# Pronominal vs. anaphoric *pro* in Kannada

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Kannada licenses a pronominal *pro* and an anaphor *pro* in root and subordinate clauses. In the subordinate clauses, *pro*'s person feature largely determines its pronominal/anaphoric status. Accordingly, there are four types of pro, each with a distinct referential property. The 1st and 2nd person *pro*s allow pronominal and anaphoric interpretations. In their pronominal reference, they refer to the speaker and the listener, respectively. In their anaphoric reference, they refer to the matrix subject and the object, respectively, irrespective of the latter's person feature, which results in a feature mismatch between *pro* and its antecedent. The 3rd person *pro* allows only pronominal interpretation. Kannada quotative verbs report direct speech. The null subjects in the embedded clauses of reported speech are basically pronominal because they are 'copies' of the pronominal subjects in direct speech. Accordingly, the embedded verbal inflection corresponds to inflection in direct speech, which results in a feature clash between *pro* and its antecedent. The fourth type, a null anaphor, occurs in non-argument *endu*-clauses. It is bound by an NP in the matrix with which it shares its φ-features. It is the semantic relation between the non-argument and main clauses that explains the presence of an anaphoric *pro* here.

**Keywords:** *pro*, pronominal, feature clash, anaphor, Kannada

## 1. Introduction

In most studies on the *pro*-drop parameter, *pro* was characterized as a pronominal empty category based on evidence from European null subject languages. To my knowledge, *pro* as an anaphor was first proposed for Kannada in Sudharsan (1998, 2001) and subsequently for Marathi in Holmberg (2005). The *pro* phenomenon in Kannada is a very complicated one, with hardly any work done on it. This paper attempts to fill this gap by offering an account of *pro* in Kannada and show that it functions as a pronominal and as an anaphor as well, on par with PRO, the pronominal anaphor. I will show that *pro*, the null pronoun, and *pro*, the null anaphor, occur in mutually exclusive contexts.

The null subject (NS) phenomenon was first observed in Romance languages (with the exception of French) such as Italian and Spanish in which the *pro* subject in a finite clause, be it root or embedded, has a pronominal interpretation. Hence the characterization of *pro* as a null analogue of an overt pronoun. Here are examples from Italian, taken from D'Alessandro (2015):

(1) *(voi)*　*state*　*leggendo*　*un*　*libro*
　　you.PL　are　reading　a　book

(2) ___　*vai*　*al*　*mare?*
　　go.2SG　to the　sea

'Are you going to the beach?'

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(3)  ___   *sono*   *belle!*
               are.3PL   beautiful

       'They are beautiful.'

(4)  ___   *non*   *mangiamo*   *carne*
               not   eat.1PL   meat

       'We don't eat meat.'

(5)  *penso*   *che*   ___   *non*   *sappiano*   *parlare*
       think.1SG   that       not   can.3PL   speak

       'I think they can't speak.'

Here is a Spanish example, taken from Jaeggli & Safir (1989, p. 19):

(6)  *el/∅*   *dijo*   *que*   ∅   *mató*   *al*   *perro*
       he   said   that      killed   the   dog

       'He said that he/she killed the dog.'

In the above examples, the referential features of *pro* can be recovered from the verbal inflection. In example (1), *pro* is 2nd person plural, in (2) it is 2nd person singular, in (3) it is 3rd person plural, in (4) it refers to a 1st person plural pronoun, and in (5) the embedded subject *pro* is 3rd person plural. An overt pronoun in place of *pro* would also be perfectly grammatical in the above examples. English, on the other hand, does not allow a *pro* subject in the corresponding positions. Consider the following Italian example from Holmberg & Roberts (2010, p. 7):

(7)  *Il*   *professore*   *ha*   *parlato*   *dopo*   *che*   *(lui)*   *e*   *arrivat.*
       the   professor   has   spoken   after   that   (he)   is   arrived.

       'The professor spoke after he arrived.'

Holmberg and Roberts observe that the overt pronoun of the adjunct clause in (7) does not exhibit the ambiguity that its English counterpart does in its reference. In other words, the overt pronoun is disjoint from 'professor' whereas the pronoun in the English sentence ambiguously refers either to the professor or to someone else. They further observe that the difference between Italian and English in the interpretation of the overt pronoun is related to the fact that subject pronouns may be left unexpressed in languages such as Italian, that is, to the positive value of the Null Subject Parameter (NSP). So, they observe that the null subject in Italian is an analogue of the overt pronoun. Hence, the general view that *pro* is a pure pronominal empty category. I will show that in Kannada *pro* can be a pronominal and an anaphor as well both of which exhibit distinct properties and occur in different environments.

