Does *V-(i)b bo'l-* express (im)possibility in Uzbek?

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1. Introduction

V-(i)b bo'l- [V(erb Stem)-cvb.seq be-] in Uzbek (Turkic, the southeastern group)

- The <u>completion</u> of an action by V-(i)b
- (1) Men bu hikoya-ni yoz-ib bo'l-di-m.

 1SG this story-ACC write-CVB.SEQ be-PAST-1SG
 'I finished writing this story.' (Bodrogligeti 2003: 725)
- The possibility of the action by V-(i)b
- (2) Hamma ilim-ni faqat savod orqali=gina **oʻrgan-ib boʻl-a=di.** all science-ACC only literary through=only learn-CVB.SEQ be-NPST=3 'One can learn all the sciences only by being a literate person.' (Ibrahim 1995: 207)

Problem: Previous studies have not fully explained the conditions under which different meanings appear in V-(i)b bo'l-.

Our aim: clarifying these conditions through a corpus examination and interviews with native speakers.

Conclusion: V-(i)b bo'l- expresses the (im)possibility if it is formally marked; V-(i)b bo'l- refers to the completion of an action if it is formally unmarked.

Outline

- 1. Introduction
- 2. Previous research and problems
- 3. Analysis
- 4. Conclusion
- 5. Future research

2. Previous research and problems

We can see two patterns of the descriptions of V-(i)b bo'l- in prior studies.

The first pattern:

- The positive form, V-(i)b boʻl-, can express completion or possibility
 - (1) Men bu hikoya-ni **yoz-ib boʻl-di-m.**1SG this story-ACC write-CVB.SEQ be-PAST-1SG
 - 'I finished writing this story.' (Bodrogligeti 2003: 725)
 - (2) Hamma ilim-ni faqat savod orqali=gina **oʻrgan-ib boʻl-a=di.**all science-ACC only literary through=only learn-CVB.SEQ be-NPST=3
 'One can learn all the sciences only by being a literate person.'(Ibrahim 1995: 207)
- The <u>negative form</u>, *V-(i)b boʻl-ma-*, can express <u>impossibility</u> (K<u>ononov 1960: 265, Ibrahim 1995:</u>

207, Rentzsch 2011, 2015).

(3) Nasib-dan qoch-ib bo'l-ma-y=di.

destiny-ABL flee-CVB.SEQ be-NEG-NPST=3

'One cannot escape one's destiny.' (Rentzsch 2015: 94)

V-(i)b bo'l- is used <u>only impersonally</u> in the case where *V-(i)b bo'l-* expresses possibility (Rentzsch 2011: 86).

That is, the third person marker always attaches to *V-(i)b bo'l-*.

2. Previous research and problems

We can see two patterns of the descriptions of V-(i)b bo'l- in prior studies.

The second pattern:

- The positive form V-(i)b bo'l- expresses only the completion of an action
 - (1) Men bu hikoya-ni yoz-ib boʻl-di-m.

 1sg this story-ACC write-CVB.SEQ be-PAST-1sg

 'I finished writing this story.' (Bodrogligeti 2003: 725)
- the <u>negative form</u> (4), or <u>a rhetorical question</u> (5) using *V-(i)b bo'l-*, denotes <u>difficulty or impossibility</u> (Bodrogligeti 2003: 725)
 - (4) Buloq-qa och-il-gan yoʻl-dan ikki chelak-ni ol-ib **oʻt-ib boʻl-mas=di.** spring-dat open-pass-ptcp.past road-abl two bucket-acc take-cvb.seq pass-cvb.seq be-ptcp.fut=past 'In the path that led to the spring it was difficult to carry two buckets.' (Bodrogligeti 2003: 725)
 - (5) Hozir-gi zamon-da har kim-ga **ishon-ib boʻl-a=di=mi?**now-ADJLZ time-LOC every who-DAT belive-CVB.SEQ be-NPST=3=Q
 'In our times is it possible to believe anyone? (It is not).' (Bodrogligeti 2003: 725)

The first pattern:

- The positive form, *V-(i)b bo'l-,* can express completion or possibility
- The <u>negative form</u>, *V-(i)b bo'l-ma-*, can express <u>impossibility</u> (Kononov 1960: 265, Ibrahim 1995: 207, Rentzsch 2011, 2015).

