BANGLA NEGATIVE POLARITY ITEMS: A DETAILED STUDY

Diti Bhadra[a], Bidisha Bhattacharjee[b], Madhumanti Datta[b], Yangchen Roy[c]
[a]Rutgers University, [b]Delhi University, [c]Jawaharlal Nehru University
diti.bhadra@rutgers.edu, dibyasha@gmail.com, madhumantidatta@gmail.com, yangchenroy@gmail.com

ABSTRACT

This paper offers a detailed descriptive study of negation and Negative Polarity Items (NPIs) in Bangla. The interaction of negation and copulas in Bangla as well as two syntactically different forms of negation are discussed. The paper explores various properties of NPIs such as strength/weakness, strictness/non-strictness, and reveals that Bangla makes very fine-grained distinctions in each category, giving rise to several new categories not previously attested in the literature. Some of these newly coined categories include Superstrong NPIs, Superweak NPIs, Superstrict NPIs, and Strict-Non-Strict NPIs. The paper also discusses the presence of a very rare class of NPIs - the Weak Strict NPIs – in Bangla. This work also describes the interaction of Bangla NPIs with focus particles and deontic modals, and tests the Positive Polarity Item (PPI) status of a deontic modal with universal force. Attempts at characterizing the strength of this PPI modal leads to puzzling results whereby it is concluded that this modal PPI is both a strong and a weak PPI.

Keywords

negative polarity items, negation, positive polarity items, modals, Bangla

1. Introduction

Negative Polarity Item (NPI) is a term given to linguistic expressions whose appearances are restricted to negative or negation-like environments. For example, the English expression *any* can only occur when there is an overt negation present in the sentence (1), and is ungrammatical otherwise (2):

(1) Raj does not have any friends.

(2) *Raj has any friends.

This paper explores such expressions in Bangla, and studies various parameters of defining and classifying NPIs. To understand NPIs better, it is imperative to begin with a study of the phenomenon of negation in the language. Thus, the outline of the paper is as follows: the next section explores Bangla negation; Section II provides a fine-grained account of strength of Bangla NPIs; Section III provides a fine-grained account of strictness; Section IV explores the interaction of negation and modality in Bangla; Section V concludes.

1.1 Introduction to Bangla Negation

1.1.1. Negative Markers

The unmarked sentential negation marker in Bangla is *na*. In the simple present, past and future and in progressive present tense *na* is used to negate the sentence. Bangla negation markers interact with tense and aspect with respect to their distribution. *Na* is used for default sentential negation, while *ni* is used for only perfect tense (see Ramchand 2004 for details).

(3)a.　jOn　　　meri-ke　　bhalobaSe　na
　　　　John-NOM　Mary-ACC　love-PRES　NEG
　　　　'John doesn't love Mary.'

    b.   ami aj   bhat kha-i-ni
           I   today rice   eat-PERF-NEG
          'I have not eaten rice today.'

The other two syntactic negators in Bangla are *no-* and *nei*. Bangla uses two copulas *howa* and *ach*. Among these, the copula *howa* 'to be' is normally null in the typical present indicative copular construction as opposed to languages like Hindi and English where it is morphologically expressed. A negated copula item of *howa* is *noy* in Bangla. Bangla *no-* has present tense conjugated forms only. It does not feature non-finite, imperative, or other tense forms. The copula appears in the past tense and when it negates it becomes *chilo na* (stay.PAST.3P NEG), and with future tense it becomes *hobe na*. (become.FUT.3P NEG):

(4)   gach-Ta beSi bOro   nOy   /hObe   na   / chilo   na
           tree-CL   much big   NEG.be/ be.FUT   NEG /   be.PAST NEG
           'The tree is not very big/ will not be very big/ was not very big'.

The other copula *ach* is used to refer to a state of affairs where *nei* is its negated version.

(5)   apni   kEmon ache-n?
           You.HON how   be-3P.HON
           'How are you?'

(6)   apni   bhalo nei
           You.HON well be.NEG
           'You are not well.'

NO- and *nei* express appropriateness or acceptability. Though not frequently, this appears in connection with certain non-finite verb forms. *Nei* following a non-finite verb form can be used as a modal, expressing acceptability, permission or suitability. Three instances are as follows:

(7)   a. *nOy* following a conditional participle:

      aj   na   gele-i   nOy
      today NEG go-IMPV NEG.be
      'It won't do if (we) don't go today'.

      b. *nOy* following a verbal noun in the genitive:

      eTa hOwa-r nOy
      this be-GEN NEG.be
      'This is not supposed to happen'.

      c. bOro-der   Sathe erokom bEbohar kor-te   nei.
         elder-PL.GEN   with this type behavior do-INF be.NEG
         '(You) shouldn't behave like this with elders.'

The position of NEG in South Asian languages is mostly restricted to either pre-verbal position or post-verbal positions. Hindi shows the pre-verbal occurrence of NEG and post-verbal occurrence of NEG are decidedly marked:

(8) a. mai nahi   khaun-gi
    I   NEG   eat-FUT.1PS.F
    'I won't eat.'

    b. ??mai khaungi nahi

On the other hand, Dravidian languages show the post verbal occurrence of NEG and no pre-verbal occurrence of NEG is allowed:

(9) a. avan vann-u   illa
    he   come-PAST   NEG
    'He did not come.'

    b. *Avan illa vanu.

1.1.2. NEG in finite and non-finite clauses

Interestingly Bangla shows a unique occurrence of NEG where NEG can appear both pre-verbally and post-verbally. In the standard dialect of Bangla, NEG is post-verbal in finite clauses and preverbal in non-finite clauses. There are exceptional cases of finite clauses where NEG can appear in a preverbal position also. In this section we will discuss briefly the position of NEG in finite and non-finite clauses.

Bangla, finite and non-finite verbs occupy two different positions relative to negation. Finite verbs precede the marker of negation *na*, while non-finite verbs follow *na*. (Bayer 1995, Ramchand 2004, Simpson& Syed 2014). Examples of the two orders are in (10) and (11) respectively:

(10)   ami   na   khe-ye   khel-te   ge-lam
    I   NEG eat-NONFIN   play-INF   go-PAST.1P
    'I went to play without eating.'

(11)   ram   aj   bari   phir-be   na
    Ram today   home   return-FUT.3P   NEG
    'Ram will not go back home today.'

Unlike Hindi, Bangla NEG cannot intervene between a main verb and a light verb or a main verb and an auxiliary verb, as shown below.

(12)   ram bread kha-ta   nahi tha   / nahi khata tha   Hindi
    Ram bread eat-IMPV.M NEG be.PAST.M
    'Ram did not use to eat bread.'

(13)   ram   ruTi-Ta   khe-ye   phel-lo   na   / * kheye na phello   Bangla
    Ram bread-CL   eat-IMPV throw-PAST NEG
    'Ram did not eat up the bread.'

Na can precede a finite verb form for emphasis:

(14)   jodi tumi   aj   na aS-te   tahole ami   toma-r   bari   je-tam
    if   2PS.NOM today NEG come-IMPV then   I   2PS-GEN   home go-PAST.1P
    'If you won't come today then I will go to your home.'

Na can precede both copulas. In the following example, *na* precedes the copula-*ach* in the present tense form where usually the form *nei* (*na+ach*) is in use for the neg+copula reading.

(15)   Sekhan-e   na   ach-e   ghOr-dor, na   ach-e   kichu
        there-LOC   NEG   be-PRES   house   NEG be-PRES   something
        'There are no houses there, there is nothing.'