We noted that the referential content of pro in Italian examples discussed above can be determined by the verbal inflection in the sentence. But in null subject languages (NSLs) like Japanese, Chinese, and Malayalam, the referential features of null subjects cannot be determined from the sentences in which the null subjects occur since these languages lack agreement inflection. In these languages the omitted pronoun can be recovered from the discourse only.

Besides, not all NSLs drop pronouns in all sentences. And some languages like German lack referential null subjects but they have only empty expletive subjects, corresponding to the overt 'it' or 'there' in English. So linguists have identified four types of NSLs on the basis of what kind of NSs they have and on the basis of how the referential features of null subjects can be determined. They are Consistent/Canonical null subject languages (CNSLs), Radical pro-drop languages, Partial NSLs, and Expletive NSLs.

In CNSLs, referential pronominal subjects of all persons can remain unexpressed in all tenses and they can be recovered from agreement inflection on the verb. So these are sentential null subjects. So consistent NSLs are consistently 'rich' in agreement inflection. For instance, languages such as Italian, Greek, Turkish, and Basque are 'rich agreement' languages.

In Radical or Discourse-oriented *pro*-drop languages, both subject and object NP can be null. These Radical *pro*-drop languages lack agreement inflection and the null pronouns are recovered from the discourse,

not from the verbal inflection. For example, Chinese, Japanese, Korean, Thai, and Malayalam are devoid of agreement inflection and are all Radical pro-drop languages.

In Partial NSLs, some referential pronouns can be dropped and some cannot be dropped. In Finnish, which is a partial NSL, only 1st and 2nd person pronouns can be dropped, but not the 3rd person pronoun. A 3rd person pronoun can be null in embedded clauses only if it is bound by a NP in the higher clause (Holmberg, 2005, p. 10). Russian is another Partial NSL and it has a null indefinite or generic subject.

Finally, in Expletive NSLs, only non-referential subjects can be null. German is an expletive NSL. In languages like English and French, null subjects are not allowed in finite clauses.

Earlier it was believed that rich agreement was mandatory for dropping pronouns. We have seen that languages like Japanese and Chinese lack agreement inflection but nonetheless they allow null subjects in finite clauses. Then what licenses null subjects? A brief discussion of some of the NS accounts would be in order here.

One of the earliest accounts of null subjects was by Borer (1986), in which she proposed what she called the I-subject hypothesis, which is as follows. The I-subject hypothesis states that there is no need to assume a null subject in the canonical subject position, i.e., Spec,IP, which means that the Spec,IP position does not get realized in NSLs. This is because Infl in NSLs has pronominal features and is itself assigned the subject theta-role. We are aware that there are NSLs such as Chinese and Japanese which lack agreement morphology and there are also NSLs which allow only non-referential (expletive) NSs. So Borer's I-subject hypothesis fails to accommodate these languages.

Jaeggli & Safir (1989) took an integrative approach to the NS phenomenon and proposed the Morphological Uniformity Hypothesis, which accommodates not only consistent NSLs like Italian and Greek but also Radical pro-drop languages like Chinese and Japanese. According to this hypothesis, NSs are allowed only in languages which possess a morphologically uniform inflectional paradigm. This means that languages must have rich agreement or no agreement at all in order to license NSs. In CNSLs like Italian, the verbal paradigm is uniformly rich and in Radical pro-drop languages, agreement inflection is uniformly absent. What this implies is that languages like English which lack a uniform inflectional paradigm cannot license NSs. This hypothesis, however, does not accommodate Partial NSLs like Finnish since these languages do have agreement inflection, though such agreement is not so rich.

So taking into account Partial NSLs like Finnish, Roberts (2010) makes a distinction between rich agreement and impoverished agreement which is crucial to the NS parameter. He observes that if agreement inflection is impoverished, then T lacks a D-feature, hence it does not allow deletion of the subject pronoun. Roberts' "impoverished" agreement hypothesis accommodates null subjects in partial NSLs.

