NEGATIVE POLARITY ITEMS IN TELUGU

Mayuri J. DILIP
Indian Institute of Technology Madras, India
mayuri.dilip@gmail.com

Rajesh KUMAR
Indian Institute of Technology Madras, India
thisisrajkumar@gmail.com

Abstract

The paper presents a unified account of licensing conditions of Negative Polarity Items (NPI) in Telugu. Based on the distribution of NPIs in complex sentences that consist of embedded clauses, we state that negation c-commanding NPI is at the base-generated position. Consequently, features checking between negation and NPI restricts the alternatives on the scale inherent to NPIs. The morphological realization of NPI in the non-negative contexts is different from the context with overt negation. The NPIs show the following distribution. NPI occurs in subject position; A negative licensing Multiple NPIs. There are three types of NPIs: wh-element, quantifier and idiomatic expression. In complex sentences, wh-elements block long-distance licensing. In contrast, quantifiers and idiomatic expressions do not block long-distance licensing.

Keywords: Negative Polarity Item; minimalist-based approach; feature checking; quantifier scale; c-commanding

Povzetek

Članek predstavlja celovit pregled pridobitvenih pogojev (angl. licencing conditions), ki zadevajo k nikalnosti usmerjene izraze (Negative Polarity Items ali NPI) v teluščini. Na osnovi porazdelitve teh izrazov v sestavljenih stavkih z vrinjenimi stavki zagovarjamo tezo, da se s-poveljevanje k nikalnosti usmerjenim izrazom izvede na položajih, ki izhajajo iz osnove. Posledično preverjanje značilnosti med nikalnostjo in k njej usmerjenimi izrazi omejuje druge možnosti in sicer preko lestvice, ki je povezana z izrazi NPI. Morfološka realizacija takšnih izrazov v nenegativnih kontekstih je drugačna od kontekstov z očitno negacijo. K nikalnosti usmerjeni izrazi izkazujejo naslednjo porazdelitev. Pojavljajo se na položaju osebka kot negativno pogojeni večkratni izrazi NPI. Obstajajo trije tipi k nikalnosti usmerjenih izrazov: vprašalnice, števniki in

idiomatični izrazi. V sestavljenih stavkih vprašalnice zaustavijo oddaljeno pridobivanje, medtem ko ga števniki in idiomatski izrazi ne.

Ključne besede: k nikalnosti usmerjeni izrazi; minimalistični pristop; preverjanje značilnosti; lestvica števnikov; s-poveljevanje

1   Introduction

This paper discusses the syntactic description of Negative Polarity Items (NPI) in Telugu, a Dravidian language. An NPI usually requires a negative licensor as discussed in several studies such as Lasnik (1972), Linebarger (1980), and Laka (1989), Progovac (1994) among others. Some argue for overt licensing involving NPIs (Lasnik, 1972; Kumar, 2006) whereas others argue for licensing at some other level such as Logical Form (LF) (Line Barger, 1980; Laka, 1989; Mahajan, 1990; Progovac, 1994; Balusu et al., 2016). This paper aims at providing a unified account of licensing conditions of NPIs in Telugu, specifically wh-elements (wh-NPI), quantifiers (q-NPI) and idiomatic expressions (i-NPI), in negative & non-negative contexts and in local & long-distance licensing contexts by adopting Kumar's (2006) analysis which is further modified into a minimalist-based approach. In order to depict feature checking between negation and NPI, we adopt operation Agree (Chomsky, 2000) and scalar reasoning (Chierchia, 2013; Nicolae, 2012).

The organization of the paper is as follows: section 2 discusses the basic structure of negation and affirmation; section 3 discusses the structural distribution of wh-NPIs, q-NPIs and i-NPIs; NPI in subject position; the occurrence of multiple NPIs, the complement clauses exhibiting restriction on long-distance licensing of NPIs; NPIs in non-negative contexts; section 4 illustrates the quantificational structure of NPIs; section 5 describes licensing conditions of NPIs; section 6 is conclusion.

2   Structural description of negation and affirmation

The morphological and syntactic description of negation and affirmation is necessary, since they play a significant role in restricting the distribution of NPIs in Telugu. The discussion is elaborated below.

In Telugu, the morphological structure of sentential negation varies in verbal predicate with a content verb as in (1a) and a non-verbal predicate such as an existential verb as in (1b). In every construction including (1a) and (1b), the negation always precedes the agreement marker. Where the agreement marker also functions as a finiteness marker in Telugu. In the case of the verbal predicate as in (1a), the negative marker *lē* occurs as a bound morpheme suffixed to the main verb except in the case of the verb with future tense. In future tense, an overt form of negative marker is absent. Therefore, we assume that the negative marker occurs in the same position

as in past and present tense and we indicate its presence with ø 'a zero morpheme'. There are various negative markers such as *-vaddu, -kūḍadu, -a-, -aka-, -akunḍā/-kunḍā, -aku-, lē-* and *ani-* (Krishnamurti & Gwynn, 1985). These markers occur in different contexts and they follow the main verb similar to the marker *–le*. In the case of non-verbal predicate as in (1b), the negative occurs as a fusional morpheme, when the verb is in the present or the past tense. By fusional morpheme, we mean that the verb functions both as negation as well as copula. However, in future tense, it occurs as a bound morpheme suffixed to copula *un-* 'be'. In (1a) and (1b) the past tense and the present tense morphemes are homophonous.[1]

1a. rāmu rā-**lē**-du/ rā-**lē**-du/ rā-ø-ḍu
Ramu come-PRES.**NEG-**3.SG.N/come-PST.**NEG-**3.SG.N/come-FUT-**NEG-**3.SG.N
'Ramu does not come. / did not come. / will not come.'