Na can precede non-finite verb forms in modal constructions:

(16)   bela-r   jawa ucit   nOy
        Bela-GEN   go   should NEG
        'Bela should not go.'

(17)   bela-r   na   jawa-i   ucit
        Bela-GEN   NEG   go-INF.EMP   should
        'Bela should not go.'

Example (16) shows the post-verbal negation where the neg particle is *noy* which is a conjugated form of neg + *be* (*na + hoy*), but in (17) where the modal construction exhibits the pre-verbal negation, the neg form is the negative morpheme *na* and crucially, *noy* cannot occur here.

Na can precede the finite verb in a series construction:

(18)   rina   na   jan-e   nac-te,   na   jan-e   gai-te,   na
        Rina   NEG   know-PRES   dance-NONFIN, NEG   know-PRES   sing-NONFIN,   NEG
        jan-e   chobi ãk-te
        know-PRES   picture draw-NONFIN
        'Rina does not know to dance, does not know to sing, does not know to draw pictures.'

Na has to precede the verb in subjunctive constructions:

(19)   bina Sabdhane ghOr-e   Dhuk-lo   jate   nina-r   ghum na   bhang-e
        Bina carefully room-LOC   enter-PAST so that Nina-GEN   sleep NEG break-SUBJN
        'Bina entered into the room carefully so that Nina won't wake up.'

Na precedes the conditional participle, and also a gerundival noun:

(20)   na   khe-le   Sorir   kharap kor-be
        NEG   eat-COND   health ill   do-FUT
        'If you won't eat you will feel unwell.'

(21)   rasta na   bhol-a   Sabhabik
        road NEG   forget-GER/INF   natural
        'Not forgetting the road is natural.'

From the above categorization of pre-verbal and post-verbal negation in Bangla, we can see that, crucially, post-verbal negation can be incorporated with the copulas in the language but incorporation is not possible in the preverbal occurrences of negation.

2. Bangla Negative Polarity Items: A fine grained account of strength

2.1. Strong, Weak and Beyond

Following Lawler's (2005) extensive list of English negative polarity items, explorations into the occurrence of linguistic expressions restricted to negative contexts in Bangla revealed a whole host of items that can be classified as NPIs. Interestingly, among these items, we discovered stark differences in terms of *strength of the NPIs.* The formulation of strength versus weakness of an NPI is centered around Zwarts' (1998) characterization of NPIs appearing in antimorphic, downward entailing and anti-additive contexts. Given below are the definitions of these characterizations, with a few examples:

(22) a. **Anti-Additive**: Let B and B^* be two Boolean algebras. A function f from B to B^* is said to be anti-additive iff for each two elements X and Y of the algebra B:
$f(X \cup Y) = f(X) \cap f(Y).$

Examples: Strong determiners such as *every* and *a*, as evidenced by the valid statements below:

    b. Every goat or donkey will be killed.   ⇔

       Every goat and every donkey will be killed.

    c. Not a priest or baker will be fired.   ⇔

       Not a priest and not a baker will be fired.

                                     (Zwarts 1998: 107-109)

(23) a. **Anti-morphic:** Let B and B^* be two Boolean algebras. A function f from B to B^* is said to be anti-morphic iff for each two elements X and Y of the algebra B:
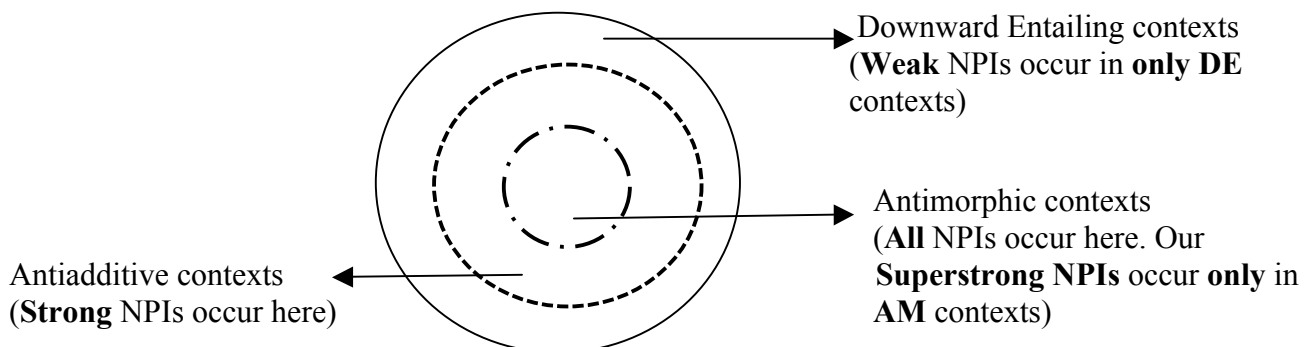
$f(X \cup Y) = f(X) \cap f(Y).$

$f(-X) = -f(X).$

                                       (Zwarts 1998: 114)

Examples: All NPIs occur in anti-morphic contexts.

(24) **Downward-Entailing:** A monotone-decreasing function is said to be a downward-entailing operator. Examples: *few, at most*, etc.

Downward Entailing contexts (**Weak** NPIs occur in **only DE** contexts)

Antimorphic contexts (**All** NPIs occur here. Our **Superstrong NPIs** occur **only** in **AM** contexts)

Antiadditive contexts (**Strong** NPIs occur here)

The contexts that we tested our NPIs in included contexts such as *at most Numeral, only, surprise, if, whether*. We present our results in Table I below, in which the '*' asterisk symbol is used to indicate that that particular NPI is not allowed in that context, and the '✓' check symbol signifies that the presence is allowed. A discussions of the patterns observed in the table follows, further followed a discussion of another significant classification possible among Bangla NPIs.

English Gloss	Bangla NPI	khub beSi hole Num (*At most Num)*	Sudhu (*Only*)	Obak hOwa/lage (*Surprise*)	jodi (*If*)	kina (*whether*)
'would *(n't) care to'	dhar dhara	*	*	*	*	*
'at all'	Ekdom	*	*	*	*	*
	Ekebare	*	*	*	*	*
'ever'	kOkhonoi	*	*	*	*	
'in ages/never'	kosmin kale-o	*	*	*	*	
'a drop'	Ek bindu-o	*	*	*	*	
'a bite'	Ek kamor-o	*	*	*	*	
'all that'	tEmon kichu	*	*	*	*	
	ahamori	*	*	*		
	OtoTao	*	*	*		
'much'	biSeS	*	*	*		
'red cent'	kana-kori-o	*	*	*		
	phuTo-pOySa-o	*	*	*		
'never'	baper jOnme-o	*	*	*		
'anymore'	ar	*	*	*		
'much/many'	hate beSi	*	*	*		
'until'	jOtokkhon na	*	*			
'at all'	ekTuo	*	*			
'any'	kono	*	*			
	EkTao	*	*			
'budge"	Ek cul-o	*	*			

	nOra					
'would *(n't) bother to'	proyojon bodh kOra		*			
'take long'	beSi SomOy lagano	*				
'yet'	Ekhono			*		
'can*('t) seem to'	V uThte para	✓	✓	✓	✓	✓

TABLE I: Spectrum of NPI Strength in Bangla**.**

The various degrees of shadedness within the table signify different classes of NPIs:

Superstrong NPIs: These NPIs are not licensed in any other contexts except negation, or only in antimorphic contexts. This is the class of NPIs that are in the first layer in the table: the white rows. They are ungrammatical even in antiadditive contexts, thus they are 'superstrong'.

