Prosody of Focus in a Language with a Fixed Focus Position: Evidence from Georgian

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1. Introduction

This paper argues that Georgian, a language with a fixed structural position reserved for the focused element (immediately preverbal), also uses prosody to signal focus. Specifically, data from a preliminary study reported here shows that various types of foci – wh-questions (WHQ), yes-no questions (YNQ), and contrastive contexts – bear the same prosodic marker of focus: the phrase accent L, rigidly aligned with the penultimate syllable of the predicate. The advantage of the approach advocated here is that it provides a unified account for the prosodic realization of different types of focus in Georgian. The double-marking of the same feature in syntax and prosody raises questions as to why language does not rely on just one of these strategies.

Georgian prosody, and especially the prosody of questions and focus in Georgian, has already received some attention in the literature. Within the Georgian philological tradition, prosody has been discussed by Alkhazishvili 1959, Zhghenti 1963, Tevdoradze 1978 and Kiziria 1987, but because this research is written up in Georgian, it remains largely inaccessible for the wider linguistic community. More recently, the prosody of questions in Georgian has been discussed by Bush 1999 and Müller 2005, the prosody of focus by Skopeteas et al. 2009, Skopeteas & Fanselow 2010, Skopeteas & Féry 2010, 2014, and to appear. A general description of Georgian prosody within the Autosegmental-Metrical (AM) theory is given in Jun et al. 2007 and Vicenik & Jun 2014. In the present paper, I am building on the latter analysis.

This paper is structured in the following way. Section 2 introduces the relevant facts of Georgian grammar. Section 3 lays out the basics of Georgian prosody adopted in this paper. Section 4 discusses the new prosodic data. Section 5 briefly discusses existing accounts of Georgian prosody. Section 6 concludes.

2. Georgian: basic facts

Georgian is a Kartvelian language spoken in the Caucasus by over four million people (Hewitt 1995). Known among linguists mainly because of its complex verbal morphology, Georgian also exhibits a number of interesting phonological and syntactic features.

Georgian stress is acoustically weak – that is, in many cases, none of the syllables in a phonological word are perceptually more prominent than others. Because of this, placement and even the existence of stress in Georgian have been a matter of debate (see Skopeteas et al. 2009 for an overview of existing approaches). There is a broad distinction between accounts that argue that the placement of stress depends on the syllable count, targeting the antepenult and /or one of the syllables closer to left edge of a phonological word (Robins & Waterson 1952; Aronson 1990; Skopeteas & Féry, to appear), and ones

that argue that Georgian has fixed initial stress (Skopeteas et al. 2009; Vicenik & Jun 2014). Here, I adopt the initial-stress approach; but because the acoustic feature under discussion – phrase accent L – targets the penultimate syllable of a predicate of any length, it is not aligned with stress under either approach. As such, nothing hinges on the analysis of lexical stress adopted here.

Georgian has flexible word order. The default word order places subjects clause-initially, but both SOV and SVO are well-attested, with no interpretive difference reported (Hewitt 1995), as in (1) and (2). Georgian is head-final, which suggests that SOV is underlying (Skopeteas at al. 2009); certain embedded structures, such as some masdars and nominalizations, must be SOV. Verb- and object-initial word orders are dispreferred.

(1) *Gogo   č'am-s   vašl-s.*[1]
     girl.NOM   eat-PRS.3sg apple-DAT
     A/the girl is eating an/the apple.

(2) *Gogo   vašl-s   č'am-s.*
     girl.NOM   apple-DAT   eat-PRS.3sg
     A/the girl is eating an/the apple.

Yes-no questions usually differ from declaratives in prosody only; more on yes-no questions below. Wh-movement in Georgian targets the immediately preverbal position - that is, the wh-word cannot be separated from the verb by any constituent, apart from verbal negation (Hewitt, 1995). The wh-word need not be clause-initial:

(3) *Vi-s   uvli-s   Nino?*
     who-DAT   look_after-PRS.3sg Nino.NOM
     Who does Nino look after?