1b. rāmu inṭi-lo   **lē**-ḍu/ **lē**-ḍu/ unḍ-**a**-ḍu
Ramu house-LOC be.PRES.**NEG-**3.SG.M/be.PST.**NEG-**3.SG.M/be-FUT.**NEG-**3.SG.M
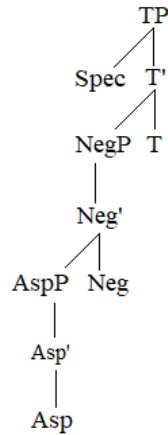'Ramu is not at home./ was not at home./ will not be at home.'

Lahiri (1998), Kumar (2006) and Bhattacharya (2012) show that the element that occurs as an NPI also occurs in certain non-negative contexts. In section (3.5), (non-)negative contexts show that the morphological structure corresponding negative contexts never occur with a non-negative contexts. In contrast, the morphological structure corresponding non-negative contexts never occurs in a negative context. The point to be noted is that the variations correspond to the functional categories such as negation and affirmation. Therefore, the formal negation and affirmation play a role in determining the type of NPI. Before moving on to how the functional categories license NPIs, we describe the syntactic representation of negation and affirmation in a tree structure. In a syntactic representation, similar to the previous studies such as Pollock (1989)**,** Chomsky (1991), Mahajan (1990), Kumar (2006), Laka (2016), the negative heads

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[1] The tense being past or present can be proved by positing the time adverb *ninna* 'yesterday' or *ippuḍu* 'now' in (1a) and (1b). In the presence of *ninna* 'yesterday', the verb exhibits past tense. In contrast, in *ippuḍu* 'now' occurs in (1b), then the verb indicates present tense.

i a. rāmu {ninna/ippuḍu}   rā-**lē**-du
Ramu {yesterday/now}   come-{PST/PRES}**.NEG-**3.SG.N
'Ramu did not come yesterday.'/'Ramu will not come now.'

ii b. rāmu {ninna/ippuḍu} inṭi-lo   **lē**-ḍu
Ramu {yesterday/now} house-LOC be-{PST/PRES}.**NEG-**3.SG.M
'Ramu was not at home yesterday.'/'Ramu is not at home now.'

its own phrase called NegP and the NegP projects below TP and above AspP, located in the functional domain as in (2).