The second pattern:

Hamma

- The <u>positive form</u> *V-(i)b bo'l-* expresses <u>only the</u> completion of an action
- The <u>negative form</u> (4), or <u>a rhetorical question</u> (5) using *V-(i)b boʻl-*, denotes <u>difficulty or impossibility</u> (Bodrogligeti 2003: 725)

Which of these patterns is correct?

If either is correct, neither can be (2) or (5).

The first pattern cannot explain (5) even if it is correct

(5) Hozir-gi zamon-da har kim-ga now-ADJLZ time-LOC every who-DAT ishon-ib bo'l-a=di=mi?
belive-CVB.SEQ be-NPST=3=Q 'In our times is it possible to believe anyone? (It is not).' (Bodrogligeti 2003: 725)

The second pattern cannot explain (2) even if it is correct.

ilim-ni

all science-ACC only literary through=only o'rgan-ib bo'l-a=di.
learn-CVB.SEQ be-NPST=3
'One can learn all the sciences only by being a literate person.'(Ibrahim 1995: 207)

faqat savod orqali=gina

This lack of explanation is caused by the absence of a statement of the condition when V-(i)b bo'l- expresses possibility in the first pattern, and the description that the negative form V-(i)b bo'l- conveys impossibility in the second pattern.

3. Analysis

- 3.1 Corpus examination
- 3.2 Interview examination

3.1 Corpus examination

We used corpus data from "Turkic web—Uzbek" in Sketch Engine.

- This corpus has 18,720,334 words from websites whose URLs include the domain .uz.
- The total number of examples, including *V-(i)b bo'l-*, was 4,816.
- In this study, we analyzed 200 examples; 53 are in the positive form, and 147 are in the negative form.

Section 3.1.1 covers the data on the positive form, while Section 3.1.2 reviews the data on the negative form. We investigated all examples through four questions:

- (1) Is there a lack of balance of verb stem in V-(i)b? (lexicon)
- (2) What are morphological features? (morphology)
- (3) What kind of sentences are used? (sentence type)
- (4) What meaning is expressed in each form? (semantics)

53 examples out of the original 200 contained the positive form.

As for the first question, 'Is there a lack of balance of the verb stem in V-(i)b?',

- tokens appearing more than once in Table 1 convey a concrete action, except for *tasavvur qil*-'imagine'.
- tokens appearing only once denote a concrete or abstract action.

Grey lines denote that sentences including V-(i)b bo'l- are rhetorical questions; that is, these examples communicate the idea of impossibility. Verb stems in these examples refer to

- <u>utterance</u> (ayt- 'say', de- 'say')
- <u>abstract action (tasavvur qil- 'imagine', bil- 'know', ishon- 'believe', oqla- 'prove</u> innocence', esla- 'remember' [before the auxiliary verb qol-], tenglash- 'become equal')

Table1: Verb stems of the positive form

Verb stem	Meaning	Token
oʻta-	carry out	7
yarat-	create, make	3
oʻrnat-	put in place, set up	2
qabul qil-	receive	2
shakllan-	take form, take shape	2
tasavvur qil-	imagine	2
toʻla-	pay	2
yoz-	write	2
almashtir-	trade, change.	1
ayt-	say	1
bil-	know	1
de-	say	1
egalla-	take over, master	1
etil-	be said	1
gulla-	flower	1
ishon-	believe	1
izla-	search for	1
ket-	leave	1
kechik-	be late	1
koʻchir-	сору	1

ta'mirla-	repair	1
nura-	become worn out	1
oʻlcha-	measure	1
oʻqi-	read	1
oʻt-	pass	1
oʻzlashtir-	master	1
oqla-	prove innocence	1
qamra-	surround	1
qanday qil-	how do	1
qol-	remain	1
salomlash-	greet one another	1
sina-	try, test	1
so'k-	curse	1
sot-	sell	1
tayyorla-	prepare	1
tenglash-	become equal	1
tush-	fall	1
yasa-	make	1
yetkaz-	convey	1
	Total	53

As for the second question,

'What are the morphological features?',

- Each inflectional suffix and personal maker are attested to (see tables 2 and 3).
- However, <u>all rhetorical questions</u> (9 examples out of 25 finite ones) include <u>the third person marker</u>.