(4) *Nino   vi-s   uvli-s?*
     Nino.NOM   who-DAT   look_after-PRS.3sg
     Who does Nino look after?

In embedded contexts, the wh-word can also be preceded by an overt interrogative complementizer *tu*, which suggests that the wh-word is located in a projection below CP (5). Nash (1995) proposes that the relevant position is the specifier of the focus projection (Spec, FocP).

(5) *Rezo   mixv-da   **tu** ratom c'avi-da   Manana.*
     Rezo.NOM   realise-IPFV Q   why   leave-IPFV   Manana.NOM
     Rezo realised why Manana left.   (from Erschler 2015)

Most researchers agree that the focus position in Georgian is immediately preverbal (a.o., Nash 1995, Vicenik & Jun 2014). This view is supported by the obligatorily preverbal placement of wh-words, which are inherently focused, and by the speakers' strong preference to place focused elements in the immediately preverbal position. There is also a view that Georgian allows both preverbal and postverbal focus placement (Skopeteas et al. 2009 et seq.). Because some speakers disallow postverbal focus placement, only preverbal focus is discussed in this work. Topics are placed clause-initially, and precede focus. Preverbal focus is compatible with both exhaustive and non-exhaustive interpretations (Skopeteas & Fanselow 2010, Skopeteas & Féry 2014). This is unlike the famous case of Hungarian, which is similar to Georgian in many respects, but where preverbal focus can only be interpreted exhaustively, and post-verbal focus non-exhaustively (É. Kiss 1998; cf. Hoot 2016 for experimental results pointing to the contrary).

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[1] Abbreviations used in the glosses: 3sg – third person singular, AOR – aorist, COMP – complementizer, COP – copula, DAT – dative, ERG – ergative, IPFV – imperfective, NEG - negation, NOM – nominative, PRS – present, Q – interrogative complementizer.

3. Georgian prosody: AM account

Here, I am adopting the tonal inventory proposed for Georgian in Jun et al. 2007 and Vicenik & Jun 2014, slightly simplified for present purposes. I assume two main levels of prosodic phrasing: the accentual phrase (AP), corresponding to a single lexical word, and the intonational phrase (IP), loosely correlated with a clause. The intermediate phrase (ip), a tonal unit reserved for longer constituents like heavy NPs, is optional in Georgian and does not play a role in the current analysis.

As assumed in the AM tradition, each type of phrase is marked by a (final) boundary tone. Additionally, APs bear two other types of tonal marking: pitch accents and (optional) phrase accents. Pitch accents align with lexical stress and, as such, are associated with AP-initial syllables. Pitch accents in Georgian can be simplex (H*, L*) or, rarely, complex (LH* and L+H*). The type of boundary tone that an AP has is usually correlated with the type of pitch accent it has: low AP-boundary tone La most often follows H* or LH*, and high AP-boundary tone Ha co-occurs with L*. Declarative IPs usually end in a low boundary tone L%, while questions have H% or HL% boundary tone.

Phrase accents that some APs bear, in contrast with pitch accents, are optional. I propose that the phrase accent H+L that Vicenik & Jun 2014 analyze as associated with the antepenultimate syllable should in fact be reanalyzed as a phrase accent L, associated with the penultimate syllable. The reason for that, as shown in Fig.2 below, is that L in certain contexts can appear on the penult of predicates without the preceding tonal element H. Most importantly, I propose that phrase accent L, realized on the penultimate syllable of the predicate, is the prosodic marker of focus in Georgian. This is consistent with Vicenik & Jun's observation that H+L is typically found in focal contexts.

An interesting feature of the Georgian prosodic system is that in cases in which two tonal targets coincide, only one of them is realized – usually the one belonging to the IP as opposed to AP. Here, when L coincides with L*, it is marked as L.

4. Data

The results reported here come from a pilot study carried out with a native speaker of Georgian (MI, female, in her 50s, Tbilisi resident) in Cambridge, MA. Target utterances were recorded in the phonetics laboratory at Harvard University and analyzed using Praat (Boersma & Weenink, 2016).

