Bengali Verb-stranding VP Ellipsis and Ellipsis Identity Conditions

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Abstract

This paper first presents additional evidence, on top of those in Simpson, Choudhury, and Menon (2013), for Verb-stranding VP Ellipsis (VVPE) in Bengali. It then demonstrates that the language violates the Verbal Identity Requirement (VIR) of Goldberg (2005), and then goes on to argue that the violation of the VIR is what should be expected, while the adherence of a language to it is what shouldn't be. The paper concludes itself by suggesting that the VIR might very well be an artifact of more underlying interactions between syntax and phonology.

1 Introduction

This paper is about Verb-stranding VP Ellipsis (henceforth, VVPE) in Bengali. The following is a most basic example of the kind of sentences I'm interested in — B's response in (1).²

Following Goldberg (2005), constructions of this type have been described as the ellipsis of a verbal constituent after the movement of its head outside the ellipsis site, that is, VVPE.³ However, there are three candidates to distinguish among while diagnosing what underlies sentences like this (2)-(4). (Boxed phrases undergo ellipsis.)



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²All glosses of Bengali data are given using the IPA.

³See Haldar (2020) for citations.

The distinction that we need to keep in mind for my purposes is the one between VVPE (2), on one hand, and Argument Ellipsis (henceforth, AE) (3) and pro-drop (4), on the other, that is, a mechanism that elides an entire verbal projection and those that silence — in one way or another — only the internal argument. The distinction between the latter two ((3)-(4)) are irrelevant to this paper. Following is how the paper is organized: § 2 introduces the VVPE diagnostics. § 2.1 presents what I will call the null adjunct reading test, following the terminology of Manetta (2018a,b, 2019) and § 2.2 presents the data based on the structural ambiguity created by the use of *again*. § 3 introduces the topic of the Verbal Identity Requirement (VIR) (from Goldberg (2005), which says that the verb stranded in a VVPE must be identical to the verb in the antecedent phrase) violations. It first shows that Bengali is a language that violates the VIR, then argues that it's the satisfaction of this requirement that should be surprising, not it violation, which should be expected, similarly to Pseudogapping. Then, based on a comparison between Lithuanian and Bengali VVPE, the Lithuanian data coming from Portlance (2019), it's suggested that VVPE is an artifact of interactions between pitch accent and syntax. § 4 concludes the paper.

2 VVPE diagnostics

2.1 Null adjunct readings

One widely used diagnostic for VVPE is the null adjunct reading test, if I use the terminology of Manetta (2018a,b, 2019). This diagnostic has been deployed in Simpson et al. (2013), who argue that Bengali has VVPE based on the fact that the adverbial present in the antecedent verbal phrase can be interpreted in the elided verbal phrase in Bengali (5), which is generally taken to indicate that whatever has been silenced in the elliptical sentence must be a constituent that is large enough to contain an adverbial, that is, a verbal constituent.

- (5) a. ob^fik tfpmski-r notun lek^ha-ța laibreri-te porlo. orun-o Abhik Chomsky-GEN new paper-CL library-LOC read-PST.3 Arun.also porlo. read-PST.3 "Abhik read Chomsky's new paper in the library. Arun also read (Chomsky's new paper in the library.)" _ giet∫^he. b. ram dilli du bar gietf^he. radz-o Ram Dilli two time go-PST.3 Raj-also ____ go-PST.3 "Ram has visited Delhi twice. Raj has also visited (Delhi twice)." c. ob^fik taksi kore elo. elo.
 - c. ob^hik taksi kore elo. orun-o _____ elo. Abhik taxi by come-PST.3 Arun-also _____ come-PST.3 "Abhik came by taxi. Arun also came (by taxi)."

(Simpson, Choudhury, and Menon (2013), (23), (26), (29); transcription mine)

However, these facts have been shown to be insufficient to indicate the existence of VVPE in a language (see, especially, Landau (2020), Manetta (2018a,b, 2019)), because, in some languages, the null adjunct readings become unavailable when the ellipsis is negated. In Bengali, however, there can be negated ellipses which *preserve* the null adjunct reading, which means that such counterarguments are not relevant to this language (6). (See Funakoshi (2014, 2016) about the use of [kintu] "but".)⁴

⁴According to Idan Landau (p.c., April, 2020), the sentence in (6) can be derived by moving the verb to Pol^0 and the subject of this verb, *Charu*, to SpecPolP, à la Manetta (2018b). I will ignore this possibility for now.