Strong-Strong:Next in strength after superstrong: the dark grey rows. These NPIs are only grammatical in the scope of the [+Q] complementizer *whether,* and ungrammatical in all the other contexts we tested.

Strong:Third layer in terms of strength: the light grey rows. Ungrammatical in 3 out of 5 contexts. These may be labelled as the canonical *strong* NPIs.

Weak: Here the weak NPI ranges begin: dark greenish rows. These NPIs were ungrammatical in only 2 out of 5 contexts, and were licensed in the other contexts. We can term these the canonical *weak* NPIs.

Weak-Weak: light greenish rows: These appear to have almost no restrictions on their distribution, being ungrammatical in only 1 context out of 5.

Superweak: the last row. These we call the Superweak NPIs. They stand as the exact opposite counterpart of Superstrong NPIs in that they are allowed in all 5 contexts.

The following examples are provided in support of the table above, where one NPI from each of the classes explained above are shown against one or more of its licensors and non-licensors.

Superstrong NPIE*ekdom* 'at all'

(25)   *ami Obak   hochhi je   ram Onjon-ke   Ekdom patta dEy.
         I   surprise am   that Ram Anjan-DAT at all   care gives
         'I'm surprised that Ram cares about Anjan at all.'

(26)   *khub beSi hole   du-jon ram-ke   Ekdom patta dEy.
          very much be-COND two-CL Ram-DAT at all   care gives
          'At most two people at all care about Ram.'

 (27)   ram Onjon-ke   Ekdom patta dEy-na.
          Ram Anjan-DAT   at all   care give-NEG

'Ram doesn't care about Anjan at all.'

Strong-Strong NPI *kokhonoi* 'ever'

(28)   *Sudhu bela kOkhonoi taj mOhol dekhe-che.
          only   Bela ever   Taj Mahal see-3P.PERF
          'Only Bela has ever seen the Taj Mahal.'

(29)   *ami obak   hocchi je   montri-ra   kOkhonoi oi   grame giyechen
          I   surprise am   that minister-CL ever   DEM village gone
          'I'm surprised that the ministers have ever visited that village.'

(30)   ami jani-na   bela kOkhonoi taj mOhol dekhe-che   kina
          I   know-NEG Bela ever   Taj Mahal see-3P.PERF   whether
          'I don't know whether Bela has ever seen the Taj Mahal.'

Strong NPI *aar* 'anymore'

(31)   *khub beSi   hole   tin-jon   ar   LOnka-y   ja-be.
          very much be-COND three-CL anymore Lanka-LOC go-FUT
          'At most three people will visit Lanka anymore.

(32)   *Sudhu du-jon   Soino   ar   LOnka-y   ja-be.
          only   two-CL soldier anymore Lanka-LOC   go.FUT
          'Only two soldiers will visit Lanka anymore.'

(33)   ami jani-na   ram ar   LOnka-y   ja-be   kina.
          I   know-NEG Ram anymore Lanka-LOC go-FUT   whether
          'I don't know whether Ram will visit Lanka anymore.'

Weak NPI *ektao* 'any'

(34)   *khub beSi ho-le   du-jon   chatro EkTao boi   pore-che.
          very much be.COND two-CL student any   book read-3P.PERF
          'At most two students have read any book.'

(35)   jodi chatro-ra   EkTao boi   pOre, tahole ora paS kor-be.
          If   student-CL any   book read, then they pass do-FUT
          'If the students read any book, then they will pass.'

(36)   ami jani-na   bela EkTao gan jane   kina.
          I   know-NEG Bela any   song know-3P. whether
          'I don't know whether Bela knows any song.'

Weak-Weak NPI *ekhono* 'yet'

(37)   *ami obak   hocchi je   ram Ekhono LOnka-y   põũche-che.
          I   surprise am   that Ram yet   Lanka-LOC reach-3P.PERF
           'I am surprised that Ram has yet reached Lanka.'

(38)   Sudhu du-jon   Ekhono bari-te   põũche-che.
          only   two-CL yet   home-LOC reach-3P.PRESPRF
          'Only two people have reached home yet.'

(39)   ami jani-na   ram Ekhono LOnka-y   põũche-che   kina.
          I   know-NEG Ram yet   Lanka-LOC reach-3P.PERF whether
          'I don't know whether Ram has reached Lanka yet.'

Superweak NPI *bujhe uthte para* 'can*('t) seem to'

(40)   khub beSi ho-le   tin-jon   chatro Onko-Ta bujhe   uTh-te   par-lo.
          Very much be-COND three-CL student sum-CL   understand rise-IMPV able-PAST
          'At most three students seemed to be able to get the sum'

(41)   ami obak   hocchi je   montri-ra   jOnogOn-ke bujhe   uTh-te   par-lo.
          I   surprise am   that minister-CL people-DAT understand rise-IMPV   able-PAST
          'I'm surprised that the ministers seemed to be able to understand the people.'

Thus, there exist extremely fine-grained distinctions in terms of strength in Bangla, as a result of which two new classes – Superstrong and Superweak – needed to be formulated.

2.2.   NPIs and Focus Particles

Bangla has a range of NPIs and PPIs which take the *–i* and *–o* morphemes, which are usually considered focus particles in the language. Based on this property, Bangla NPIs can be divided into three kinds:

i)   NPIs which do not take either *–i* or *–o*,
ii)   NPIs which take *–o*
iii)   NPIs which take *–i*.

The NPIs like *biSeS* 'much', *ar* 'anymore', *jOtokkhon na* 'until' fall under the first category.

The particle *–o* is quite similar to the Hindi *bhii,* following the discussion on Hindi *bhii* in Lahiri (1998). *–o*, like *bhii*, bears the meanings of *also* and *even*. As in Hindi, the non-focussed *–o* gives the meaning of *also*, while its focussed variant gives the meaning of *even*.

(42)   ram-o   gan   gai-be.
          Ram-O   song   sing-FUT.3P
          'Ram too will sing.'
          'Even Ram will sing.'

The unfocussed -o in sentence (42)yields the *also* meaning. It asserts that Ram will sing, and also presupposes that there exists an x: x is not equal to Ram, and x will sing.

However, with a particular focus intonation on *Ram-o*, -o gives the even reading, where the likelihood presupposition is added in the meaning of sentence (42). Thus sentence (42) then has two presuppositions-a) there exists x: x is not equal to Ram, and x will sing. b) For all x, the likelihood that x will sing is greater than the likelihood that Ram will sing. For the Bangla NPIs, the –o basically gives the *even* meaning of English.

For some Bangla NPIs, the particle -o at the end is absolutely necessary, and for some it might be optional. For example, *baper jOnme* 'father's lifetime (never)' might be used with or without the –o. For the other –o class NPIs, a strong focus on the word is required if –o is to be omitted, for example, the NPIs *EkTa-o* ('even one') , minimisers like E*k bindu-o* ('even a drop'), *Ek kamor-o* ('even a bite') etc. Again, for some of them, the –o seems to be extremely difficult to be dropped, like *kanakori-o* (even a red cent), *phuTo pOySa-o* ('even a red cent'), *ekTu-o* ('even a bit'), *otoTa-o* ('even that much') etc. Though there might be speaker differences regarding this point, there still seem to be slightly different degrees in the strictness of the requirement of –o in these NPIs. The *even* or -o NPIs in Bangla lie in the Strong-Strong/Weak-Weak/Strong categories.