Before proceeding to the prosodic realization of focus in Georgian, let us first look at the prosody of all-new declarative clauses, which can be analyzed as either carrying no focus (Szendrői 2003) or carrying new information focus (É. Kiss 1998). As such, I take them to be unmarked items to which utterances containing a focused element can be compared.

Intonation of all-new declaratives in Georgian can be described as a succession of APs each bearing an L* pitch accent followed by Ha boundary tone, with downstep throughout the utterance, as shown in Fig.1. Focus-marking L phrase accent is absent from all-new declaratives.

(6)   *Giorgi-s*   *mosc'on-s*   *dzalian*   *lamazi*   *gogo*   *Tbilis-idan.*
        Giorgi-DAT   like-PRS.3sg   very   beautiful.NOM   girl.NOM   Tbilisi-from
        Giorgi likes a very beautiful girl from Tbilisi.

Yes-no questions (YNQ) in Georgian are formed by manipulating prosody only – that is, there is no question particle, no obligatory word order change, etc. Importantly, YNQs differ from all-new declaratives in their focal properties: in the former, the predicate – or, rather, its polarity – is focused. This is known as *verum* (e.g., Höhle 1992), *polarity* or *predicate/predication* focus. This change in focal properties is what is reflected in prosody. Instead of the sequence of L* Ha-marked phrases, as in all-new declaratives, in YNQs the predicate bears the L phrase accent, followed by a Ha AP-boundary tone. The rest of the clause is deaccented until the clause-final H% or HL% boundary tone.

(7)   *Giorgi-s*   *mosc'on-s*   *dzalian*   *lamazi*   *gogo*   *Tbilis-idan?*
        Giorgi-DAT   like-PRS.3sg   very   beautiful.NOM   girl.NOM   Tbilisi-from
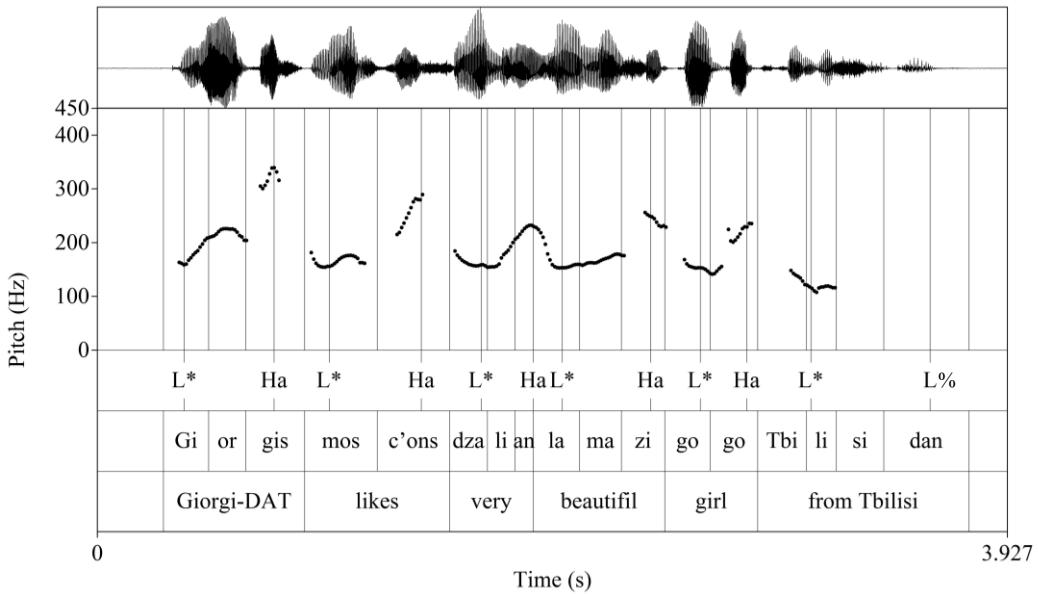   *Giorgi likes a very beautiful girl from Tbilisi.*

