k'ac-i sk'am-s da magida-s a-c'v-eb-a.*

The following examples illustrate the effects of prosodic prominence on the object constituent in the SOV (37a) and the SVO (37b) order. In contrast to the versions with neutral intonation in (36), the negation of the utterance in B is judged as felicitous in this context, which provides evidence that the prosodically prominent objects are exhaustively identified. The crucial point is that exhaustive identification is possible both in the preverbal position as well as postverbally. Hence, Georgian differs from Hungarian in that the exhaustive interpretation is not restricted to the immediately preverbal position (see Kiss, 1998 and Horvath, 2008 for Hungarian) but may be also invoked when the focused object is realized in situ, as exemplified by the SVO order.

- (37) (a) A: *k'ac-i SK'AM-S a-c'v-eb-a.*
 man-NOM chair-DAT (IO.3)NV-push-THM-PRS.S.3.SG

‘A man pushes a chair.’

B: *ara, k'ac-i sk'am-s da magida-s*
 no man-NOM chair-DAT and table-DAT
a-c'v-eb-a.

PV(IO.3)-push-THM- PRS.S.3.SG

‘No, the man pushes a chair and a table.’

(b) A: *k'aci a-c'v-eb-a SK'AM-S.*

B: *ara, k'ac-i sk'am-s da magida-s a-c'v-eb-a.*

4.2.2. (b) *Scalar interpretation of numerals*

The interpretation of numerals is a further indicator for the interpretational properties of focused constituents (see Kiss, 2007). In certain contexts, numerals allow for an interpretation that relates to the scale in which the numeral is involved. The set of natural numbers builds an entailment scale: assuming two natural numbers x and y such that $x < y$, x is part of y ($y = x + z$). The inference that is motivated from this fact is that propositions that hold true for x will also be true for y . (38) illustrates this inference in clauses involving negation. Both sentences under (38) are articulated in neutral intonation and evoke the inference that ‘Soso did not bring up a number of children which is equal or greater than two’.

(38) (a) *soso-s or-i bavšv-i ar ga-u-zrd-i-a.*

Soso-DAT two-NOM child-NOM NEG PV-(IO.3)SV-bring.up-PF-3.SG

‘Soso did not bring up two children.’ (n of children ≤ 2)

{Soso brought up three children.}

(b) *sosos ar ga-u-zrd-i-a or-i bavšv-i.*

‘Soso did not bring up two children.’ (n of children ≤ 2)

{Soso brought up three children.}

As Kiss (2007) shows for Hungarian, this inference does not arise when the quantified NP is identificationaly focused. Identificational focus has the effect of excluding the alternative members of the set of relevant referents that are invoked within a particular context. The inference motivated by the entailment scale does not arise, since it contradicts the interpretation of exhaustive identification which is licensed by focus. This is exemplified for Georgian in (39a-b) that involve prosodic prominence of the object constituent. Hence, (38a-b) but not (39a-b) are contradicted by the proposition {Soso brought up three children}. The data pattern of Georgian differs from the corresponding examples in Hungarian in that both preverbal and postverbal focus allow for the identificational interpretation, when they are realized with prosodic prominence.

- (39) (a) *soso-s OR-I BAVŠV-I ar ga-u-zrd-i-a.*
 Soso-DAT two-NOM child-NOM NEG PV-(IO.3)SV-bring.up-PF-3.SG
 PR-PV(INV.S.3)-grow.up-PF-INV.O.3(INV.S.3.SG)
 ‘Soso did not bring up two children.’ (*n* of children ≠ 2)
 {Soso brought up three children.}
- (b) *soso-s ar ga-u-zrd-i-a OR-I BAVŠV-I.*
 ‘Soso did not bring up two children.’ (*n* of children ≠ 2)
 {Soso brought up three children.}

4.2.3. Indefinite quantifiers

The interpretation of indefinite numerals is a further criterion for the identificational properties of focus constituents (see Kiss, 2007). The sentences in (40)

illustrate the interpretation of these quantifiers with neutral intonation. Following Kiss (2007), these quantifiers are upward entailing, i.e. they imply that the denoted quantity reaches at least a minimum from a scale of potential quantities.

- (40) (a) *čven ramdenime lar-i še-v-a-grov-e-t...*
 1.PL.ERG some/a.few(NOM) Lari-NOM PR-S.1-PV-gain-AOR-PL
 ‘we gained some/a.few of Lari...’
 {..., so we can buy the present.}
 # {..., so we cannot buy the present.}
- (b) *čven še-v-a-grov-e-t ramdenime lar-i...*
 {..., so we can buy the present.}
 # {..., so we cannot buy the present.}

Focus has the interpretational effect of invoking the set in which the focused element belongs and excluding the alternative members of the set. When the sentences in (40) are realized with focus on the quantified NP, the denoted quantity is interpreted as excluding other quantities that are contextually relevant, e.g., the expected, the usual, or the necessary amount of Lari. This effect of focus renders the continuation {..., so we cannot buy the present} in (41) infelicitous. In line with the previous examples, this effect may be invoked both in the preverbal and the postverbal positions in Georgian, when these are realized as prosodically prominent. This is in contrast to the Hungarian data presented by Kiss (1998), in which only the preverbal position may induce the identificational interpretation.