2. Position of negation in a tree structure:

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                    TP
                  /  |
               Spec  T'
                    /|
                 NegP T
                   |
                 Neg'
                  /|
             AspP  Neg
               |
             Asp'
               |
             Asp
```

In the case of affirmation in the non-negative contexts, we adopt Laka's (2016) analysis, where the affirmation heads its own syntactic projection called an Affirmative Phrase (AffP) and it occurs in place of NegP. Morphologically, there is no overt marker for affirmation in Telugu, hence we posit a zero morpheme exactly in the same position where a negative morpheme occurs in a negative clause. Now, in the following section, we discuss the structural description of NPIs in Telugu by comparing it with English and Hindi.

3   Structural description of NPIs

In this section, we demonstrate the variations and restrictions of NPIs occurring in different types of clauses. The structural variations that we discuss in this section help us understand the licensing conditions of NPIs. We observe the structure of Telugu by comparing it with Hindi and English. Such comparison among languages belonging to three different language families helps us to identify the location of the licensing conditions in the clause structure.

3.1   Description of three types of NPIs

In line with Lahiri (1998), Kumar (2006) and Balusu et al. (2016) the NPIs are attached with a particle indicating 'even'. In Telugu, the particle is *kūḍā* or the final vowel lengthening. The root of an NPI can be a wh-element, quantifier or an idiomatic expression similar to Hindi as in (3), (4) and (5). To the best of our knowledge, we do not find a wh-element and a quantifier as NPIs in English. However, English has idiomatic expression as in (5c).

3a. *Telugu*
    rāmu **evvarini-i**   {avamāmāninc-a-lē-ḍu/*avamāmāninc-ā-ḍu}
    Ramu **wh-even.NPI** {insult-PST-NEG-3.SG.N/insult-PST-3.SG.N}
    'Ramu did not insult anyone.'

3b. *Hindi[2]*
    rāmu ne   **kisī kā bhī**   apmān {nahĩĩ kiyā thā/ *kiyā thā}
    Ramu erg **wh even-NPI** insult   {not do PST.SG/ do PST.SG}
    'Ramu did not insult anyone.'

4a. *Telugu*
    rāmu **okkarini kūḍā**   avamāninca-lē-ḍu/avamāninc-ā-ḍu
    Ramu **one person even.NPI** insult-NEG.PST-3.SG/ insult-PST-3.SG
    'Ramu did not insult anyone.'
    Literally: 'Ramu did not insult one person also'

4b. *Hindi-Urdu*
    rāmu ne   **ēk vyakti ka bhī**   apmān nahi kiyā thā/ *kiya thā
    Ramu erg **one person gen even.NPI** insult   not do PST.SG/ do PST.SG
    'Ramu did not insult anyone.'
    Literally: 'Ramu did not insult one person also'

5a. *Telugu*
    nēnu nī-ku **cilli gavva kūḍā**   {ivv-a-nu/*ist-ā-nu}
    I   you-to **single penny even.NPI** {give-NEG.PST-3.SG/*give-PST-3.SG}
    'I will not give a single penny to you.'

5b. *Hindi[3]*
    mẽ tum-kō **ēk phūṭi kauṛī**   {nahĩĩ dū-ngā/ *dū-ngā}
    I   you-dat **one broken penny.NPI** {NEG give-FUT.1.SG.M/ give-FUT.1.SG.M}
    'I will not give you a red cent.'

5c. *English*
    He did not save **a single penny**.
    (Ladusaw, 1983, p. 382; as cited in Ramachandram, 1991, p. 13)

3.2   Occurrence of NPI in subject position

Below are the constructions exhibiting the NPI in subject position. Both in Telugu and Hindi, all the three types of NPIs can occur in subject position as in (6a) and (6b). In English, the NPI *anyone* cannot occur in subject position as in (6c), since it cannot be licensed by structurally lower negation (Chierchia, 2013, p. 62).

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[2] Personal communication with Dr. Devleena Chakravarty, Ph.D.

[3] Kumar (2006).

6a. *Telugu*
    ēmī/okkaṭi kūḍā/cilli gavva kūḍā lē-du
    wh-NPI/q-NPI/i-NPI   be.PRES.NEG-3.SG.NH
    'There is nothing.'

6b. *Hindi*
    kōi bhī/ ēk bhī/ ēk phūṭi kauṛī nahī̃ hẽ
    wh-NPI/q-NPI/i-NPI   not   be.PRES.SG
    'There is nobody.'/ 'Not even one person is there.'/
    'Even a single penny is not there.'

6c. *English*
    ***Any** student didn't respond well. (Chierchia, 2013, p. 62)

3.3   Occurrence of Multiple NPIs

Below are the constructions with multiple NPIs licensed by a single negative licensor. In English as in (7a), the negative *not* licenses the NPI such as *anybody, anything*; in Hindi as in (7b), the negative *nahī̃* licenses the NPIs *kōi bhī* 'anybody', *kahī* 'anywhere' and in Telugu as in (7c), the negative *-lē* licenses the NPIs *evarū* 'anyone', *ekkadikī* 'anywhere'. Note that i-NPI cannot occur as multiple NPIs.

7a. *English*
    He didn't give **anybody anything** at **any** place at **any** time.
    (Kuno & Whitman, 2004, p. 225)

7b. *Hindi*
    kōi bhī   kahī   nahī̃ Gayā
    who even.NPI somewhere.NPI not   go-PST.3.SG.M
    'Nobody went anywhere.'

7c. *Telugu*
    evarū   ekkadikī   vell-a-lē-du
    who.even.NPI anywhere.NPI go-PST-NEG-3.SG.N
    'Nobody went anywhere.'

3.4   Structural restrictions of NPIs in various complex sentences

In this section, we discuss the distribution of NPIs occurring in three types of complex sentences: adjunct clauses, complex NPs and complement clauses. Based on the structural restrictions in complex sentences, we classify the q-NPIs and i-NPIs as non-strict NPIs and wh-NPIs as strict NPIs. A strict NPI is the one which does not permit long-distance licensing and in contrast, non-strict NPI does. The data where a negation locally licenses NPI do not exhibit any particular variations. Therefore, we show the

data with clause-mate negative licensing in the appendix D for the sake of brevity. The restrictions relating to long-distance licensing are further elaborated below.