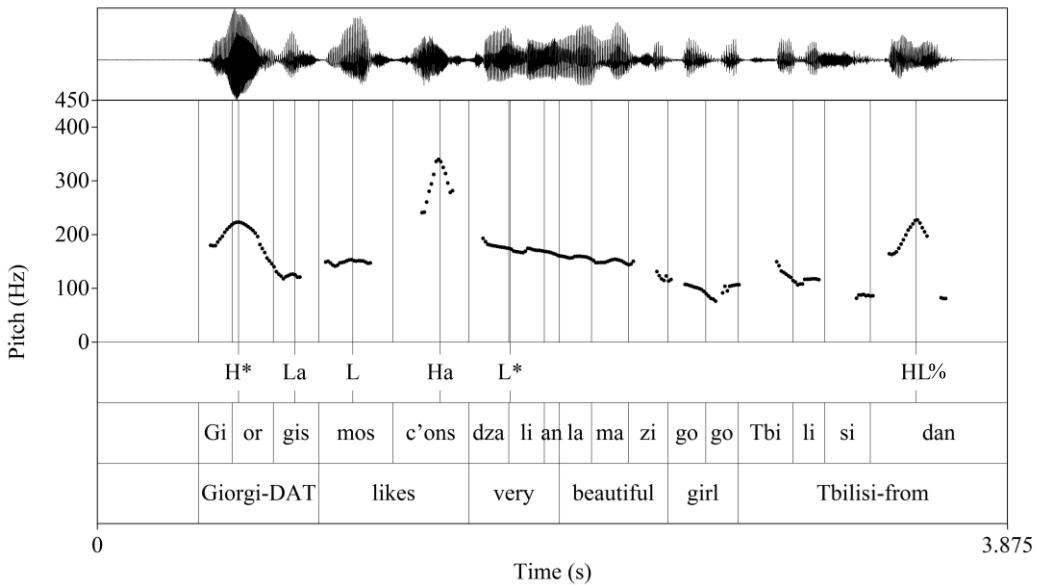Fig. 1. All-new declarative intonation

Fig. 2. YNQ intonation

It is also possible to show that the L phrase accent and the Ha boundary that accompanies it are indeed associated with the predicate – as opposed to position in the clause. Because Georgian has relatively free word order, the position of the predicate within a YNQ can vary, but the tonal realization of the predicate stays the same regardless of its position in the clause, as shown in (8), (9), and (10).

(8)   ***Šeč'am-a***   *Manana-m*   *alubal-i?*
     eat-AOR.3sg Manana-ERG   cherry-NOM
     Did Manana eat the/a cherry?

(9)   *Manana-m*   ***šeč'am-a***   *alubal-i?*
     Manana-ERG   eat-AOR.3sg cherry-NOM
     Did Manana eat the/a cherry?

(10) *Manana-m*   *vašl-i*   **šeč'am-a**?
      Manana-ERG   apple-NOM   eat-AOR.3sg
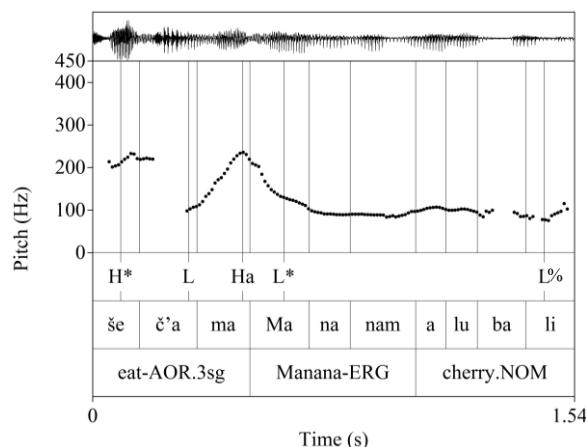   *Did Manana eat the/an apple?*