Hindi also uses *bhii* with its indefinite pronouns to form NPIs. Bangla, however, uses not –o, but a separate morpheme –i, basically a focus marker or emphatic marker in the language, for the purpose. This gives the Bangla NPIs *keu-i* ('anybody'), *kauke-i* ('anybody-ACC/DAT'), *kOkhono-i* ('ever'), *kothao-i* ('anywhere') etc. Again for these NPIs, the –i can be dropped when there is a focus on the word, (or doubling of a consonant in the middle for some words, as in *kOkkhono, kotthao*). The –i based NPIs are all Strong NPIs.

The Superstrong NPIs *Ekdom* and *Ekebare* might optionally bear an –i, as in *Ekdom-i* and *Ekebare-i*.

Both –i and –o NPIs basically refer to the *least likely* selection, i.e. selection of the least likely option in a set, the job done by *bhii* in Hindi.

(43) ami   kothao-i   jai-ni.
        I   anywhere-i   go-NEG.1P
        'I have not been to a single place.'

(44) ami   EkTao   boi   pori-ni.
        I   one-O   book   read-NEG.1P
        'I have not read a single book.'

So for example, the sense expressed by *kothao-i* in sentence (43) is that of '(not) a single place', and again that expressed in *ekta-o* in sentence (44) is that of '(not) a single piece (of book)'. This basically unites the function of the two particles with respect to NPIs.

3. Bangla Negative Polarity Items: A fine grained account of strictness

3.1.   *Strict, Non-Strict and Beyond*

There have been different proposals regarding the strictness of NPIs (Gajewski 2007, among others). Here we follow Collins and Postal's (2014) account of strict NPIs, based on the syntactic approach to

classical neg-raising.[1] In addition, we introduce *two new* classes of NPIs based on the parameter of strictness, none of which could be adequately captured by the two existing canonical categories.

Strict NPI

NPIs which require a clause-mate negation are called strict NPIs.

Non-strict NPI

NPIs which do not require a clause-mate negation are known as non-strict NPIs.

For CNRP predicates, it is assumed that the Neg raises from the embedded clause to the matrix clause, assuming that the Excluded Middle property holds. Thus strict NPIs are licensed in the complement of CNRP predicates with a matrix negation, but not in the complement of non-CNRP predicates with matrix negation, as the negation in the non-CNRP cases does not originate from the embedded clause. Non-strict NPIs are licensed under either kind of predicates with a matrix negation.

Based on the above test, Bangla NPIs have been divided into the Strict and the Non-Strict categories.

Super-strict NPI

Interestingly, a new class of NPIs seems to emerge in Bangla, a class which we call the Super-Strict class. These are NPIs which fail to be licensed even in the complement of a CNRP predicate when the negation is in the matrix clause. They seem to require the negation to be merged in a clause-mate position with respect to the NPI.

Strict-Non-strict NPI

Another class of NPIs are observed in Bangla, which we call the Strict/Non-strict class. The NPIs of this class are clearly not licensed under non-CNRP predicates with matrix negation. However, when embedded under CNRP predicates, they result in some variation and lack of clarity in the judgements among speakers. This class, thus, has been placed in the middle of the continuum ranging from the strict to the non-strict NPIs.

The following data is comprised of a few representative examples from each class under non-CNRP and CNRP predicates. Please refer to the Appendix section for extensive examples corroborating the facts presented in Table II. The data below is followed by Table II which is a comprehensive summary of the spectrum of strictness in Bangla.

Strict

(45)   *bela Sone-ni   je   Onjon **koSminkale-o**   Agra   gE-che.
         Bela hear-NEG that Anjan ever   Agra   go-3P.PERF
        'Bela hasn't heard that Anjan has ever been to Agra.'

---

[1] We are only using Collins and Postal's diagnostics without making any commitment as to whether the negation actually syntactically originates in the embedded clause or not.

(46)   bela biSSaS kOre-na   je   Onjon **koSminkale-o**   Agra gE-che.
        Bela believe do-NEG   that Anjan ever   Agra go-3P.PERF
        'Bela doesn't believe that Anjan has ever been to Agra.'

(47)   *bela Sone-ni   je   Onjon **kOkhonoi**   taj mOhol dekhe-che.
        Bela hear-NEG   that Anjan ever   Taj Mahal see-3P.PERF
        'Bela hasn't heard that Anjan has ever seen the TajMahal.'

(48)   bela biSSaS kOre-na   je   Onjon **kOkhonoi** taj mOhol   dekhe-che.
        Bela believe do-NEG   that Anjan ever   Taj Mahal   see-3P.PERF
        'Bela doesn't believe that Anjan has seen the TajMahal.'

Non-Strict

(49)   bela Sone-ni   je   manali põũcha-te **beSi SomOy lag-be.**
        Bela hear-NEG   that Manali reach-INF   much time   need-FUT
        'Bela hasn't heard that it will take much time to reach Manali.'

(50)   bela biSSaS kOre-na je   manali   põũcha-te **beSi SomOy   lag-be.**
        Bela believe do-NEG   that Manali   reach-INF   much time   need-FUT
        'Bela doesn't believe that it will take much time to reach Manali.'

(51)   ?bela Sone-ni   je   Onjon **biSeS**   gan   jan-e.
        Bela hear-NEG   that Anjan   much   song   know-3P.PRES.
        'Bela hasn't heard that Anjan knows much music. '

(52)   bela biSSaS kOre-na je   Onjon **biSeS** gan jan-e.
        Bela believe do-NEG   that Anjan   much song know-3P.PRES.
        'Bela doesn't believethat Anjan knows much music.'

Strict/Non-Strict

(53)   *bela Sone-ni   je   Onjon **bape-r**   **jOnm-e-o**   Agra gE-che
        Bela hear-NEG   that Anjan father-GEN   birth-LOC-even Agra go-3P.PERF
        'Bela hasn't heard that Anjan has ever (lit. 'in his father's lifetime') visited Agra.'

(54)   %bela biSSaS kore-na je   Onjon **bape-r**   **jOnm-e-o**   Agra gE-che.
        Bela believe do-NEG that Anjan   father-GEN birth-LOC-even Agra go-3P.PERF
        'Bela doesn't believe that Anjan has ever (lit. 'in his father's lifetime') visited Agra.'

(55) *bela   Sone-ni   je   **jOtokkhon na** pOroma   aS-be,   bidiSa
      Bela   hear-NEG   that until   Paroma   come-FUT Bidisha
      opekkha kor-be.
      wait   do-FUT
      'Bela hasn't heard that Bidisha will wait until Paroma arrives.'

(56) %bela   biSSaS kore-na   je   **jOtokkhon na** pOroma   aS-be,   bidiSa
      Bela   believe do-NEG   that until   Paroma   come-FUT Bidisha
      Opekkha kor-be.
       wait   do-FUT
      'Bela doesn't believe that Bidisha will wait until Paroma arrives.'

Superstrict

(57) *bela   Sone-ni   je   Onjon   o-r   kOtha-r   **dhardhare.**
      Bela   hear-NEG   that Anjan   s/he-GEN   word-GEN   cares about
      'Bela hasn't heard that Anjan cares about her words.'

(58) *bela biSSaS kOre-na je   Onjon   o-r   kOtha-r   **dhardhare.**
      Bela believe do-NEG that Anjan   s/he-GEN word-GEN   cares about
      'Bela doesn't believe that Anjan cares about her words.'

(59) *bela   Sone-ni   je   Onjon   o-ke   **Ekdom/ Ekebare** bhalobaS-e.
      Bela   hear-NEG   that Anjan   s/he-DAT   at all   love-3P.PRES
      'Bela hasn't heard that Anjan loves her at all.'