(6) [CONTEXT:

The conversants know that Amol and Charu were each supposed to bake a cake and there is an expectation that they would do so according to a certain recipe. The speaker is reporting to her interlocutor that Charu ended up not following this recipe, while Amol did.] bani-etf^h-e. pmol resipi onuctai kek-ta kintu faru_i Amol.NOM recipe according-to cake-CLSFR make-PFV-PRS.3 but Charu.NOM *i* ek kebare bitf tf iri ho-etf h-e. bana-e-n-i. or ;-ta make-PRS.3-NEG-PFV her *i*-CLSFR completely horrible be-PFV-PRS.3 "Amol baked the cake according to the recipe. But Charu $_i$ didn't. Her $_i$ cake was completely terrible."

There is another objection raised to the null adjunct reading diagnostic by Landau (2020). In the Hindi example in (7), the meaning is vague because one of its readings, *i.e.*, "Gita drew a square slowly" entails its other reading — *i.e.*, "Gita drew a square". Landau presents (7) to show that the meaning of the adverbial doesn't always depend on its pronunciation and thus suggests that the null adjunct reading is pragmatically supplied in the examples that it's observed in.

(7) Amit-ne dhiire-dhiire ek vritt banaayaa. Amit-ERG slowly one circle draw.PRES.M.SG
"Amit drew a circle slowly."
Gita-ne chaukor banaayaa.
Gita-ERG square draw.PRES.M.SG
"Gita drew a square (slowly)."

(Landau (2020), (10): 348)

However, if whatever theory of pragmatically supplied adverbial meaning he is alluding to there is correct, then the following contrast in Bengali cannot be explained.

(8) a. A: $\operatorname{mod}^{h}u$ du-g^{h}vn'ta dh'ore æk-ta kobita likh-l-o.				
Madhu.NOM two-hour for one-CLSFR poem write-PST-3				
"Madhu wrote a poem for two hours."				
B: b ^f anu=o æk-ţa kobiţa lik ^h -l-o.				
Bhanu.NOM=too one-CLSFR poem write-PST-3				
"Bhanu wrote a poem ($\#$ for two hours) too."				
A: #na, na, b ^f anu-to pãt g ^f onța d ^f ore lik ^h -etf ^h -e.				
no no Bhanu-TOP FIVE HOUR for write-PFV-PRS.3				
# "No, no, Bhanu wrote it for FIVE HOURS."				
b. A: mod ^ĥ u du-g ^ĥ ɒŋʾţa d ^ĥ ore æk-ţa kobiţa lik ^h -l-o.				
Madhu.NOM two-hour for one-CLSFR poem write-PST-3				
"Madhu wrote a poem for two hours."				
B∶ar b ^ƙ anu=o æk-ţa gpl⁻po lik ^h -l-o.				
and Bhanu.NOM=too one-CLSFR STORY write-PST-3				
"Bhanu wrote a STORY (for two hours) too."				
A: na, na, b ^f anu-to pãt g ^f onța d ^f ore lik ^h -etf ^h -e.				

no no Bhanu-TOP FIVE HOUR for write-PFV-PRS.3 "No, no, Bhanu wrote for FIVE HOURS."

But a VVPE analysis coupled with focus movement in a Pseudogapping-like structure as in (10) can account for (8b) (see Pesetsky (1982), Jayaseelan (1990), Lasnik (1999), Baltin (2003), Takahashi (2004) and Johnson (2000, 2009)), while no such derivation is possible for (8a) because of there being no valid focus movement. So, (8a) must be derived with AE as in (9).



So, B's reply, if it doesn't include the object and when construed with the adverbial meaning, must be derived with VVPE, as in (11).



Similar data can be adduced against his arguments from Hindi: there's no possible focus movement in (12a) because the *ek vritt* "a circle" in B's response isn't focus-marked, but there can be focus movement of *chaukor* "square" in (12b) because it's focus-marked, which is why a Pseudogapping like structure can arise and the null adjunct reading becomes available.