In (8) and (9), the NPI occurs in the embedded clause and the negation *-lē-* in the matrix clause depicting long-distance licensing. The constructions show ungrammaticality, since the adjunct clause and the complex NP function as syntactic islands. That is, the negation in the matrix clause cannot license the NPI in the embedded clause.

1. NPIs in adjunct clauses

8a. *rāmu ikkaḍiki **[evari-kī**   cepp-i] rā-**lē-**du
     Ramu here   **whom-with.evenNPI** tell-CPM come-**NEG**-3.SG.NM
     '*Having telling anyone, Ramu did not come here.'

8b. *rāmu **[koncem kūḍā** tin-i]   paḍu-ko-**lē-**du
     Ramu **little even.NPI** eat-CPM sleep-SELFBEN-**NEG-**3.SG.NM
     *'Having eaten little also, Ramu did not sleep.'

8c. *rāmu ikkaḍiki **[cilli gavva**   unḍi] rā-**lē-**du
     Ramu here   **single penny.NPI** having come-**NEG**-3.SG.NM
     *'Ramu did not come here with single penny.'

2. NPIs in complex NPs

9a. **[evvarū**   vāḍina] katti] nī daggara **lē-**du
     who.even.NPI used   knife you with   be**.NEG-**3.SG.NM
     *'The knife which is used by anyone is not with you.'

9b. **[koncem kūḍā** panḍina panḍu] pullagā   **lē-**du
     little even.NPI ripen   fruit   sour-adjl be**.NEG-**3.SG.NM
     *'The fruit which ripened at all, is not sour.'

9c. **[cilli gavva   kūḍā**   unna] nī-ku]   lāṭarī   tagala-**le-**du
     single penny even.NPI have   you-DAT lottery get-PST.**NEG-**3.SG.NM
      *'You who have a single penny, did not win a lottery.'

The complement clause as in (10a) shows that a wh-NPI *evaru.u* exhibiting long-distance licensing leads to ungrammaticality as in (10a). The ungrammaticality is because the embedded clause functions as a syntactic island blocking the long-distance licensing. In contrast, q-NPI *konni-kūḍā* and i-NPI *cilli gavva kūḍā* exhibit long-distance licensing as in (10a) and (10b). Due to the possibility of long-distance licensing, q-NPIs and i-NPIs are non-strict.

3. NPIs in complement clauses

10a. ***[[[evaru.u**   unn-ā-ru]   ani]   nēnu anukō-**lē**-du]
who.even.wh-NPI be-PRES-3.PL.H COMP   I   think-PST.**NEG**-1.SG.NM
'I did not think that there is anybody.'

10b. **[[[konni kūḍā**   unṭ-ā-yi]   ani]   nēnu anukō-**lē**-du]
few-even.q-NPI be-PRES-3.PL.H COMP   I   think-**NEG.PST**-3.SG.NM
'I did not think that there can be few also.'

10c. [[[nī daggara **cilli gavva kūḍā**   un-ṭun-di]   ani]   anukō-**lē**-du]
you with   **single penny even.i-NPI** be-PRES-3.SG.NM COMP think-**NEG.PST** -1.SG.NM
'I did not think that you will be having a single penny also.'

3.5   Occurrence of an NPI in non-negative contexts

The previous studies such as Lahiri (1998), Kumar (2006) and Bhattacharyya (2012) among others discuss the occurrence of NPIs in non-negative contexts such as yes/no question, conditional, imperative, generic, modal of possibility and adversative predicate. The data in the studies mentioned above shows that the morphological composition of NPI is identical in negative as well as in non-negative contexts as in (11) and (12). For example, the NPI in the presence of negation is *any* or *kisii bhii* as in (11) and the NPI in the non-negative context will also be *any* or *kisii bhii* as in (12) (for NPI in non-negative constructions in Hindi see Kumar (2006)). However, Telugu being morphologically rich language, NPIs in non-negative contexts as in (13)–(18) are morphologically different from the one in the presence of overt negation. That is, the NPI is attached with *kūḍā* 'even' in the presence of a sentential negation and in contrast, NPI is attached with *ainā* 'at least' in non-negative context. In the following section, we demonstrate the quantificational restrictions of NPI in non-negative context (NPI-*ainā* hereafter) and the NPI in the presence of overt negation (NPI-*kūḍā* hereafter) and we also describe a correlation at the level of semantic configuration between both the types of NPIs.

11. *Hindi-Urdu*
maiN-ne kisii bhii sTuDeNT ko nahiiN dekh-aa
I-ERG   any.NPI student to   NEG   se-PERF
'I did not see any student.' (Kumar, 2006, p. 109)

12. *Hindi-Urdu: Yes/No Question*
aap-ne   kisii bhii   sTuDeNT ko dekh-aa (kyaa)
you-ERG some even student to   see-PERF what
'Did you see any student?' (Kumar, 2006, p. 111)

13. *Telugu: Yes/No Question*
    ā rūm lo   **evar(u)-ainā** unn-ā-r(u)-ā?
    that room in **who-at least** be-PST-3.PL.H-INT
    'Is anybody there in that room?'

14. *Telugu: Conditional*
    okavēla ā gadilō-ki   **evarainā**   vaste, nēnu nī-ku   cept-ā-nu
    if   that room-in **who at least** come, I   you-to tell-PST-3.SG
    'I will let you know, if anybody comes into the room.'

15. *Telugu: Imperatives*
    ēdainā   tinu
    which at least eat-3.SG
    'Eat anything.'

16. *Telugu: Generics*
    yē pilli ainā   eluka-ni vēṭāḍu-tun-di
    any cat at least rat-ACC   hunt-GEN-3.SG.N
    'Any cat hunts a rat.'

17. *Telugu: Modals of Possibility*
    evvarainā   ī tēbl ni   etta-galugutā-ru
    who at least this table ACC lift-poss-3.PL.H
    'Anyone can lift this table.'

18. *Telugu: Adversative Predicates*
    nuvvu **ēdainā**   ceppāvaṇṭe nā-ku āscaryangā un-di
    you   **who.atleast**   tell   I-DAT surprising be.PRES-3.SG.NM
    'I am surprised that you told anything to the police.'

Summing up the discussion in this section, Telugu differs from English, where the NPI can occur in subject position in Telugu. In English, Hindi and Telugu, negation licenses multiple NPIs. The complement clauses in Telugu, wh-NPIs are strict NPIs since as they do not allow long-distance licensing. In contrast, q-NPIs & i-NPIs function as non-strict NPIs since they allow long-distance licensing. The NPI in the negative context and in the non-negative contexts show morphological variations. In the following discussion, we claim that NPI-*ainā* and NPI-*kuḍā* are counterparts of a single type of NPI.