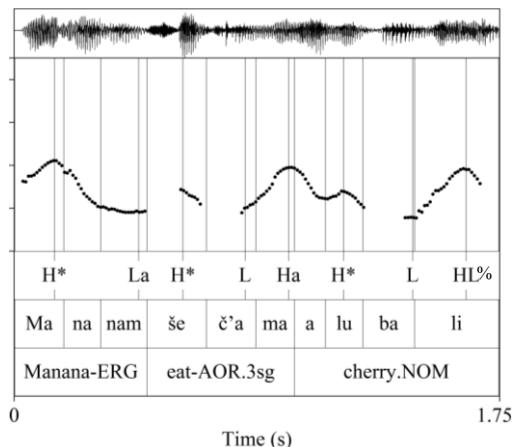Fig.3. Intonation of a verb-initial YNQ

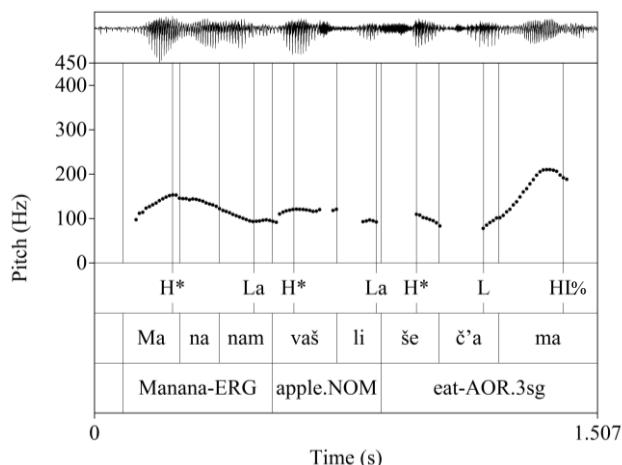
Fig.4. Intonation of a verb-medial YNQ

Fig.5. Intonation of a verb-final YNQ

Finally, it is also possible to show that the tonal contour found on predicates in YNQs – phrase accent L followed by a high boundary tone – is not limited to verbs but is also found on non-verbal predicates. In (11), the non-verbal predicate is *simartle an č'ori* 'truth or rumor', and it is also realized with phrase accent L on the penultimate syllable, as shown in Fig.6.

(11) *Es simartle-a*   *an č'ori   rom*   *Givi-s*   *mosc'ons*   *Manana?*
      It truth.NOM-COP.3sg   or rumor COMP   Givi-DAT   like-PRS.3sg Manana.NOM
      Is it true or is it a rumor that Givi likes Manana?

Let us now move on to the prosodic realization of wh-questions (WHQ) in Georgian. As already mentioned above, wh-questions for arguments and adjuncts alike are formed by wh-movement, with the immediate preverbal position as landing site. The predicate of a WHQ also bears a L phrasal accent on the penultimate syllable. Again, as Fig. 7 and Fig. 8 below show, the prosodic realization of the predicate is independent of its position in the clause, which can be medial or final.

Focused material preceding the predicate (that is, the wh-phrase) typically receives a H* pitch accent. WHQs differ from YNQs in that the Ha target on the ultima of the predicate might not be realised – instead, the tone can stay low up to the H% or HL% IP-boundary tone.
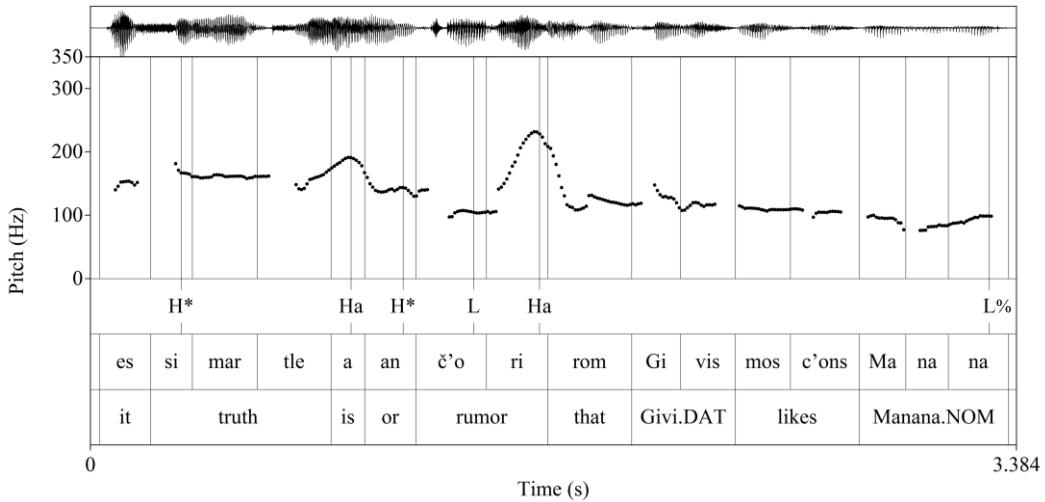
Fig.6. Intonation of a YNQ with a non-verbal predicate