(12) a. A: Amit-ne	dhiire-dhiir	e ek	vritt		
Amit-ERG	slowly	one	circle		
banaayaa.					
draw.PRES.M.SG					
"Amit drew a circle slowly."					
(fr	om Landau	(2020),	(10))		
B: Gita-ne-bh					
Gita-ERG-1	too one	circle			
banaaya	a.				
draw.PRES.M.SG					
"Gita drev	w a circle to	00." ("slowly"		
cannot be communicated)					
(Rajesh Bhatt, p.c., March, 2020)					

b. Amit-ne dhiire-dhiire ek vritt Amit-ERG slowly one circle banaayaa. draw.PRES.M.SG "Amit drew a circle slowly." Gita-ne chaukor banaayaa. Gita-ERG square draw.PRES.M.SG "Gita drew a square (slowly)." (Landau (2020), (10))

Thus, I believe it can be safely claimed that the null adjunct reading is a valid diagnostic for VVPE despite the numerous objections raised to it and Bengali responds positively to this diagnostic, suggesting that the language does have VVPE.

2.2 Again

The next diagnostic comes from an ambiguity created by the word *again*. But in order to see that, I need to introduce a kind of construction — found, among others, with the verb "to memorize" in (13) — which I will call "complex predicates".



Note, in (15), that the null adjunct reading is obligatory. This means, in the light of (6), that when the lower part of complex predicates go unpronounced and only the higher part remains, we get VVPE. This will be useful for the *again* facts below.

(15) A: mod^{fi}u du-g^{fi}onţa d^{fi}ore kobiţa-ţa muk^hosţ^ho kor-l-o. Madhu.NOM two-hour for poem-CLSFR.ACC mouth.residing do-PST-3 "Madhu memorized the poem for two hours."
B: b^{fi}anu=o kor-l-o. Bhanu.NOM=too do-PST-3 "Bhanu memorized the poem for two hours too." Again creates a kind of ambiguity that is known to be structural (see von Stechow (1996), Rapp and von Stechow (1999), Johnson (2004)). On one hand, it can create a repetitive reading, that is, one of a previous act being repeated, in which case *again* attaches to an inchoative verbal phrase. On the other, it can create a restitutive reading, that is, one of a previous state being restored, in which case *again* attaches to a stative verbal phrase. In the light of this, first witness (16).

- (16) a. No ellipsis, context makes repetitive reading impossible, restitutive read-ING POSSIBLE k^hul-e bond^{fi}o kor-l-o fiaoa-e dprcka-ta qæ-l-o. keu n-a, wind-INS door-CLSFR.NOM open-GER go-PST-3 anyone NPI closed do-PST-3 NEG-IPFV bond^{fi}o kor-l-am. tai ami abar ota/dprcka-ta so I.NOM again that.ACC/door-CLSFR closed do-PST-1 "The wind blew the door open. No one closed it, so I closed it again." b. NO ELLIPSIS, CONTEXT MAKES REPETITIVE READING POSSIBLE AND FELICITOUS, RESTI-TUTIVE READING POSSIBLE BUT NOT DOMINANT AND DEGRADED bond^{fi}o kor-l-o. kitf^hu-k^khon ppre k^hola dek^h-e pmol dorda-ta amiAmol.Nom door-CLSFR closed do-PST-3 some-moment after open see-GER I.NOM bond^{fi}o kor-l-am. abar ota/dorda-ta again that.ACC/door-CLSFR closed do-PST-1
 - "Amol closed the door. After some time, seeing it open, I closed it again."

In (16a), the context facilitates only the restitutive reading, while in (16b), the context facilitates the repetitive reading which emerges as the predominant, if not the only, interpretation. I've shown the two structures that should underlie this ambiguity in (17).



Observe (18) now, and note the following things.

- The examples have the complex predicate [bbndd^{fi}o kbra] "to close".
- The lower part and the internal argument of the complex predicate go unpronounced.

- When the context makes the repetitive reading impossible, the discourse goes bad and when it makes it possible, the discourse becomes felicitous.
- (18) a. MUST BE SOMETHING OTHER THAN AE OR pro-DROP, CONTEXT MAKES REPETITIVE READING IMPOSSIBLE, RESTITUTIVE READING INFELICITOUS #fiaoa-e dordsa-ta k^hul-e gæ-l-o. keu bond^{fi}o kor-l-o n-a, wind-INS door-CLSFR.NOM open-GER go-PST-3 anyone NPI closed do-PST-3 NEG-IPFV tai ami abar kor-l-am. so I.NOM again do-PST-1 #"The wind blew the door open. No one closed it, so I did again."
 - b. MUST BE SOMETHING OTHER THAN AE OR *pro*-DROP, CONTEXT MAKES REPETITIVE READING POSSIBLE, THE READING IS FELICITOUS pmol fokal-e dordsa-ta bond^{fo} kor-etf^hi-l-o. pore ami abar kor-l-am. Amol.NOM morning-LOC door-CLSFR closed do-PFV-PST-3 later I.NOM again do-PST-1 "Amol had closed the door in the morning. Later, I did again."