4   Semantic description of NPIs: an alternative-based structure

In this section, we discuss the quantificational restrictions of NPIs by adopting analyses of Chierchia (2013) for NPI-*kuḍā* and Nicolae (2012) for NPI-*ainā*. Chierchia's analysis of NPIs provides an answer to the question, "Why the class of NPI licensors is semantically uniform and why NPIs have the shape they do?" The analysis takes place

through the process of feature checking, where the negation is the goal and the NPI is the probe. The probe inherently has a scale with active quantificational alternatives arranged over it, where the alternative to the right entails the alternative to the left. For example, if the scale is *<one, two, three…>*, *two* entails *one.* The scale functions as the uninterpretable feature of the probe, in other words [uNEG]. Negation which is the goal consists of negative features which function as the interpretable features such as the [iNEG]. In line with Lahiri's (1998) analysis of NPIs, the emphatic operator is associated with a low-point element in a scale and this point functions as semantically the strongest alternative. Strongest alternative, in the sense, it functions as threshold, where no other alternatives further entails it. For example, *ēk bhī* 'any.NPI' as in (19) has *ēk,* indicating the numeral 'one', which is a low-point on the active alternative scale. This low-point functions as a strongest alternative, in which case, anything that is entailed within *ēk* are counted. Since the alternatives entailed in *ēk* is zero alternatives, *ēk bhī* in a negative context indicates 'no individuals'.

19. **ēk bhī**   ādmī   nahī̃   āyā
    any.NPI   man   not   came
    'No man came.' (Chierchia, 2013, p. 156)

This procedure of selecting the lowest point in the scale and making it semantically strongest is called scale truncation. In other words, the alternative that functions as a threshold is considered the *least* likely alternative and only those alternatives lesser than the threshold are active. The entire process mentioned above occurs only in downward-entailing context.

Nicolae (2012) provides an alternative-based semantic account of PPIs. The analysis lays a connection between a PPI and an NPI. In this analysis, the super-domain alternatives are active in a PPI. That is, the alternatives which entail the emphasized alternative are counted. For example, in the scale *<one, two, three…>* if we suppose that *two* is the emphasized alternative, any numeral entailing *two* is a super-domain*.* In other words, any numeral greater than or equal to *two,* which are *<two, three…>* are considered to be a part of the super-domain. Such activation of super-domain occurs in upward-entailing context only. In contrast, the sub-domain alternatives are active in the case of NPI. For example, in the scale *<one, two, three…>* if *two* is the emphasized alternative, then the sub-domain would be anything that *two* entails. Hence, the sub-domain includes *one*, since *two* entails *one*. We make a modification to Nicolae's analysis, where we apply the PPI's analysis to NPI-ainā. Further, we do not call NPI-ainā as PPI, since the context is semantically negative, even if it is morphologically/ syntactically affirmative.

The application of Chierchia (2013) and Nicolae (2012) to NPIs in Telugu has the following results. Recall that NPI-*kūḍā* is a counter-part of NPI-*ainā* and the evidence is shown at the morphological level in constructions with non-negative context. We claim

a similar correlation of NPI-*kūḍā* and NPI-*ainā* at semantic level as well. The discussion is elaborated below. The NPI-*kūḍā* and NPI-*ainā* possess an inherent neutral element and we label it as a Polarity Item (PI), which is identical to both NPI-*kūḍā* and NPI-*ainā.* By identical, we mean that the PI has a quantificational scale with active alternatives arranged in a linear, incremental order, where the alternative on the right entails the alternative on the left and one among the alternatives is an emphatic alternative, where it functions as a threshold/mid-point. The quantification on the scale is restricted, consequent to the negation/affirmation influencing the PI. Note that the particle *kūḍā* or *ainā* realizes only following the feature checking depending on what type of restriction exists on the scale. In the case of an NPI-*kūḍā*, due to the influence of the overt negation, the sub-domain alternatives remain active and the super-domain alternatives are cancelled. In the case of NPI-*ainā*, due to the influence of the overt affirmation, the super-domain alternatives are active and the sub-domain alternatives are cancelled. The NPI-*kūḍā* and NPI-*ainā* are related at semantic level also. That is, the structure of alternatives that we demonstrated for NPI-*ainā,* consistently occurs in all the non-negative contexts as in (15)–(18).

Summing up the discussion above, we illustrated the quantification structure of NPIs in Telugu based on the alternative-based semantic analysis by adopting Chierchia (2013) and Nicolae (2012). The NPIs inherently possess a neutral element which has a scale with active alternatives. Due to the influence of a negative or affirmative features, the neutral element undergoes cancellation of certain active alternatives depending on the type of NPI. Similar to the correlation at the morphological level, NPI-*kūḍā* shows a correlation with NPI-*ainā* at their semantic level also, where the NPI-*ainā* consistently shows active super-domain alternatives in all the non-negative contexts. NPI-*kūḍā* has active sub-domain alternatives, NPI-*ainā* has active super-domain alternatives. We discuss the feature checking of NPIs along with their licensing conditions in the following section.