(60) *bela biSSaS kore-na je   Anjon   o-ke   **Ekdom/Ekebare** bhalobaS-e.
       Bela believe do-NEG that Anjan   s/he-DAT   at all   love-3P.PRES
       'Bela doesn't believe that Anjan loves her at all.'

English Gloss	NPI	With Non-Neg-Raising Predicates (embedded under *'je')*	With Classical Neg-Raising Predicates (embedded under *'je'*)	Classification
'would *(n't) care to'	**dhar dhara**	*	*	**Super Strict**
'at all'	**Ekdom**	*	*	**Super Strict**
	Ekebare	*	*	**Super Strict**
	ekTuo	*	*	**Super Strict**
'red cent'	**kana kori-o**	*	*	**Super Strict**
	phuTo pOySa-o	*	*	**Super Strict**
'in ages/never'	**koSmin kale-o**	*	✓	**Strict**
'ever'	**kOkhonoi**	*	✓	**Strict**
'a drop'	**Ek bindu-o**	*	✓	**Strict**

'all that'	otoTa-o	*	✓	Strict
	ahamori	*	✓	Strict
	tEmon kichu	*	✓	Strict
'anymore'	ar	*	✓	Strict
'much/many'	hate beSi	*	✓	Strict
'budge'	Ek chul-o nora	*	✓	Strict
'would *(n't) bother to'	proyojon bodh kora	*	✓	Strict
'yet'	Ekhono	*	✓	Strict
'never'	baper jOnme-o	%	✓	Strict/Non-Strict
'yet'	jotokkhon na	%	✓	Strict/Non-Strict
	kono	%	✓	Strict/Non-Strict
;	EkTa-o	%	✓	Strict/Non-Strict
'take long'	beSi SomOy lagano	✓	✓	Non-Strict
'much'	biSeS	✓	✓	Non-Strict
'can*('t) seem to'	V uThte para	✓	✓	Non-Strict

TABLE II: Spectrum of Strictness in Bangla

Finally, trying to correlate the different classes of NPIs based on their strength and strictness, some interesting observations may be made.

The classes of Strong-Strict NPIs and Weak-Non-strict NPIs, which are very common cross-linguistically, are observed. However, along with that, the *very rare class* of **Weak-Strict NPIs** is also observed.

The NPIs which belong to the Strict-Non-Strict class, i.e., lying in between the Strict and the Non-Strict classes, all belong to the canonical Strong or canonical Weak classes, which lie in between the Strong-Strong and the Weak-Weak classes.

Examples portraying the interesting behavior of the special weak-strict class of NPIs in Bangla are given below.

(61) *bela Sone-ni   je   Onon   **Ekhono**   cakri   peye-che.
       Bela hear-NEG that Anjan   yet   job   get-3P.PERF
       'Bela hasn't heard that Anjan has got a job yet.'
   ~ [not licensed under matrix negation and non-CNRP predicates]

(62) *ami Obak   hocchi je   ram **Ekhono** LOnka-y   põũche-che.
       I   surprise am   that Ram yet   Lanka-LOC reach-3P.PERF
       'I'm surprised that Ram has reached Lanka yet.'
   ~ [not licensed under matrix DE licensor]

(63)   bela Sune-che   je Onjon **Ekhono** cakri   pay-ni.
        Bela hear-3P.PERF   that Anjan   yet   job   get-NEG.3P.
        'Bela has heard that Anjan hasn't got a job yet.'
    ~ [licensed under clausemate negation]

(64)   ami jani-na   Onjon **Ekhono** cakri peye-che   kina.
        I   know-NEG Anjan   yet   job   get-3P.PERF   whether
        'I don't know whether Anjan has got a job yet.'
    ~ [licensed under clausemate DE context]

The table below summarizes the classes of NPIs in Bangla:

	Weak-Weak	***Weak***	***Strong***	***Strong-Strong***
Non-Strict	☞beSi SomOy lagano ☞V uThte para		☞biSeS	
Strict/Non-Strict		☞jOtokkhon na ☞**EkTao**	☞baper jOnme-o	
Strict	☞proyojon bodh kOra ☞Ekhono	☞Ek cul-o nOra	☞OtoTao ☞ahamori ☞ar ☞hate beSi ☞koSmin kale-o	☞kOkhonoi ☞eE-bindu-o ☞tEmon kichu

TABLE III: Classes of NPIs in Bangla.

1.   Bangla Modals and Negation

4.1.   *Bangla Deontic Modals*

Bangla has four deontic modal predicates. They are *dOrkar* ('need to'), *ucit* ('must'/ 'should'), *para* ('can'/ 'might'/ 'may'), *hOwa* ('have to'/ also the verb 'be'). *Para* is the only modal with existential force among these deontic modal predicates. Below are a few examples:

(65) ram-er   Ekhon bari   ja-wa   dOrkar.
     Ram-GEN   now   home go-INF need
     'Ram needs to go the market now.'

(66) ram-er   Ekhon bari-te   thak-a   ucit.
     Ram-GEN now   home-LOC stay-INF should
     'Ram should be at home now.'

(67) ram bikele   bajar je-te   pare.
    Ram afternoon market go-IMPV can.3P
    'Ram may go to the market in the afternoon.'

(68) ram-ke   Ekhon bari je-te   hO-be.
    Ram-DAT now   home go-IMPV be-FUT.3P
    'Ram has to go home now.'

A pertinent observation here is that *para, ucit* and *hOwa* can all have both epistemic and deontic usages. (66) for example, is ambiguous between an epistemic reading (I see Ram's lights on, and I know that he is conscientious about saving energy: I infer Ram should be home now) and a deontic reading (Ram will receive an official letter at home that requires his signature: It is necessarily the case that Ram be home now). Similarly, the sentence in (67) can have an epistemic reading (Its 5 o'clock now, and I know that Ram goes to the market at 5 pm everyday: Ram might be going to the market now), or a deontic reading (Ram is allowed to get off work only at 5, and is granted permission to go the market at 5: Ram is allowed to go to the market at this time). *para* can also lend an ability modal meaning, and thus (67) also has an ability reading (Ram is physically able to go the market now, as opposed to earlier: Ram can go to the market now).

The disclaimer to be made here is that this paper will only concern itself with the relationship between *deontic* modality and negation, and the scopal interactions between them. One of the goals of this exercise is to be able to classify Bangla modals as PPI modals, NPI modals or neutral modals as per the nomenclature and properties laid out in Iatridou and Zeijlstra (2013) (also see Homer (2015)). Restricting our domain of inquiry to deontic modals is due to the fact that epistemic modals are mostly considered to be unambiguous scope takers *above negation.* Several studies (Drubig 2001, Butler 2003, among others) have claimed that epistemic modals are 'high' modals that scope over negation, while deontic modals are 'low' modals that can take scope *over or under negation.* Iatridou and Zeijlstra use this scopal promiscuity of deontic modals to define their PPIhood, NPIhood or neutral status. Our goal being the same for Bangla modals, we will only focus on the deontic usages of all the modal predicates discussed here.

4.2.   Deontic Modals and Negation

Bangla makes a distinction between two types of negation based on their syntactic positions, as discussed in Section 1.1.2. To help the reader recall, we can consider the minimal pair of sentences below, and note that the different syntactic positions of negation bring about a significant difference in meaning:

(69) bela naac-te   pare-na.   POST-verbal
     Bela dance-IMPV can-NEG.3P
     'Bela cannot dance'

(70) bela na-o   naac-te   pare.   PRE-verbal
     Bela NEG-O dance-IMPV can.3P
     'It may be the case that Bela doesn't dance'

We labelled (69) as post-verbal negation, and (70) as preverbal, based solely on their surface positions.