Roberts (2010) proposes a deletion analysis of pro in consistent null subject languages within the framework of the Minimalist theory. Both Roberts (2010) and Holmberg (2005) depart from Borer's (1986) I-subject hypothesis and assume that there is an empty pronominal subject at Spec,IP position in null subject languages. Roberts (2010) assumes that in consistent NSLs like Italian, T is pronominal and that there is a D-feature in T which correlates with 'rich' agreement. Roberts (2010, p. 75, fn. 18) treats the D-feature on T as unvalued and that of *pro* as valued. He derives *pro*'s silent nature in the following way. The postulation of D-feature on T means *pro* counts as a defective Goal and its features are "properly included in T." Roberts defines a defective Goal this way (2010, p. 70):

(8)  A goal G is defective iff G's formal features are a proper subset of those of G's Probe P.

Besides, T has an EPP-feature which *pro* satisfies by raising to Spec, IP. Roberts observes that defective goals never have PF realization. Central to Roberts' account is the view that *pro* is just like an overt pronoun, and its non-overtness is "purely a PF matter" (Roberts, 2010, p. 80).

As for 'radical' *pro*s, following Saito (2007), Roberts assumes that empty arguments are copied from the discourse at LF.

In partial null subject languages such as Finnish, finite T does not have an *u*D-feature. T probes for D-feature. The subject's φ-features are copied by T and the subject has its case feature valued in return. Let's now turn our attention to Kannada.

## 2.  Kannada, an ambivalent language

What type of language is Kannada?  Kannada allows null subjects of all persons in all tenses.  It licenses a referential null subject of all persons in all tenses; it has arbitrary or generic null subjects, and it has an expletive null subject as well.  Above all, it licenses a null anaphor in the object position in reflexive sentences and a null anaphoric subject in finite subordinate clauses. Therefore, in Kannada, there are parallels between *pro* and PRO, the pronominal anaphor. However, the pronominal *pro* and the anaphor *pro* occur in different syntactic environments.

Kannada is 'rich' in agreement inflection.  However, negative and modal verbs are invariable, hence they are devoid of agreement inflection. Only non-negative and non-modal indicatives, interrogatives, and imperatives show agreement so much so that agreement can be looked upon as a feature of positivity or affirmation.  And subordinate clauses such as adverbial, gerund, and relative clauses also lack agreement since they are not declarative/interrogative in force. But these clauses are tensed and license a nominative subject also and can also have a null subject. As we know, null subjects of all persons can occur in almost all sentences and in all tenses. Besides, Kannada allows almost all types of null subjects, although rich agreement is not present uniformly in all sentences.  Therefore, Kannada cannot be called either a 'consistent' null subject language or a 'radical' pro-drop language.  It is an inconsistent or an ambivalent language as it possesses properties of both 'consistent' null subject languages and 'radical' pro-drop languages.  It is in fact more of a radical type than a consistent type.

It is quite possible that Kannada never belonged exclusively to any one type at any point of time in its history.  This is because the lack of agreement inflection in some subordinate clauses is a characteristic of the Dravidian languages in general.  But the lack of agreement inflection in negative and modal clauses is partly due to the historical changes that took place in Kannada centuries ago. In Old Kannada (OK), even standard negation (SN) and certain kinds of modal verbs did inflect for agreement. SN in OK was formed on the negative suffix *–a*, which was attached to the verb and the agreement inflection was assimilated into the negative suffix.  And the existential negation was formed on the invariable negative existential verb *illa*, 'to be not'. Both of these negatives were restricted to present tense. During the Jaina period when Kannada and other Dravidian languages came under the influence of Sanskrit, there were significant changes in the syntax of Dravidian languages.  I have argued in Sudharsan (2012) that one of the syntactic changes that took place in Kannada was the reanalysis of the invariant negative existential verb *illa* into a verbal negator, on the lines of the Sanskrit SN in which the negative particle *na* was used both in SN and existential negation in all tenses. Since in OK – prior to the influence of Sanskrit – the SN could not be used in past tense, the use of the existential negative *illa* was extended to verbal negation in past tense. Gradually, the SN formed on *illa* replaced the earlier SN in which the verb inflected for agreement.  Kannada thus developed a full paradigm of negation based solely on the invariable negative verb *illa*.

In contemporary Kannada the modal negative *aar*, 'not to be able to', which does inflect for agreement, is also fast disappearing and is being replaced by the negative formed on *illa* and the linking verb *aagu*, 'become'.

The case of Kannada suggests that not all NSLs fit neatly into one of the four types of NSLs proposed in Biberauer et al. (2010). Languages can be of mixed type, and Kannada gives evidence for this.