5   Licensing conditions of an NPI

In this discussion, we demonstrate an analysis which is a combination of syntactic and semantic operations. We compare previous studies such as Mahajan (1990), Chomsky (1995), Kumar (2006) and we conclude that Kumar's analysis of c-commanding best suits NPIs in Telugu. In addition to Kumar's analysis, we adopt the Chomsky's (2000) feature checking similar to operation Agree and also Chierchia's quantificational restriction. The analysis is elaborated below.

Mahajan (1990) states that the negative licenses the NPI at the level of LF, where the negative moves to a position higher than the NPI, adjoining the finite IP so that the negative c-commands the NPI. Mahajan's analysis encompasses the fact that the

negation c-commands the NPI. However, the analysis may not be suitable for Telugu, particularly for construction depicting long-distance licensing as shown in (20).

20. **lē**ᵢ   **[evarinī]**ᵢ   [s1[s2 rāmuⱼ ikkaḍa **t**ⱼ cūḍa-**t**ᵢ-du s2]   ani]   sītaᵢ
    neg who even.NPI   Ramu here   see-**NEG**-3.SG.NM] comp Sita
    cepp-in-di s1]
    tell-PST-3.SG.NM]
    'Sita said that Ramu did not see anyone here.'

In (20), the NPI and the negative base-generate within the embedded clause and the NPI is scrambled out of its position. Under Mahajan's analysis the negation moves and it adjoins the finite IP at LF in a way that the negative c-commands the NPI. However, the adoption of Mahajan's analysis has the following problems: a. there is no limit to the number of heads moving. b. The movement of the negation is long-distance i.e. it moves from the embedded clause to the left of the finite IP. Such movement is a violation of head-movement constraint. c. The negation cannot move above the adjoined NP, since the adjunction functions a barrier for movement. d. Before the movement, the negative only negates the embedded clause. However, after the movement of the negative, to form an adjunct of a finite IP, the negative negates the entire sentence, that is, the embedded and the matrix clause. As a result, it is a violation of the structure preserving principle, since there is a change in the scope at PF and LF.

Chomsky's (1995) reconstruction states that the NPI is reconstructed at a lower position, so that the negative c-commands the NPI. However, the analysis may not be suitable for analysing NPIs in Telugu.

21. *Surface Structure*
    [[sītaᵢ tīsin-a   yē fōṭō kūḍā]ⱼ   tanakiᵢ nacc-alēdu ani]   rāmu
    Sita   take-ADJL Photo even.NPI her   like-not   COMP Ramu
    cepp-ā-ḍu   tⱼ
    tell-PST-3.SG.M
    'Ramu said that she does not like any photograph that Sita took.'

22. *Logical Form*
    *eⱼ tanakiᵢ nacc-alēdu ani   rāmu cepp-ā-ḍu   [sītaᵢ tīsin-a
       her   like-not   COMP Ramu tell-PST-3.SG.M Sita take-ADJL
    yē fōṭō kūḍā]ⱼ
    Photo even.NPI
    'Ramu said that she does not like any photograph that Sita took.'

In (21) and (22), we find that *sīta tīsin-a fōṭō* 'the photograph which is taken by Sita' is scrambled to sentence initial position, in a way that *sīta,* a referential expression c-commands *tanaki* 'to her', a pronoun. However, when the scrambled element is reconstructed at the level of LF, then *tanaki* wrongly c-commands *sīta.* We consider it 'wrongly c-commanding' in (22), since *sīta,* a referential expression is supposed to be

free everywhere. Further, not all NPIs occur in a scrambled position. This method of reconstruction may not be applicable for NPIs which are not scrambled.
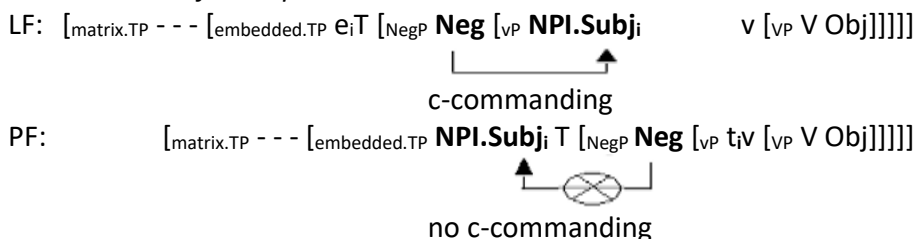
Kumar's (2006) analysis of Hindi can be applied to NPIs in Telugu, since the problems that arose due to the application of the analyses mentioned above, do not arise in this analysis. Further, the analysis is suitable to account for strict NPIs, non-strict NPIs, multiple NPIs and NPI in subject position in Telugu and Hindi as discussed in sections 3. Kumar's analysis states that the negative licenses the NPI at Deep Structure prior to movement at Surface Structure. Since the structure of Telugu is similar to Hindi, we adopt the analysis to account for NPIs in Telugu, where the negative licenses the NPIs at the base-generated position itself. Hence, even if the NPIs move out of their positions for achieving further operations such as Case and Agreement, they do not lose the negativity of the NPIs.

In order to license an NPI, the negative c-commands an NPI-*kūḍā* and an affirmative c-commands a NPI-*ainā*. Hoeksema (2000) provides evidence that more than c-commanding, it is the scope of negation and negative operators that license an NPI. However, we claim that the negative obligatorily c-commands the NPI at the level of LF. In order to prove our claim, we first illustrate how the strategy of c-commanding operates, when the NPI is the subject of a clause with a local negative licensor. Further, an illustration of an ungrammatical construction is provided, where the NPI occurs outside the c-commanding domain of the negative at the level of LF. The illustration is elaborated with the help of complex sentences below.

The construction in (23) has a structure depicted in (24), where the negative c-commands the NPI, prior movement to subject position. The operations do not lead to ungrammaticality.

23. [akkaḍa **okkaḍu kūḍā   lē-**ḍu]   ani   anukunn-ā-nu
    there   **one person even.NPI NEG-**3.SG.M COMP think-PST-1.SG
    'I thought that there is nobody.'

24.   *Structure of example 23:*
    LF: [$_{matrix.TP}$ - - - [$_{embedded.TP}$ e$_i$T [$_{NegP}$ **Neg** [$_{vP}$ **NPI.Subj$_i$**   v [$_{vP}$ V Obj]]]]]