This syntactico-semantic difference becomes especially important when we explore the interaction of modals with these two types of negation. The reader will notice that (69) and (70) have the existential deontic modal *para*. Crucially, in (69), the modal takes scope *under* negation, while in (70), the modal takes scope *over* negation. This is evident in the meanings of (69) and (70) shown below in (69a) and (70a):

(69a) It is not the case that Bela can dance. $\neg > \Diamond$
(70a) It is possibly the case that Bela not dance. $\Diamond > \neg$

Crucially, apart from *uchit*, all the other modals have this property. The examples below show similar patterns for *howa* and *dorkar*, with respect to preverbal and postverbal negation.

(71) bela-ke   bhat khe-te   hO-be-na. $\neg > \Box$
      Bela-DAT rice eat-IMPV   be-FUT-NEG
      'It is not the case that Bela has to eat rice.'

(72) bela-ke   na   bhat khe-ye   thak-te   hO-be. $\Box > \neg$
     Bela-DAT NEG rice eat-IMPV stay-IMPV   be-FUT
     'It is necessarily the case that Bela remain without eating rice.'

(73) bela-r   ja-wa-r   dOrkar nei. $\neg > \Box$
     Bela-GEN   go-INF-GEN need   be.NEG.
     'It is not the case that Bela needs to go.'

(74) bela-r   na   ja-wa-i   dOrkar. $\Box > \neg$
     Bela-GEN NEG go-INF-EMPH need
     'It is necessarily the case that Bela not go.'

One notices an interesting correlation here: surface syntactic hierarchies seem to match scope hierarchies in these cases. The scopal interactions between negation and these modals seem to be dependent on or reflect the exact surface syntactic hierarchy. Bangla is a head-final SOV language. In (69), (71) and (73), the NEG particle *na/nei* is the highest in the structure, with the modal being lower, and the scope relations mirror that. On the other hand, in (70), (72) and (74), the modal is in a higher syntactic position than the NEG elements, and that is reflected in the scope relations too.

Iatridou and Zeijlstra's categorization of modals with respect to negation is laid out below:

PPI Modals = Modals that scope over negation. Examples are *must, should, ought to, to be to.*
Neutral Modals = Modals that scope under negation but do not require negation. Examples are
        have to, need to, can, may.
NPI Modals = Modals that scope under and require negation. Examples are *need, ought.*
                                                                    (I & Z 2013: pp. 532)

Para, hOwa and *dOrkar* thus can be classified as *neutral* modals. *Ucit,* on the other hand, obligatorily takes scope over *both* preverbal and post-verbal negation, as shown below:

(75) bela-r   bajar   ja-wa   ucit   nOy.   □>¬
        Bela-GEN market go-INF should NEG
        'It is necessarily the case that Bela not go to the market.'

(76) bela-r   bajar   na ja-wa-i   ucit.   □>¬
        Bela-GEN market NEG go-INF-EMPH should
        'It is necessarily the case that Bela not go to the market.'

In both cases: whether the NEG is syntactically higher or lower than the modal, it is outscoped by the modal. Thus, *uchit* can be classified as a *PPI* modal in Iatridou and Zeijlstra's terms.
Table IV below summarizes our findings so far:

Modal	Force	Preverbal Negation	Postverbal Negation	Status	
dOrkar	□	□>¬	¬ >□	Neutral modal	TABLE IV:
hOwa	□	□>¬	¬ >□	Neutral modal	Polarity Status of
para	◇	◇> ¬	¬ >◇	Neutral modal	Bangla Deontic
ucit	□	□>¬	□>¬	PPI modal	Modals.

Bangla thus appears to *lack the presence of any NPI modals.*

4.3.   *Ucit* as a PPI modal

    4.3.1. Positive Polarity

Before we look into the diagnostics of positive polarity of modals, let us briefly discuss what positive polarity is. PPIs were first identified as a class in Baker (1970), and are discussed more recently in Szabolcsi (2004), Nilsen (2003), and Ernst (2009).As the name suggests, polarity items which systematically avoid appearing in negative contexts have been termed as *positive polarity items.* In terms of licensing of PPIs, that crucially means that these elements cannot be in the syntactic or semantic scope of negation or other negative operators. Some examples are *some, already, would rather,* speaker oriented adverbs sucha s *unfortunately*, etc:

(77) Bill would rather be in Montpellier.
    #Bill wouldn't rather be in Montpellier.

(75) Unfortunately, John died.
      #John didn't unfortunately die.

                                    (Giannakidou 2008:20,22)

In Section 2.2., we had discussed the interaction of the focus particles –*i* and –*o* in Bangla and their interaction with NPIs. Here, we want to point out that the addition of –*i* with degree adverbs, or with degree modifiers of adjectives and adverbs might sometimes result in PPIs as well, for example, O*toTa-i* ('that much'), *khub-i* ('very'), *bhiSon-i* ('very'), *OnekTa-i* ('a lot'), *Onekkhon-i* ('a lot of time').

(76)   *Onjon khub-i bhalo gay-na.
         Anjan very-i well sing-3P.NEG
        'Anjan doesn't sing very well.'

(77) *bela   OnekTa-i   nepali jane-na
        Bela   quite a lot-i   Nepali know-3P.NEG
       'Bela doesn't know much Nepali.'

4.4. The PPI Status of Uchit

Iatridou and Zeijlstra (2013) lay out four tests to confirm the positive polarity-hood of PPI modals. To confirm the PPI status of *uchit*, we perform these tests below:

4.4.1   Metalinguistic/Contrastive Negation

Bangla PPI modal *uchit* takes scope *under* metalinguistic/contrastive negation, with contrastive focus on the modal, as in Greek or Dutch. This is in accordance with Jackendoff's(1972) claim, as the position of the Bangla sentential negation *na* is supposed to be higher than the position of the modal *uchit*.

(78) a. SOba-r-i   NPI-er   opor pãc-Ta article pO-ra   ucit.
      Everybody-GEN-i NPI-GEN about five-CL article read-INF   should
      'Everybody should read five articles on NPIs.'

b.   karor-i   NPI-er   opor   pãc-Ta article pOr-a   UCIT na,   ¬ > **PPI** □
        Anyone-i NPI-GEN about   five-CL article read-INF should NEG
        tobe   por-le   SObar-i   bhalo hO-be
        however read-COND   everyone-i good be-FUT.3P
        'Nobody SHOULD read five articles on NPIs, however, it would be good for all if they
        do so.'

(79) a. ram-er   NPI-er   opor kichu article pO-ra   ucit.
         Ram-GEN NPI-GEN about some article read-GER should
         'Ram should read certain articles on NPIs.'

    b. ram-er   NPI-er   opor kono article pO-ra   UCIT na, o-r   iccha ho-le.   ¬ > **PPI** □
        Ram-GEN NPI-GEN about any   article read-INF should NEG he-GEN wish be-COND
        o por-te   pare
        he read-IMPV   can.3P
        'Ram SHOULD not read any article on NPIs, he may read them if he wishes.'

4.4.2 Intervention Effects

By virtue of being a PPI, *uchit* is disallowed in the immediate scope of an antiadditive operator. But when some other intervening element takes scope between the antiadditive operator and the PPI, the sentence with *uchit* becomes grammatical. This is shown below:

(80) A: Onjon Eto   bikkhato lok, bela-r   o-ke   biye   kO-ra ucit.
           Anjan so much famous   man, Bela-GEN he-DAT marriage do-INF should
           'Anjan is so famous! Bela should marry him.'