- (41) (a) *čven RAMDENIME lar-i še-v-a-grov-e-t...*
 1.PL.ERG some/a.few(NOM) Lari-NOM PR-S.1-PV-gain-AOR-PL
 ‘We have gained some/a.few Lari, ...’
 # {..., so we can buy the present.}

{..., so we cannot buy the present.}

(b) *čven še-v-a-grov-e-t RAMDENIME lar-i ...*

{..., so we can buy the present.}

{..., so we cannot buy the present.}

The examples in this section have shown that both preverbal and postverbal focus in Georgian may motivate the interpretation that a set of alternatives is excluded. This has been illustrated by means of the exhaustive interpretation of the set of referents denoted through the focused constituents and the exclusion of inferences based on entailment scales in the interpretation of numerals and indefinite quantifiers.

4.3. Focus-sensitive operators

Distributional restrictions on the occurrence of focus-sensitive particles provide evidence concerning the semantic properties of the operator that licenses movement. In Hungarian (see Kiss, 1998), *only*-phrases obligatorily occur in the position immediately preceding the predicate, while the particles *also* and *even* are not compatible with this position. In Georgian, focus-sensitive particles provide evidence for a distinction between the preverbal and the postverbal positions on the one hand and the sentence initial position on the other, but not for a distinction among the two former positions.

An *only*-phrase identifies a subset of contextually relevant referents for which the rest of the proposition exhaustively holds. Apart from cases in which the exhaustive identification is part of the presupposition, the *only*-phrase occupies a position that allows for a focus interpretation. This is illustrated in the following examples by means of the Georgian particle *mxolod* 'only'. In line with the data we discussed so far, an *only*-phrase may be realized either in the preverbal position or postverbally in Georgian. Hence, both A₁ (immediately preverbal placement) and A₂ (postverbal placement) are

felicitous in (42) (the same examples may be replicated for object focus). A₃ illustrates the placement of the *only*-phase in the sentence initial (and not preverbal) position. This structure is judged as infelicitous in the context in (42) and as generally non-acceptable out of context.¹⁷

(42) Q: {‘Who has hit Kote?’}

A₁: *mxolod maria-s h-q’-av-s*
 only Maria-DAT INV.S.3-have-THM-INV.O.3(INV.S.3.SG)
k’ot’e na-cem-i.
 Kote(NOM) PTCP-hit-NOM
 ‘Only Maria has hit Kote.’

A₂: *k’ot’e h-q’-av-s mxolod maria-s na-cem-i.*

A₃: *#mxolod maria-s k’ot’e h-q’-av-s na-cem-i.*

The occurrence of *also* in a syntactic position is a diagnostic for exhaustivity. Since the denotation of this particle entails that the referent at issue is a member of a set of referents for which the proposition also holds, its occurrence in a position that is inherently associated with exhaustivity invokes a contradiction. The concept of *also* is expressed in Georgian through the enclitic *-c* ‘also’. The examples in (43) show that the suffix ‘also’ can occur in both positions that may be focused in Georgian, i.e. neither position is inherently associated with a feature [+ exhaustive].

(43) (a) *maria-s k’ot’e-c h-q’-av-s*
 Maria-DAT Kote(NOM)-also O.3-have-THM-PRS.S.3.SG
na-cem-i.
 PV-hit(PTCP)-NOM

¹⁷ This order is licit in a context in which the exhaustive identification of the subject is presupposed, i.e. as an answer to the question ‘whom has only Maria hit?’.

‘Maria hit also Kote.’

- (b) *maria-s h-q'avš kot'e-c*
 Maria-DAT O.3-have-THM-PRS.S.3.SG Kote(NOM)-also
na-cem-i.
 PV-hit(PTCP)-NOM
 ‘Maria hit also Kote.’

A further diagnostic is provided in Georgian by the adjunct *agretve* ‘among others’. This adjunct is placed sentence initially, but its scope is determined by the focus domain of the clause. Examples (44a) and (44b) illustrate that the scope of this adjunct is the preverbal constituent, when the sentences are realized with neutral intonation.

- (44) (a) *agretve maria-m k'ot'e-s s-cem-a.*
 among.other Maria-ERG Kote-DAT IO.3-hit-AOR.S.3.SG
 ‘among other (individuals that Maria hit) Maria hit Kote.’
 (b) *agretve maria-m s-cem-a k'ot'e-s.*
 ‘among other (individuals that hit Kote) Maria hit Kote.’