                              └────────────┐
                                    c-commanding
    PF: [$_{matrix.TP}$ - - - [$_{embedded.TP}$ **NPI.Subj$_i$** T [$_{NegP}$ **Neg** [$_{vP}$ t$_i$v [$_{vP}$ V Obj]]]]]
                              ┌──⊗──┐
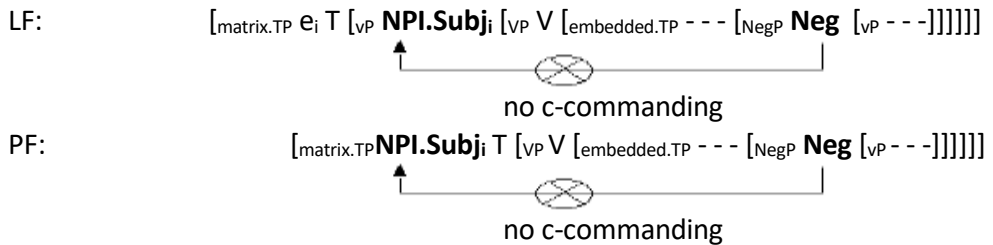   no c-commanding

Now, we demonstrate how the occurrence of an NPI outside the c-commanding domain of negation at the level of LF leads to ungrammaticality. The construction in (25) has a structure depicted in (26), where the negative does not c-command the NPI, both at LF and PF. If we compare the LF in (24) and the LF in (26), we notice that the c-commanding strategy exists in (23) which is the structure of a grammatical sentence.

Based on the correspondence between grammaticality and c-commanding in (23), we claim that the strategy of c-commanding is a necessary condition for the sentence to be grammatical. We further state that c-commanding also exists in licensing an NPI-*ainā*, where an affirmative licenses it, at the base-generated positions prior to movement for further operations.

25. *[akkaḍa **lē-**ḍu]   ani   **okkaḍu kūḍā** anukunn-ā-nu.
    there   **NEG-**3.SG.M COMP **anyone.NPI** think-PST-1.SG
    'I thought that there is nobody.'

26.   *Structure of example 25:*
    LF: $[_{matrix.TP}$ e$_i$ T $[_{vP}$ **NPI.Subj**$_i$ $[_{VP}$ V $[_{embedded.TP}$ - - - $[_{NegP}$ **Neg** $[_{vP}$ - - -]]]]]]

                        no c-commanding
    PF: $[_{matrix.TP}$**NPI.Subj**$_i$ T $[_{vP}$ V $[_{embedded.TP}$ - - - $[_{NegP}$ **Neg** $[_{vP}$ - - -]]]]]]

                        no c-commanding

However, c-commanding is not the only condition that is required to license NPI. If we adopt c-commanding as the only condition, the negation wrongly licenses every element that occurs in the c-commanding domain. In addition to c-commanding, the NPIs must have two more properties inherently such as, an active alternative scale and *ainā* 'epistemic *at least*'. These two properties play a role in feature interaction with their respective licensors. Feature checking takes place between negation & NPI-*kūḍā* and affirmation & NPI-*ainā*. Prior to the feature checking the NPI remains a neutral item as discussed in section 4. Below, we provide the feature composition that leads to the realization of different types of NPIs. In the configuration mentioned below, the properties on the left hand side together form either NPI-*kūḍā* or the NPI-*ainā* mentioned on the right hand side. The licensor identifies that an element is a NPI, by checking the active alternative scale inherent to the NPI. Further, the NPI takes the morphological realization based on the function of the particle, which is inherently present in it. A schematic representation of feature checking is provided in (27).

27. Before: $[_{NegP}$ Neg$_{[iNeg]}$ $[_{vP}$ NPI.Subj$_{[u-Neg]}$ v $[_{vP}$ V NPI.Obj$_{[u-Neg]}$]]]
    After: $[_{NegP}$ Neg$_{[iNeg]}$ $[_{vP}$ NPI.Subj$_{[u-Neg]}$ v $[_{vP}$ V NPI.Obj$_{[u-Neg]}$]]]

In the case of NPI-*kūḍā,* the PI with the scale and the feature of emphatic 'even', checks its uninterpretable features with its goal, which has interpretable negative features, resulting in NPI-*kūḍā* as in (a). In the case of NPI-*ainā,* the PI with the scale and feature of epistemic *at least*, checks its uninterpretable features with its goal, which has interpretable affirmative features as in (b).

a. PI + negation + scale + inclusiveness feature → sub-domain alternatives of the threshold are active → NPI-*kūḍā.*

b. PI + affirmation + scale + epistemic feature → super-domain alternatives greater than or equals to the threshold are active → PPI-*ainā*.

Summing up the discussion in this section, adopting Kumar (2006), we state that the negative/affirmative licenses the NPI vP-internally at the level of LF. Consequent to their occurrence in a c-commanding domain of the licensor, the polarity-sensitive items undergo feature checking, where the negative/affirmative function as the goal and the NPI as the probe. The probe is a neutral item with uninterpretable features such as the active alternative scale, along with one of the functions such as epistemic *at least,* dubitative or emphatic properties. Further, a goal is either an affirmative licensor or a negative licensor. In the process of feature checking, the probe checks its uninterpretable features with the interpretable features of the corresponding goal. As a result, the PI which is a neutral item morphologically realizes into NPI-*kūḍā* or NPI-*ainā*.

6   Conclusion

In this paper, we described in detail, the distribution of NPIs followed by the analysis of licensing conditions. The distribution of NPIs covers the following. There are three types of elements that occur as the root of the NPIs: wh-elements (wh-NPI), quantifiers (q-NPI) and idiomatic expressions (i-NPI). When these elements occur in complement clauses, wh-NPIs function as strict NPIs, since they disallow long-distance licensing. In contrast, q-NPIs and i-NPIs function as non-strict NPIs, since they allow long-distance licensing. The NPIs occur in subject position, unlike English. Further, multiple NPIs can occur in a single clause. We notice that the NPI in the non-negative contexts possess a morphological structure different from the NPI in the presence of overt negation. It is NPI-*ainā* in the non-negative contexts which is the counterpart of NPI-*kūḍā* in the negative contexts. The evidence for such correlation between NPI-*ainā* and NPI-*kūḍā* is based on the consistent occurrence of *ainā* 'at least' attached to the NPI in every non-negative construction. Further, a similar kind of consistency is noticed at the semantic level, where NPI-*ainā* in every non-negative context depict activation of super-domain alternatives. Based on the distribution of the NPIs mentioned above, we illustrated that the negative/affirmative licenses NPI-*kūḍā/ainā*, when the NPI base-generate at vP-internal positions at LF, prior any type of movement for Case/Agreement. Parallel to c-commanding, the polarity-sensitive items undergo feature checking. The negation/affirmation is the goal with negative/affirmative interpretable features. The polarity-sensitive item prior to feature checking is a neutral item (PI), a probe, which has uninterpretable features: active alternative scale and one of the functions such as emphatic *even* or epistemic *at least*. This scale is the main