B: Onjon bikkhato bole   bela-r   oke biye   kO-ra   ucit   nOy,   o bhalo gan
   Anjan famous   because Bela-GEN him marry do-INF   should NEG.be. he good song
   gay   bole   kO-ra   ucit
   sings because do-INF should
   'Bela shouldn't marry Anjan because he is famous, but because he sings well.'

[It is NOT the case that > BECAUSE Anjan is famous > Bela SHOULD marry him.]

Crucially, *   ¬ >□ (*uchit*)
but,   ✓¬ > **because** >□.

4.4.3. Clause-External Negation

PPIs are allowed to occur in the scope of negation/other NPI-licensing operator if negation is external to the clause containing the PPI. The data below show two sentences, with a non-neg-raising and a neg-raising verb respectively, demonstrating that the modal *uchit* is outscoped by negation when the latter is in a clause external to the clause containing *uchit.*

(81) a. Onjon dabi kOre-ni je   bela-r   ja-wa   ucit   ¬ >□
         Anjan claim do-NEG that Bela-GEN go-INF   should
         'Anjan did not claim that Bela must go.'

b. Onjon mone kOre-na je   bela-r   briSTi-te khEl-a   ucit   ¬ >□

   Anjan think do-NEG that Bela-GEN rain-LOC play-INF should

  'Anjan does not think that Bela should play in the rain'

4.4.4. *Baker/Szabolcsi Facts*

This PPIhood test is described as the following in Iatridou and Zeijlstra:

> A striking fact about PPIs is that whereas a PPI cannot be in the immediate
> scope of a clausemate negation/antiadditive operator, this configuration becomes
> licit when it is in the scope of an NPI-licensing environment. This set of facts
> was first observed by Baker (1970); it is also discussed at length by Szabolcsi
> (2004:35–41), for whose explanation of PPI-hood it is crucial.

<div align="center">(Iatridou and Zeijlstra 2013: pp. 541)</div>

Thus, while: *   NEG > PPI
✓ NPI licenser > NEG > PPI

We present data below demonstrating the presence of *uchit* under several NPI licensing environments such as antecedent of conditionals, in the restriction of the universal quantifier, in the scope of *only*, and in the complement of verbs such as *surprise.* Crucially, however, the results of the Baker/Szabolsci test in Bangla are inconclusive. More accurately, the tests fail to yield the results we expect in that *even in an NPI licensing environment, the NEG > PPI interpretation is not attainable with ucit*. The modal obligatorily outscopes negation.

<u>Antecedent of conditionals:</u>

(82) a. Onjon-er   jodi aj   khicuri   kha-wa   ucit   na   hOy,   tahole mug-Dal

     Anjan-GEN if   today lentil-soup eat-INF   should NEG be.PRES then   lentil

     ke-na-r   dOrkar nei

     buy-INF-GEN. need   be.NEG

   'If Anjan should not eat khichuri today, then there is no need to buy lentils.'

<div align="right">[IF >□> ¬]</div>

<u>Restriction of universals:</u>

b. prottek-Ta chele ja-r   aj   cinema na dekh-te   ja-wa   ucit   chilo

   Every-CL boy   REL-GEN today cinema NEG watch-INF go-INF   should was

   Se cinema dekh-te   gE-che

   he cinema see-INF   go-3P.PERF

  'Every boy who shouldn't have gone to the movies today, did go.'

<div align="right">[∀ >□> ¬]</div>

<div align="center">22</div>

Only:

c. Sudhu Onjon-er-i   aj   kaj   kO-ra   ucit   nOy
    only Anjan-GEN-i today work do-GER   should NEG.be.
    'Only Anjan should not work today.'

$$[only > \Box > \neg]$$

Surprise:

d. ama-r Obak   lag-che   je o-r   nun   kha-wa ucit   nOy
    I-GEN surprised feel-PRES.PROG that he.GEN salt   eat-INF should NEG.be.
    'I am surprised that he shouldn't eat salt.'

$$[surprise > \Box > \neg]$$

The results of the four PPIhood tests conducted on *uchit* are summarized in Table V below. We have used a '?' sign to signify that the Baker/Szabolsci tests stand inconclusive:

Metalinguistic Negation	Intervention Effects	Clause-External Negation	Baker/Szabolsci facts
$\neg > \Box$	$\neg > \textbf{because} > \Box$	**cl.-ext.** $\neg > \Box$	**?**

TABLE V: PPIhood test results for *Uchit*

4.5.   *The Curious Case of the Strength of Uchit*

The previous section established fairly satisfactorily that *ucit* can be considered a PPI modal. This raises the question of the strength factor of the modal PPI in the language. Attempts to answer that question led to quite puzzling results.

The strength of a PPI, as per the formulations laid down in Zwarts (1998) are the mirror opposite of NPIs. Thus, PPIs anti-licensed in only antimorphic contexts are considered weak, PPIs anti-licensed in anti-additive contexts are considered of medium strength, while PPIs anti-licensed in only DE contexts are considered strong. Given this characterization, the table below shows the results of *ucit* in such contexts, leading to our formulation that *ucit* is *both a strong and a weak PPI.*

UCHIT	Contexts	Does uchit scope under this licensing context?	Strength
	Few	✗	
	At most 5	✗	STRONG
	Only	✗	
	Every	✓	WEAK?
	If	✓	
	Negation	✗	WEAK

TABLE VI: Strength of *Uchit*

We leave a clearer exposition of this for future work.

5. Conclusion

This paper offered a wide descriptive window into the distribution and distinctive properties of negation and NPIs in Bangla. In addition, it explored what it means for deontic modals to be polarity items. Through discussions of various issues related to strength/weakness of polarity items, and syntactic notions such as strictness/non-strictness of licensors of polarity items, this paper offered a very fine-grained lens of looking at these traditional concepts through the discovery of rare classes of NPIs as well as forging of novel categories to distinguish myriad yet interrelated characterizations of polarity items in natural language.

REFERENCES

Baker, Carl L. 1970. Double negatives, *Linguistic Inquiry* 1, 169–186.

Bayer, Josef. 1995. *Directionality and logical form: on the scope of focussing particles and wh-in-situ*. Dordrecht: Kluwer.

Butler, John. 2003. A minimalist treatment of modality. *Lingua*, *113*(10), 967-996.

Collins, Chris and Paul Postal. 2014. *Classical Neg-raising: An Essay on the Syntax of Negation*. Cambridge: MIT Press

Drubig, H. B. 2001. On the syntactic form of epistemic modality. *Ms., University of Tübingen*.

Ernst, Thomas 2009. Speaker oriented adverbs. *Natural Langauge and Lingusitic Theory* 27, 497–544.

Gajewski, Jon. 2007. Neg-raising and polarity. *Linguistics and Philosophy* 30: 298-328.

Giannakidou, A. 2008. Negative and positive polarity items: Variation, licensing, and compositionality. *Semantics: An international handbook of natural language meaning. Berlin: Mouton de Gruyter (to appear)*.

Homer, V., 2015. Neg-raising and positive polarity: The view from modals. *Semantics and Pragmatics*, *8*, pp. 1-48.

Iatridou, Sabine., & Hedde Zeijlstra. 2013. Negation, polarity, and deontic modals. *Linguistic Inquiry, 44(4),* 529-568.

Jackendoff, R.S., 1972. Semantic interpretation in generative grammar.

Lahiri, Utpal. 1998. Focus and Negative Polarity in Hindi. *Natural Language Semantics* 6: 57-123.