Since the effect of the silencing mechanism, whatever it is, is reflected in a semantic distinction between a repetitive reading and a restitutive reading, it cannot be the case that this silencing mechanism is one that interacts with an individual argument. The derivations are shown below.



So, it cannot be *pro*-drop or AE and has to be VVPE. Thus, the ambiguity engendered by *again* provides another way to discern Bengali VVPE.

3 VIR violations

To begin the second part of this paper, a certain trait of VVPE was observed by Lotus Goldberg in her 2005 dissertation, which has since been known as the "Verbal Identity Requirement" (henceforth, VIR) (20).

(20) THE VERBAL IDENTITY REQUIREMENT (VIR) The verb stranded in VVPE must be identical in its root to the verb in the antecedent clause.

(Goldberg (2005))

Some languages obey the VIR, for instance, Irish (Goldberg (2005), McCloskey (2017)), famously, and Uzbek (Gribanova (2020)). (21) is an example from Irish.

(21) *Níor cheannaigh mé teach ariamh, ach dhíol. NEG.PAST buy I house ever but sold "I never bought a house, but I sold one."

(McCloskey (2017), (53a): 22)

And some don't, like Swahili (Goldberg (2005), (4.25): 184, taken from Ngonyani (1998), (6)), Russian (Gribanova (2013)), Hungarian (Lipták (2013), ft. 13, (i) taken from Bánréti (2007)), Brazilian Portuguese (Santos (2009)), Greek (Merchant (2018)). (22). Bengali belongs to the latter group: null adjunct readings are available when the verbs differ (22).⁵, ⁶ (23) shows the structure that should underlie (22).

(22) A: bmol tarafiuro kor-e boi-ta skæn kor-l-o. Amol.NOM rush do-GER book-CLSFR.ACC scan do-PST-3 "Amol scanned the book hurriedly."
B: ar tfaru print kor-l-o. and Charu.NOM PRINT do-PST-3 "And Charu PRINTED it (hurriedly)." ("hurriedly" optionally communicated)



Such sentences, that is, VIR violations, have long been expected to be ungrammatical. However, the languages I mention above as ones that do violate it have been counterexamples. And these counterexamples, now along with Bengali, should not be surprising. That is, what should be mysterious

⁵[skæn kpra] and [print kpra] are code-switching expressions for "to scan" and "to print", respectively.

⁶Uppercase indicates focus-marking.

is why the VIR is obeyed by some languages, not why it's violated in some. This is because, as we know from PARALLELISM (see Takahashi and Fox (2005), Hartman (2011)) (24), ellipsis identity conditions look at entire phrases that contain a focus-marked element focus-moved out of the ellipsis site which, in turn, contain the trace/copy bound by this focus-moved element, that is, phrases that contain both the focus-marked binder and its bindee. And they require the differing things to be contrastively focus-marked.

(24) PARALLELISM (FORMULATED FOR MY PURPOSES)⁷ If α is the antecedent to β , then α is identical to β exactly except every γ in α that contrasts with a corresponding δ in β .

This is shown in English Pseudogapping examples below. The phrases with a circled node are the ones considered by the ellipsis identity conditions, the boxed ones are those that actually get elided and uppercase indicates focus-marking.⁸



There are languages that obey the VIR because verbal stems in those languages are independently unable to bear focus-marking because they cannot bear pitch accent which the focus-marking will be realized as. Irish is one such language. So, various other elements have to intervene to salvage the pitch accent associated with focus (see Merchant (2018)). Witness (26) from Irish, where small caps indicate focus-marking.