(12) *Nino   vi-s   uvli-s*?
    Nino.NOM   who-DAT   look_after-PRS.3sg
    Who does Nino look after?

(13) *Vis uvlis Nino?*

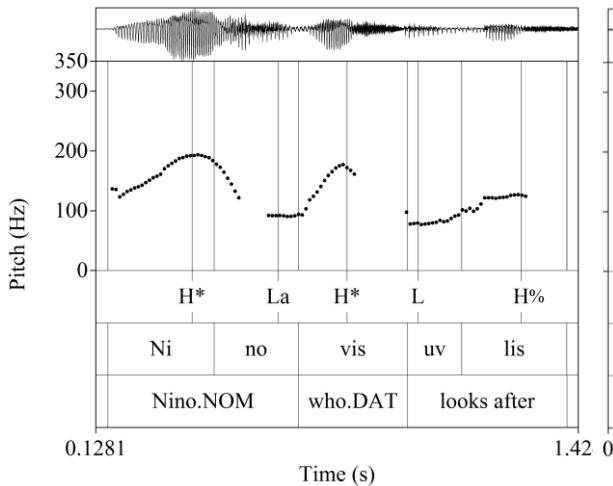(14) **Vis Nino uvlis?*

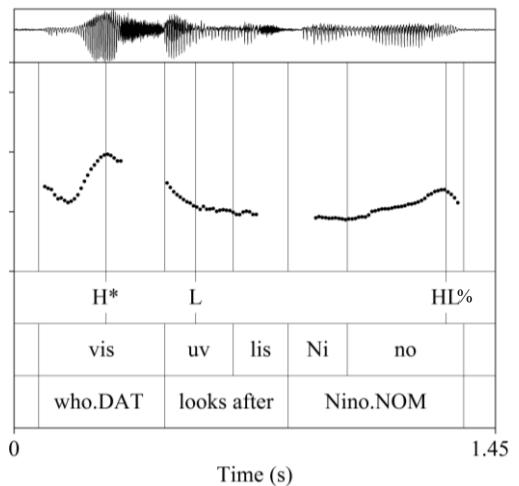Fig.7. Intonation of a verb-final WHQ

Fig.8. Intonation of a verb-medial WHQ

Finally, let us look at contrastive focus – the type of focus used in corrective contexts, such as when the hearer corrects something the speaker said. Here, too, there is a phrase accent L aligned with the penultimate syllable of the predicate. The prosody of corrective replies is similar to WHQs, the only noticeable difference being final L% instead of a final rise. (15) below is an example of a corrective reply bearing verum focus. However, the tonal realization of the predicate is the same if it is one of the arguments that bears contrastive focus – for some examples, see Skopeteas et al. 2009 and Vicenik & Jun 2014.