feature that distinguishes the polarity-sensitive item from other element in the c-commanding domain. It is the function of the particle, inherently located within the polarity item, which is also responsible for the type of NPI. In feature checking, the probe checks its uninterpretable features with the interpretable features of the goal, as a result, the NPI is realized into NPI-*kūḍā* or NPI-*ainā*.

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APPENDIX A

A list of quantifiers

The following list shows quantifiers attached with particle indicating 'even'. The non-occurrence of a particle with the quantifier is depicted with '*'.

Table A1: Universal Quantifiers

Telugu	Gloss
andaru-u; *andaru-kuḍā/*antamandi.i; antamandi-kuḍā	that many people even [+human]
anni.i/anni-kuḍā	that many even [-animate][+countable']
*anta.a/anta-kuḍā	that much even [-animate][-countable']

Table A2: Existential quantifiers

Telugu	Gloss
*kondaru.u; kondaru kuḍā/kontamandi.i; kontamandi kuḍā	few people even [+human]
konni.i/konni kuḍā	few things even [-animate][+countable']
*koncemu.u; koncem kuḍā/*konta.a; konta kuḍā	little even [-animate][-countable']

APPENDIX B

A list of numerals

The following list shows numerals attached with particle indicating 'even'. The non-occurrence of a particle with the quantifier is depicted with '*'.

Table B1: Cardinal numerals with [+human] feature

Telugu	Gloss
okkaḍu.u; okkaḍu kuḍā	one person even
iddaru.u; iddaru kuḍā	two persons even

Table B2: Cardinal numerals with [-human] feature

Telugu	Gloss
okaṭi.i; okaṭi kuḍā	one even
reṇḍu.u; reṇḍu kuḍā	two even

Table B3: Ordinal numerals

Telugu	Gloss
modaṭidi.i/ modaṭidi kuḍā	first one even
reṇḍavadi.i/ reṇḍavadi kuḍā	second one even

APPENDIX C

A lists of wh-entities

The following list shows wh-elements attached with particle indicating 'even'. The non-occurrence of a particle with the quantifier is depicted with '*'.

Table C1: wh-entities

Telugu	Gloss
enduku.u; enduku kuḍā/dēniki.i; dēnikikuḍā	why even
ēmi.i; *ēmi kuḍā	what even
ekkaḍa.a; ekkaḍa kuḍā	where even
eppuḍu.u; eppuḍu kuḍā	when even
*ela.a; *elā kūḍā	how even
evaru.u; *evaru kūḍā	who even
ēvi.i/ *ēvi kuḍā	which ones even
ēdi.i/ ēdi kuḍā	which one even

APPENDIX D

The negation licenses the NPIs locally. All the three types of NPIs can be licensed by a local negative licensor. The NPIs do not show any particular variations in the structure when they are locally licensed. NPIs depicting long distance licensing in similar type of complex sentences show variations in the licensing conditions which is elaborated in section (3.4).

1. NPIs in adjunct clauses

   i a. rāmu   ikkaḍiki **[evari-kī**   cepp-**akunḍā**]   vacc-ā-ḍu
         Ramu here   **anybody-with.NPI** tell-**without.Neg** come-PST-3.SG.M
         'Ramu came here without telling anyone.'

   i b. rāmu **[koncem kūḍā**   tin-**akunḍā]**   paḍu-konn-ā-ḍu
         Ramu **little   even.NPI** eat-**without.Neg** sleep-selfben-PST-3.SG.M
         'Ramu slept without eating anything.'

   i c. rāmu ikkaḍiki **[cilli gavva   lēkunḍā]**   vacc-ā-ḍu
         Ramu here   **single penny.NPI without.Neg** come-PST-3.SG.M
         'Ramu came here without a single penny.'

2. NPIs in Complex NP

   ii a. **[evvarū**   vāḍ-**ani]** katti] nī daggara un-di
          anybody.NPI use-**neg** knife you with   be-3.SG.NM
          'The knife which is not used by anyone, is with you.'

   ii b. **[koncem kūḍā**   paṇḍ-**ani]** panḍu] pullagā   un-di
          little   even.NPI ripe-**neg** fruit   sour-adjl be-3.SG.NM
          'The fruit which did not ripen little bit also, is sour.'

   ii c. **[cilli gavva   kūḍā   leni]**   nī-ku]   lāṭarī   tagil-in-di
          single penny even.NPI not have you-dat lottery get/win-PST-3.SG.NM
          'You who do not have even a single penny, won a lottery.'

3. NPIs in complement clauses

   iii a. **[[[evarū   lē-**ru]   ani]   nēnu anu-konn-ā-nu]
          anybody.NPI be.PRES.**NEG-**3.PL.h comp I   think-selfben-PST-1.SG
          'I thought that there is nobody.'

   iii b. **[[[konni-kūḍā   lē-**vu]   ani]   nēnu anu-konn-ā-nu]
          few-even.NPI be.PRES.**NEG-**3.PL.NH comp I   think-selfben-PST-1.SG
          'I thought that there cannot be few also.'

   iii c. [[[nī daggara **cilli gavva kūḍā**   **lē-**du]   ani]
          you with   **single penny even.NPI** be.**NEG.**PRES-3.PL.NH comp
          anu-konn-ā-nu]
          think-selfben-PST-1.SG
          'I thought that you don't have a single penny also.'

Abbreviations

1	: first person
3/iii	: third person
ACC	: accusative
ADJL	: adjectivaliser
COMP	: complementizer
CPM	: conjunctive participle marker
DAT	: dative
DUB	: dubitative
EMPH	: emphatic
ERG	: ergative
F	: feminine
FUT	: future
GEN	: genitive
H	: human
INDEF	: indefinite
INF	: infinitive
LOC	: locative
M	: masculine
N	: neuter
NEG	: negative
NH	: non-human
NM	: non-masculine
PERF	: perfective
PL	: plural
PRES	: present
PST	: past
QP	: quotative particle
SELFBEN	: self-benefactive
SG	: singular