However, if a constituent is prosodically prominent, then the operator takes scope over it (45a-b). In line with the discussion so far, prosodic prominence can be realized either in the immediately preverbal position or postverbally, however not on the non-V-adjacent preverbal constituent (see (45c)).

- (45) (a) *agretve maria-m s-cem-a K'OT'E-S.*
 among.other Maria-ERG IO.3-hit-AOR.S.3.SG Kote-DAT
 ‘among other (individuals that Maria hit) Maria hit Kote.’
 (b) *agretve maria-m S-CEM-A k'ot'e-s.*
 ‘among other (things that Maria did to Kote) Maria hit Kote.’
 (c) **agretve MARIA-M k'ot'e-s s-cem-a.*

The examples in this section give further support to the view that focus may be realized either in the preverbal position or postverbally in Georgian (this is shown by the distributional properties of *only*-phrases as well as by the scope assignment properties of the adjunct ‘among other’). Moreover, the distribution of the suffix ‘also’ shows that there is no difference in the semantics among the two alternative positions for focus in terms of exhaustivity. This is in line with the interpretational properties presented in the last section, which show that both positions may be interpreted as identificational when they are realized as prosodically prominent.

5. Conclusions

In section 2, we presented semi-spontaneous data that revealed an asymmetry between two types of narrow focus: (a) non-contrastive (answer to *wh*- question) and (b) contrastive (corrective answer to truth value question). This data shows that encoding focus in the preverbal position occurs more frequently in the contrastive than in the non-contrastive discourse condition.

In section 3, we have shown that this data results from different syntactic structures. The canonical word order of Georgian is arguably V final and non-V-final orders are derived through two distinct syntactic strategies: (a) V attraction by the head of a functional projection hosting the focused constituent, (b) optional V fronting that may be induced by stylistic factors. These operations account for the data pattern that is obtained in the production study. The observed cases of preverbal focus result from V attraction, and the observed cases of postverbal focus are instances of focus *in situ* (while the V has undergone optional fronting).

In section 4, we dealt with the distributional and interpretational properties of these constructions. We have shown that V attraction is licensed by different types of constituents that have undergone movement, i.e. *wh*- constituents, focused constituents, and negative words. This evidence shows that contrast is not a necessary condition for the contextual licensing of movement to the specifier position. The interpretation of preverbal and postverbal focus by means of properties shows that an identificational interpretation is possible both for preverbal as well as for postverbal focused constituents. Additionally, the distribution of the focus-sensitive operator *only* provides additional evidence that both preverbal and postverbal focused constituents may host the focused constituent. The distribution of the focus-sensitive operator *also* is identical with the distribution of *only* which shows that exhaustivity is not an inherent requirement of either position. Based on this data, we draw the conclusion that competence data does not reveal an association between the feature of contrast and movement to FP in Georgian.

This conclusion implies that the observed correlation between contrast and movement to the specifier position does not result from a form-to-function association in terms of necessary and sufficient conditions. This is in line with the observation that the obtained results do not show a categorical distribution depending on context, but rather a difference in preferences.

It has been argued in a number of recent publications on information structure that a number of syntax-to-function associations that are assumed in discourse configurational analyses do not categorically hold (see discussion of German word order variation in Fanselow, 2006, 2008) or result from defeasible inferences (see discussion on exhaustivity in Hungarian, Wedgwood, 2003). In light of this view on the interface between syntax and information structure, we assume that the observed

correlation between contrast and movement to the specifier position in Georgian is not the effect of an operator [+ contrast] which is inherent to the constituent structure.

In our view, the observed interaction between contrastivity and word order is a genuine result of the discourse asymmetry between contrastive and non-contrastive contexts. Though narrowly focused constituents may be realized both preverbally and postverbally in Georgian, there is a preference for the preverbal encoding which is predicted through the accentuation rules of the language (since postverbal focus requires a marked prosodic structure) and is empirically attested in the speakers' intuitions about the felicity of various word orders in answers to *wh*- questions. We assume that the asymmetry between contrastive and non-contrastive focus in the experiment presented in section 2 reflects the general preference for the optimal placement of narrowly focused constituents: speakers select the construction involving movement to a specifier position more frequently, when they assume that they contradict assumptions of the hearer, which is the case in a corrective answer to a truth value question, but not in answers to *wh*- questions; in the latter case, the focused constituent conveys information that is highly expected from the hearer, hence a particular structural marking of its contribution to the discourse is not necessary.

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Abbreviations

3 3rd person

ADVR adverbializer

AOR aorist

DAT dative

DIST distal

ERG ergative

INV inverted (person affix in the inverted case marking pattern, that occurs in the perfect tenses)

IO indirect object (person affix)

NEG negation

NOM nominative

NV neutral version

OV objective version

PF perfect

PL plural

PR preverb

PROX proximal

PRS present

PTCP participle

PV preradical vowel

S subject (person affix)

SG singular

SV subjective version

THM thematic suffix

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