Table3: Personal markers attached to bo'l- in the positive form

	1st	2nd	3rd	No personal	
	person	person	person	marker	Token
Finite	3	3	25	-	31
Non-finite	2	3	13	4	22
				Total	53

Table2: Inflectional suffixes attached to bo'lin the positive form

Syntactic			
feature	Suffix	Gloss	Token
	-di	PAST	12
	-a	NPST	7
Finite	-gan	PRF	7
rillite	-ar	FUT	2
	-sa	COND	2
	-sin	IMP.3	1
	-gan	PTCP.PAST	18
Non-finite	-digan	PTCP.NPAST	1
NOII-IIIIILE	-gach	CVB.SEQ	2
	-ib	CVB.SEQ	1
		Total	53

53 examples out of the original 200 contained the positive form.

As for the third question, 'What kinds of sentences are used?', all types can be used (see Table 4). That said, all interrogatives express a rhetorical question.

Table4: Types of sentences of the positive form including *V-(i)b bo'l-*

Туре	Token
Declarative	21
Imperative	1
Interrogative	9
	31

53 examples out of the original 200 contained the positive form.

In the fourth points of view 'What meaning is expressed in each form?',

- The declarative and imperative indicate the completion of an action.
- The interrogative refers to impossibility (6).
 - (6) Italyan oshxona-si-ni ... pomidor-siz, tasavvur qil-ib boʻl-a=di=mi? Italian restaurant-3.POSS-ACC tomato-PRIV image do-CVB.SEQ be-NPST=3=Q 'Is it possible to imagine an Italian restaurant without tomatoes?' (infoteka.uz)

Regarding the negative form, 147 out of the original 200 examples had this form.

We now examine the question, 'Is there a lack of balance of the verb stem in V-(i)b?' We can attest to some lack of balance.

- The verb de- 'say' accounts for about 10%,
- The verb *tasavvur qil-/et-* 'imagine' accounts for about 15% of tokens.

Table5: Verb s	tems of the negat	ive form	qabul qil-	receive	2	ol-	take	1
Verb stem	Meaning	Token	qaytar-	return	2	oqla-	whitewash	1
de-	say	14	qil-	do	2	qara-	look	1
tasavvur qil-	image	11	toʻldir-	fill out	2	qol-	remain	1
tasavvur et-	image	10	tut-	hold	2	quri-	dry	1
erish-	reach	7	yech-	take off, solve	2	qutul-	be free	1
top-	find	7	almashtir-	trade	1	rish-	?	1
tani-	know	6	angla-	understand	1	sigʻdir-	fit	1
qiyosla-	compare	4	aniqla-	ascertain	1	siljit-	move	1
yum-	close (eye)	4	baqir-	shout	1	soʻra-	ask	1
bahola-	affix a price to	3	ber-	give	1	taʻrifla-	describe	1
foydalan-	use	3	chida-	endure	1	taqiqla-	prohibit	1
hal qil-	solve	3	chiqar-	take out	1	taqqosla-	describe	1
kechiktir-	delay	3	gapir-	talk	1	tashla-	throw	1
qoʻy-	put	3	havas qil-	desire	1	tenglashtir-	make equal	1
solishtir-	compare	3	ilgʻa-	see (only in neg.)	1	toqat qil-	endure	1
ayt-	say	2	jilovla-	bridle	1	tur-	stand	1
bajar-	carry out	2	ma'qulla-	accept	1	ulan-	be connected	1
boshqar-	manage	2	oʻlcha-	measure	1	unut-	forget	1
ishon-	believe	2	oʻngla-	set straight	1	uygʻon-	get up	1
kechir-	forgive	2	oʻrnat-	place	1	yoz-	write	1
kifoyalan-	be sufficient	2	o't-	pass	1	yuv-	wash	1
koʻr-	see	2	oʻzgartir-	change	1		Total	147

Regarding the negative form, 147 out of the original 200 examples had this form.