(26) a. A: An ngéillfidh siad? b.	An rabhadar	ann? c. A: An raibh Colm ann?
Q yield.FUT they	Q be.past.3pl	in.it Q be.PAST Colm there
"Will they yield on this?"	Bhíodar.	"Was Colm there?"
B: Caithfidh SIAD.	be.past.3pl	B: Bhí muis.
must they	"Were they present?	They cer- be.PAST PARTICLE
"They HAVE to."	tainly were."	"He was indeed."
		(Merchant (2018), (112)-(114): 261)

⁷Thanks to Kyle Johnson for suggesting this wording.

⁸If vP-internal subjects are taken into account, the phrases to be considered by the ellipsis identity conditions will expand to the entire TP that are the sentences. That's not relevant to my arguments, so I'm abstracting away from that.

But not all languages are like this, e.g., Lithuanian. Portlance (2019) has shown that Lithuanian verbal stems can bear focal stress in environments that she identifies as AE (see the paper for an explanation of how) (27).

(27) A: Ar Žmonės jų nemėgo? Q People.NOM 3PL.GEN NEG.like.PST.3PL "Do people dislike them?"
B: Ne, jie GARBINO juos. no 3PL.NOM respect.PST.3PL 3PL.ACC "No, they RESPECT them."

(Portlance (2019), (29): 7)

What's interesting, however, is that, just like Lithuanian, Bengali verbal stems *can* bear focal stress (see 22). Despite that, as is observable in (28), Lithuanian obeys the VIR, unlike Bengali.

(28) *Iš praďzių, jis ASPIMETĖ viršininku, bet po to jis from first.GEN, 3SG.NOM PERF.REFL.pretend.PST.3SG boss.INS but afterwards 3SG.NOM TAPO (viršininku). become.PST.3SG boss.INS
"At first, he pretended-being boss, but afterwards he became (boss)."

(Portlance (2019), (31): 8)

This discrepancy between the behaviors of the two languages is something that needs to be explained, then. Following is one direction to pursue, which involves a certain difference between Bengali and Lithuanian that is illuminating in this regard. On the one hand, as Portlance says, following Harizanov and Gribanova (2019), Lithuanian has post-syntactic head amalgamation, which means that Lithuanian verbs do not move out of the ellipsis site in syntax, but undergo morphologically oriented head amalgamation after syntax. On the other hand, it can be argued that Bengali Head Movement is a syntactic phenomenon.⁹ Portlance, following Schoorlemmer and Temmerman (2012), imputes the ungrammaticality of (28) to the focus-marking being left inside an ellipsis site because with them, she considers focus-marking inside ellipsis sites to be destructive for ellipsis. However, as far as focus-marking is concerned, the identity conditions should not be able to distinguish between the boxed phrases in the two structures below since, because of PARALLELISM, as I mentioned above, the phrases that will be considered for the sake of ellipsis identity conditions, are the boxed ones which contain both the moved verb and its trace/lower copy, that is, both the binder and the bindee. That is, the following examples should be grammatical exactly as the above Pseudogapping example is. (The same convention about boxed and circled nodes applies.)

 $^{^{9}}$ I'll be happy to provide that argument to anyone who is interested. It can also be found in the appendix for the handout for my FASAL-11 talk.



So, in the light of these data, I would like to depart from Portlance's suggestion is a very specific way: following Merchant (2018), I would like to insist that it's because the pitch accent — and not the focus-marking — borne by the Lithuanian verb left inside the ellipsis site that the ellipsis goes bad. This intuition has been discussed in Merchant (2018) as well. Observe (30): the associate of *only* that bears pitch accent cannot be engulfed by ellipsis.

- (30) Abby will only play [the flute] $_{\rm F}$ at the recital, not the piano.
 - a. Ben also will only play [the flute] $_{\rm F}$ at the recital.
 - b. *Ben also will only play [the flúte]_F at the recital.

(Merchant (2018), (119): 264)

If we follow this intuition, then the vP in (29a) cannot be elided because of "BECAME", but the vP in (29b) can be because "PRINT" is outside the ellipsis site by the time the ellipsis happens.¹⁰ This means that there has to be some sort of syntax-phonology communication that affects and controls ellipsis. However, it must be kept in mind that it shows something that will be difficult to reconcile with our best intuitions about modularity. And, apart from the fact that this is an unorthodox idea to begin with, we have to worry about why it is only pitch accent — and not any other aspect of prosody — that ellipsis seems to care about.