Lawler, John. 2005. http://www.umich.edu/~jlawler/NPIs.pdf

Nilsen, Oystein 2003. *Eliminating Positions*. Ph.D. dissertation. University of Utrecht.

Ramchand, G. C. 2004. Two types of negation in Bengali. In *Clause structure in South Asian languages* (pp. 39-66). Springer Netherlands.

Simpson, A. and Syed, S., 2014. Finiteness, negation and the directionality of headedness in Bangla. *Natural Language & Linguistic Theory*, *32*(1), pp.231-261.

Szabolcsi, Anna 2004. Positive polarity – negative polarity. *Natural Language and Linguistic Theory,* 22, pp 409–452.

Appendix

Data in support of Table II:

Strict NPIs under non-CNRP and CNRP predicates

1. *bela   Sone-ni   je   Onjon **Ek bindu-o** Spanish   jane
   Bela   hear-NEG that Anjan   one   drop-o   Spanish know-3P
   'Bela hasn't heard that Anjan knows even a bit of Spanish.'

2. bela biSSaS kore-na je   Onjon   **Ek   bindu-o** Spanish jane
   Bela believe do-NEG that Anjan   one   drop-O   Spanish know-3P
   'Bela doesn't believe that Anjan knows even a bit of Spanish.'

3. *bela   Sone-ni   je   Onjon   **OtoTa-o/ahamori/ tEmon kichu**   bhalo gay.
   Bela   hear-NEG that Anjan   that much-O/ great/such   well   sing-3P
   'Bela hasn't heard that Anjan sings all that well. '

4. bela   biSSaS kore-na je   Onjon   **OtoTa-o /ahamori/tEmon kichu**
   Bela   believe do-NEG that Anjan   that much-O/great/such
   bhalo   gay.
   well   sing-3P
   ' Bela doesn't believe that Anjan sings all that well. '

5. *bela Sone-ni   je   Onjon   **ar**   gan   gay.
   Bela   hear-NEG that Anjan   anymore song   sing-3P
   'Bela hasn't heard that Anjan sings anymore.'

6. bela biSSaS   kore-na je   Onjon   **ar**   gan   gay.
   Bela believe do-NEG that Anjan   anymore song   sing-3P
   'Bela doesn't believe that Anjan sings anymore.'

7. *bela Soneni   je class-er   chatro-der   **hat-e   beSi SomOy** acche**.**
   Bela   hear-NEG that class-GEN students-GEN hand-LOC much time   has
   'Bela hasn't heard that the students of the class have much time in hand.'

8. bela biSSaS   kore-na je   class-er   chatro-der   **hate   beSi   somOy**
   Bela   believe do-NEG that class-GEN   students-GEN hand-LOC much   time
   acche**.**
   has
   'Bela doesn't believe that the students of the class have much time in hand.'

26

9. *bela Sone-ni je Onjon ta-r kOtha-r theke **Ek cul-o norbe**.
   Bela hear-NEG that Anjan he-GEN word-GEN from one hair-O move
   'Bela hasn't heard that Anjan will budge an inch from his position.'

10. Bela biSSaS kore-na je Onjon ta-r kOtha-r theke
    Bela believe do-NEG that Anjan he-GEN word-GEN from
    ek cul-o norbe.
    one hair-O move
    'Bela doesn't believe that Anjan will budge an inch from his position.'

11. *bela Sone-ni je Onjon o-r Sathe kOtha bOla-r
    Bela hear-NEG that Anjan he-GEN with word say-GEN
    proyojon bodh kOre.
    need feel does
    'Bela hasn't heard that Anjan bothers to talk to her.'

12. bela biSSaS kore-na je Onjon o-r Sathe kOtha bOla-r
    Bela believe do-NEG that Anjan he-GEN with word say-GEN
    proyojon bodh kOre.
    need feel does
    'Bela doesn't believe that Anjan bothers to talk to her.'

13. *bela Sone-ni je Onjon **Ekhono** cakri peyeche.
    Bela hear-NEG that Anjan yet job get-3P.PERF
    'Bela hasn't heard that Anjan has got a job yet.'

14. bela biSSaS kore-na je Onjon **Ekhono** cakri peyeche.
    Bela believe do-NEG that Anjan yet job get-3P.PERF
    'Bela doesn't believe that Anjan has got a job yet.'

Non-Strict NPIs under non-CNRP and CNRP predicates

15. bela Sone-ni je manuS-ke **bujh-e** **uTh-te pa-ra** Eto
    Bela hear-NEG that human-DAT understand-IMPV rise-INF able-INF so
    kothin.
    difficult
    'Bela hasn't heard that it is so difficult to seem to understand people.'

16. bela   biSSaS   kore-na   je   manuS-ke   **bujh-e**   **uTh-te**   **para**
    Bela   believe do-NEG   that human-DAT understand-IMPV rise-INF   able-INF
    Eto   koThin.
    so   difficult
    'Bela doesn't believe that it is so difficult to seem to understand people.'

Strict/Non-Strict NPIs under non-CNRP and CNRP predicates

17. *bela   Sone-ni   je   **kono** lok   pahar-e   core-che
     Bela   hear-NEG   that   any   person mountain-LOC   climb-3P.PERF
     'Bela hasn't heard that anyone has climbed the mountain.'

18. %bela biSSaS   kOre-na   je   **kono** lok   pahar-e   core-che
     Bela believe do-NEG   that   any   person mountain-LOC   climb-3P.PERF
     'Bela doesn't believe that anyone has climbed the mountain.'

19. *bela   Sone-ni   je   **EkTao**   lok   pahar-e   core-che.
     Bela   hear-NEG   that   one-even   person mountain-LOC   climb-3P.PERF
     'Bela hasn't heard that even a single person has climbed the mountain.'

20. %bela biSSaS kore-na je   **EkTao**   lok   pahar-e   core-che.
     Bela believe do-NEG that one-even   person mountain-LOC climb-3P.PERF
     'Bela doesn't believe that even a single person has climbed the mountain.'

Superstrict NPIs under non-CNRP and CNRP predicates

21. *bela   Sone-ni   je   Onjon   o-ke   **ekTu-o**   bhalobaSe.
     Bela   hear-NEG   that Anjan   s/he-DAT   a bit-even   love-PRES.3P
     'Bela hasn't heard that Anjan loves her even a bit.'

22. *bela   biSSaS   kore-na je   Onjon   o-ke   **ekTu-o**   bhalobaSe.
     Bela   believe do-NEG that Anjan   s/he-DAT   a bit-even   love-PRES.3P
     'Bela doesn't believe that Anjan loves her even a bit.'

23. bela   Sone-ni   je   Onjon-er   kache   **kanakori-o**   ache
     Bela   hear-NEG   that Anjan-GEN   near   blind cent-even has
     'Bela hasn't heard that Anjan has even a red cent.'

24. *bela   biSSaS kore-na   je Onjon-er   kache   **kanakori-o**   ache**.**
     Bela   believe do-NEG   that Anjan-GEN   near   blind cent-even   has
     'Bela doesn't believe that Anjan has even a red cent.'

25. *bela   Sone-ni   je   Onjon-er   kache   **phuTopOySa-o**   ache**.**
    Bela   hear-NEG   that   Anjan-GEN   near   faulty cent-even   has
    'Bela hasn't heard that Anjan has even a red cent.'

26. *bela   biSSaS   kore-na   je   Onjon-er   kache   **phuTopOySa-o**   ache**.**
    Bela   believe   do-NEG   that   Anjan-GEN   near   faulty cent-even   has
    'Bela doesn't believe that Anjan has even a red cent.'

COLOPHON