In terms of the second question, 'What are the morphological features?', there is no example with a first- or second-person marker (see tables 6 and 7).

in the negative form

Syntactic feature Suffix Gloss Token NEG.NPAST 92 -та-у FUT.NEG -mas Finite PTCP.FUT=PAST -mas=di NEG ... NPST na ... V-a -ma-ydigan |NEG-PTCP.NPST| 31 Non--maslik VN.NEG finite PTCP.FUT -mas 147 Total

Table6: Inflectional suffixes attached to bo'l- Table7: Personal markers attached to bo'l- in the negative form

	1st	2nd	3rd	No personal	
	person	person	person	marker	Token
Finite	0	0	98	-	98
Non-finite	0	0	16	33	49
				Total	147

Regarding the negative form, 147 out of the original 200 examples had this form.

Regarding the third question, 'What kinds of sentences are used?', only the declaratives are attested to (see Table 8).

Table8: Types of sentences of the negative form including V-(i)b bo'l-

Туре	Token
Declarative	98
Imperative	0
Interrogative	0
	98

Regarding the negative form, 147 out of the original 200 examples had this form.

As for fourth question, 'What meaning is expressed in each form?', the negative form expresses only impossibility, as in (7).

(7) Tana-miz-da yoʻqotish-lar oʻrn-i-ni **toʻldir-ib boʻl-ma-y=di,...** body-1sg.poss-loc loss-pl place-3.poss-acc fill-cvb.seq be-neg-npst=3 'Losses in our body cannot be filled with the other.' (lit. Losses in our body cannot be filled with those places) (abduhamid.uz)

3.2 Interview examination

There is no example such as (2), which includes **faqat** ...**gina** 'only' + V-(i)b bo'l- in the instances we analyzed.

(2) Hamma ilim-ni <u>faqat</u> savod orqali<u>=gina</u> **oʻrgan-ib boʻl-a=di.** all science-ACC only literary through=only learn-CVB.SEQ be-NPST=3 'One can learn all the sciences only by being a literate person.' (Ibrahim 1995: 207)

We asked two native speakers (a male and female speaker born in the city of Tashkent in 1990 and 1994, respectively) whether they would permit the use of sentences without faqat ...gina 'only' from (2) as in (8). They regarded (8) as odd.

(8) ?? Hamma ilim-ni savod orqali **oʻrgan-ib boʻl-a=di.** all science-ACC literary through learn-CVB.SEQ be-NPST=3

If the positive form of *V-(i)b bo'l*-expresses the completion of an action, it has <u>no special features</u>.

Table 9: Results from the corpus analysis

	Positive form		
	except for rhetorical questions	in rhetorical questions	Negative form
1. Is there a lack of balance of the	Number of variable	Yes.	Yes.
verb stem in <i>V-(i)b</i> ? (lexicon)	verb stems	Verb stems referring to	de- 'say' and
		an utterance or	tasavvur qil-/et-ʻimage'
		abstract action	
2. What are the morphological features? (morphology)	Variable forms	Only the third person marker	Only the third person marker
3. What kinds of sentences are used? (sentence type)	Variable sentence types	Only questions	Non-finites or declaratives
4. What meaning is expressed in each form? (semantics)	Completion	Impossibility	Impossibility

If the positive form of *V-(i)b bo'l*-expresses the completion of an action, it has <u>no special features</u>.

Table 9: Results from the corpus analysis

	Positive form				
	except for rhetorical questions	in r	Tokens express a	Negative form concrete or	
1. Is there a lack of balance of the verb stem in <i>V-(i)b</i> ? (lexicon)		Yes. Vorl	Table 1.	as outlined in Tasavvur au-vet- In	
2. What are the morphological features? (morphology)	Variable forms	Cnly mar	displayed in tabl	es 2 and 3. marker	
3. What kinds of sentences are used? (sentence type)	Variable sentence types		Variable sentence for rhetorical qu	• •	t atives
4. What meaning is expressed in each form? (semantics)	Completion	Imp	attested to in Tal	ble 4.	

If the positive form of *V-(i)b bo'l-* in rhetorical question or the negative form of *V-(i)b bo'l-* conveys <u>impossibility</u>, then *V-(i)b bo'l-* has <u>some special features</u>.