In this context, I should mention in what ways this generalization invoking pitch accent is provisional. Consider the completely felicitous examples in (31).¹¹

- (31) a. Marcel agreed to draw only the HAWTHORNS, Gilberte did [agree to draw only the HAWTHORNS] too.
 - b. A: WHO bought WHAT?B: JOE bought A WATERMELON, SMITTY did too, and IRVING bought a CAMERA.

(Haldar(2020), (125): 59)

 $^{^{10}}$ Recent Uzbek VVPE data is consistent with this analysis: according to Gribanova (p.c., 2020), Uzbek Head Movement is post-syntactic and Uzbek verbal stems can bear focus, just like Lithuanian, and Uzbek conforms to the VIR, like, again, Lithuanian.

¹¹Thanks to Rajesh Bhatt and David Pesetsky for bringing this to my attention.

In (31a), what gets elided is *agree to do only the HAWTHORNS* and this constituent contains a phrase which bears pitch accent, that is, *HAWTHORNS*. Again, in (31b), B's response contains the ellipsis of the phrase *buy a WATERMELON*, which, in turn, contains pitch accent falling on *WATERMELON*. Despite these phrases having pitch accents inside them, phrases containing them can be felicitously elided. I would leave these issues for future research.

4 Conclusion

This paper has three main objects: to present additional data, in the light of those in Simpson, Choudhury, and Menon (2013), in favor of the existence of VVPE in Bengali, to demonstrate that Bengali VVPE violates the VIR of Goldberg (2005) and to elaborate why this violation is not surprising and why, in fact, its satisfaction should be. It achieves the first goal in two ways. In § 2.1, it's shown that the meaning of an adverbial pronounced in the antecedent verbal constituent can be understood in the elliptical sentence even when the adverbial is not pronounced there but the verb is, which means that whatever is being elided must be large enough to contain this adverbial, that is, a verbal constituent that the stranded verb has moved out of before ellipsis. In § 2.2, it's shown that when an elliptical sentence with only the upper part of a complex predicate has *aqain* in it, only the repetitive reading is possible and the restitutive reading is infelicitous. Similarly to § 2.1, these examples suggest that whatever is being elided has to be sufficiently large to contain an entire verb phrasal meaning which can be modified by *again*, or this repetitive-restitutive distinction should not arise. These two examples show in concert that whatever silencing mechanism is involved in deriving these elliptical sentences, they must be applicable to constituents large enough to contain entire verbal constituents, and not just internal arguments, which eliminates the possibility of pro-drop or AE being involved and thus leaves out VVPE as the only process responsible for these sentences. The second and the third goal are achieved in § 3. That null adjunct readings persist even when the verb stranded in the elliptical sentence is different from the one in the antecedent phrase in Bengali shows that the language doesn't obey the VIR. This is used to emphasize the point that what is actually surprising is that the VIR has been observed to be obeyed in many languages, not that it has been observed to be violated in others. And this is done by arguing that there should be nothing different, as far as ellipsis identity conditions are concerned, between a verb stranded outside ellipsis in VVPE and a phrase, such as an internal argument, moved outside a verbal constituent in Pseudogapping, for instance. Then, based on a comparison between Lithuanian and Bengali, following Merchant (2018) and departing from Portlance (2019) and Schoorlemmer and Temmerman (2012), it's argued that the VIR is an artifact of more underlying interactions between prosody, especially pitch accent, and syntax. This leaves us with the observation that ellipsis happens to be a mechanism that is sensitive to pitch accent in a very specific way — and not to other aspects of prosody. Such loose ends that are left untied mentioned in the last section, I leave for future research to investigate.

Abbreviations

1	1st person
2	2nd person
3	3rd person
ACC	Accusative
CLSFR	Classifier
ERG	Ergative
GER	Gerund

INS	Instrumental
LOC	Locative
NEG	Negative
NOM	Nominative
PFV	Perfective
IPFV	Imperfective
PST	Past
PRS	Present
TOP	Topic

Acknowledgments

I'm grateful to Kyle Johnson, Rajesh Bhatt and David Pesetsky for extremely productive discussions and for reading multiple drafts of previous versions of this paper. This paper would not be possible without them. I also thank the anonymous reviewers and the audience at FASAL-11. I'm also grateful to Vera Gribanova, Boris Harizanov and Idan Landau for their insights and comments during the course of the development of the ideas in this paper. I also thank my parents and all other informants I consulted. All faults here are entirely mine.

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