(15) a. ***Šeč'am-a***   *Manana-m   alubali?*
      eat-AOR.3sg Manana-ERG   cherry.NOM
      Did Manana eat the/a cherry?

    b. *Ara,   gadaagd-o*
      NEG   throw_away-AOR.3sg
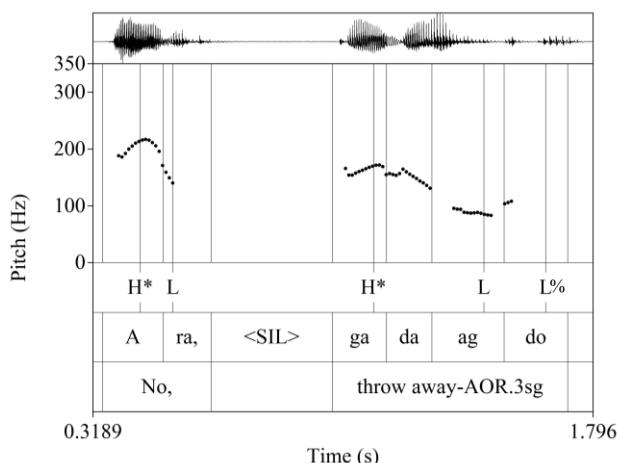   *No, she threw it away.*

Fig.9. Intonation of a corrective reply

Overall, therefore, this section has shown that there is a prosodic feature that is found in different types of focus and across structural configurations – phrase accent L aligned with the penultimate syllable of the predicate.

5. Other accounts

As mentioned in the introduction, Georgian intonation, especially that of questions and focus, has already received some attention in the literature. Two of the other accounts, which draw conclusions particularly relevant to the present one, are briefly discussed below.

Bush 1999 in a study of the prosody of YNQs in Georgian also concludes that there is always a low tone realized on the penult of verbs in YNQs. He proposes that this low tone is part of a complex phonological phrase accent, L+H⁻. Crucially, Bush 1999 takes the phrase accent to act as a boundary tone for phonological phrases. He also introduces an additional feature, [+early peak], to account for the rigid placement of the L part of the phrase accent on the penultimate syllable, as opposed to the more varied placement that parts of complex tones usually show. In contrast, the approach taken here does not need additional machinery, because phrase accent is taken to be a different entity from the AP boundary tone, following Vicenik & Jun 2014. Phrase accents are known to gravitate not only to phrase boundaries, but to other prominence-bearing syllables as well (Grice et al. 2000). This, however, raises the question about the kind of prominence the penult bears, and takes us back to the problem of lexical stress placement in Georgian.

Detailed studies of Georgian focus intonation can be found in Skopeteas et al. 2009, Skopeteas & Fanselow 2010, Skopeteas & Féry 2010, 2014, and to appear. One of the many findings reported in this work is that focus in Georgian is prosodically manifested by alignment with phonological phrase boundaries, as opposed to pitch or phrase accents. Specifically, Skopeteas & Féry (to appear) conclude that initial foci are aligned with a high phrase tone at the right edge, final foci are aligned with a high phrase tone at the left edge, and medial foci are prosodically integrated in a constituent preceding the focus and separated from the post-focal material. This analysis is at odds with the present account, which predicts that in focal contexts there should also be a change in prosody of the predicate, with the L phrase accent appearing. However, because the studies in Skopeteas et al. 2009 et seq. are aimed at replies to various types of WHQs (focusing subjects, objects or indirect objects), the direct comparison with the current study, aimed at YNQs, WHQs and corrective replies, is impossible. The task for the future is to consider the prosody of predicates in a wider range of focal contexts.

6. Conclusion

In this paper, I have shown that different focal contexts in Georgian - YNQs, WHQs, and corrective replies - exhibit the same prosodic feature, a low phrase accent L on the penultimate syllable of the

predicate. Because this phrase accent is absent from all-new declaratives in Georgian, it constitutes the prosodic marker of focus. The advantage of the approach developed here is that it offers a unified analysis of different types of focal contexts and structural configurations.

Some questions remain, however. We might expect L to be associated with a prominence-bearing syllable, given that it is a phrase accent. This raises questions about stress placement in Georgian. Also, typological rarity of marking different types of focus on the predicate, as proposed here, deserves further investigation. Overall, the current account makes strong predictions which should be tested in a wider range of focal contexts - such as, e.g., replies to WHQs. This is the next step to be taken.

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