Table 9: Results from the corpus analysis

	Positive form		
	except for rhetorical questions	in rhetorical questions	Negative form
1. Is there a lack of balance of the verb stem in <i>V-(i)b</i> ? (lexicon)	Number of variable verb stems	Yes. Verb stems referring to an utterance or abstract action	Yes. de- 'say' and tasavvur qil-/et-'image'
2. What are the morphological features? (morphology)	Variable forms	Only the third person marker	Only the third person marker
3. What kinds of sentences are used? (sentence type)	Variable sentence types	Only questions	Non-finites or declaratives
4. What meaning is expressed in each form? (semantics)	Completion	Impossibility	Impossibility

If the positive form of *V-(i)b bo'l-* in rhetorical question or the negative form of *V-(i)b bo'l-* conveys impossibility, then *V-(i)b bo'l-* has some special features.

Table 9: Results from the corpus analysis

		Positive form			
	ste	()	ns	in rhetorical questions	Negative form
1.		terance or abstract action tend to be		Yes.	Yes.
	att	sted to, as presented in tables 1 and 5.		Verb stems referring to	de- 'say' and
				an utterance or	tasavvur qil-/et-ʻimage'
		Only a <u>third person number</u> or no		abstract action	
2.	W	marker is attested to, as seen in Table 7.		Only the third person	Only the third person
	fea	tures? (mornhology)		marker	marker
3.	. W∣ use	Questions in the positive form, or declarative sentences and non-finite	4	Only questions	Non-finites or declaratives
4.		forms in the negative form, are attested to as depicted in tables 4 and 8.		Impossibility	Impossibility

In addition, we clarified that the positive form of *V*-4. Conclusion (i)b bo'l- with faqat ...gina 'only' express limited possibility.

Table 9: Results from the corpus analysis

	Positive form		
	except for rhetorical questions	in rhetorical questions	Negative form
1. Is there a lack of balance of the verb stem in <i>V-(i)b</i> ? (lexicon)	Number of variable verb stems	Yes. Verb stems referring to an utterance or abstract action	Yes. de- 'say' and tasavvur qil-/et-'image'
2. What are the morphological features? (morphology)	Variable forms	Only the third person marker	Only the third person marker
3. What kinds of sentences are used? (sentence type)	Variable sentence types	Only questions	Non-finites or declaratives
4. What meaning is expressed in each form? (semantics)	Completion	Impossibility	Impossibility

We concluded that

- \blacksquare V-(i)b bo'l- conveys (im)possibility if it is formally marked.
- \blacksquare V-(i)b bo'l- denotes the completion of an action if it is formally unmarked.

In other words,

- if *V-(i)b bo'l-* expresses (im)possibility, positive forms in a rhetorical question or with *faqat ...gina* 'only' and <u>negative forms</u> are attested to.

 In addition, these cases have the third-person marker or <u>no personal marker</u>.
- If *V-(i)b bo'l-* conveys **the completion of an action**, <u>no formal feature</u> is attested to.

5. Future research

From a diachronic perspective,

Rentzsch (2015: 94) pointed out that *V-(i)b bo'l-* is only attested in a negative form in the 16th-century memoir *Baburnama*, which was written in Chaghatay, a literary language of Central Asia.

- Uzbek may have newer features than Chagatay based on the conclusions of this study. The positive form of *V-(i)b bo'l-* with *faqat ...* = gina, which means 'only', or in a rhetorical question, expresses (im)possibility.
- However, we must examine the details of the system for possibility in Uzbek and Chagatay to demonstrate the suggestion made above.

5. Future research

From an areal viewpoint,

Hidaka (2023) showed that V-(I)p bol- in Turkmen and Uzbek can express (im)possibility compared to other Turkic Languages of Central Asia, such as Turkmen (the southwestern group), Kazakh, Kyrgyz (the northwestern group), Uzbek, and modern Uyghur (the southeastern group).

- *V-(I)p bol-* in Uzbek can express only participant-external possibility. However, in Turkmen, one can convey not only participant-external possibility, but also deontic possibility.
- Hence, we need to scrutinize the details of the system regarding possibility in Uzbek and Turkmen to determine how *V-(I)p bol-* has been expanded.

Possibility expressions in Uzbek

- *V-(i)b ol-* [V-CVB.SEQ take] participant-internal/external possibility
- *V-(i)sh mumkin* [V-VN possible] participant-external possibility, deontic possibility
- *V-sa boʻl-* [V-cond be-] deontic possibility