**2.1.  *Pro* in Kannada.**  *Pro* has a wide distribution in Kannada and it occurs in root and in embedded clauses. It can be definite or arbitrary in its reference. An object pronoun can also be dropped and can be recovered from the discourse, since the verb does not show agreement with the object noun.

Before we consider *pro* in detail, an overview of verbal morphology of Kannada would be in order. Kannada shows rich agreement inflection in positive indicative, interrogative, and imperative sentences. The verb shows agreement in person, number, and gender with 3rd person singular subjects. And with 1st and 2nd person singular subjects it shows only person and number features. There is a two-way distinction between human and non-human with 3rd person plural nouns. Kannada has two morphological tenses: past and non-past.  There are three aspects: simple, progressive, and perfect.  In the positive indicative clauses, the auxiliary verb *iru*, 'to be' is used only in non-simple forms. It is tense which renders a clause finite and it is tense which licenses a null subject in Kannada. And agreement is not present consistently in all sentences.

The negatives are periphrastic in simple and non-simple tenses, since negation is indicated by the invariant negative verb *illa*, which is on a par with the positive *iru*, 'be' except that the latter inflects for tense and agreement. In verbal negation, the main verb is in non-finite form and the negator *illa* is invariably attached to the main verb except when there is emphasis on the main verb, in which case *illa* is detached from the verb. In the following sections we will take an overview of different types of *pro* in Kannada. We will first look at *pro* in root clauses. The 1st and 2nd person pronouns are invariably dropped and they refer to the speaker and the listener, respectively. Here are examples of 1st and 2nd person *pro* subjects:

(9)  Speaker A:  pro  *sinimage      bartiiraa?*
                      cinema.to   come.PRES.2PL(HON)

     'Will you come to the cinema (movie)?'

     Speaker B:  pro  *khanDitvaagiyuu   bartiini.*
                      definitely          come.PRES.1S

     'I will definitely come.'

A 3rd person pronoun, on the other hand, can also be dropped, if the person it refers to is mentioned earlier in the discourse.

(10)  Speaker A:  *yelli      nimma   magaLu?   kaaNisodilla*
                   where,   your    daughter   seen.PRES.NEG
      'Where is your daughter? She is not to be seen.'

      Speaker B:  pro  *maisuurge   hoogiddaaLe*
                        Mysore.to   has gone.3SF

      '(She) has gone to Mysore.'

In the above dialogue, a 3rd person pro is licit in speaker B's utterance since it has an "antecedent" *nimm magaLu*, 'your daughter' in the dialogue. Similarly, the object pronoun can also be left unexpressed if it is recoverable from the discourse. However, in reflexive sentences where the reflexive verb *koL* is present, the object pronoun can be optionally null and is bound locally by the subject pronoun, null or otherwise, and hence can be recovered from the sentence itself. So it is the reflexive *koL* which licenses a null anaphor, i.e. *pro* in the object position.

Reflexivity in Kannada is generally expressed by the reflexive light verb *koL*, which can be used with 1st, 2nd, and 3rd person subjects. It is *koL* which inflects for tense and agreement and the main verb will be in the non-finite form. Kannada has a logophoric reflexive pronoun *taan*, 'self' which is strictly 3rd person subject-oriented; it lacks gender features; it is marked for case. Because of *taan*'s 3rd person subject-orientation, there is a gap in the paradigm of lexical anaphors in Kannada. But the null subject option seems to have filled this gap by allowing for *pro* to have 1st and 2nd person antecedents. So, the presence of the reflexive *koL* invariably renders *taan* superfluous since the subject and the object positions can be null. *Taan* invariably gets reduplicated, as shown in the examples (11a-c) below. Consider these examples:

(11)  a.  *avanu*/pro<sub>i</sub>  *koopadalli   tannann   taan*/pro<sub>i</sub>  *hoDedukoNDa/*hoDeda*
          he/*pro*         anger.IN   self.ACC   self/*pro*   beat.PCPL.koL.PAST.3SM/beat.3SM

          'He beat himself in anger.'

      b.  * *niinu*<sub>i</sub>   *kopadalli      tannan/taan*<sub>i</sub>   *hoDedkoNDe.*
            you       anger.GEN    self.ACC/self   beat.PCPL.koL.PAST.1S

      c.  *Raghu*<sub>i</sub>   *kopadalli      tannann   taanee*<sub>i</sub>      *hoDedukoNDa/*hoDeda*
          Raghu    anger.GEN    self.ACC   self.EMPH   beat.PCPL.koL.PAST.3SM/beat.PAST.3SM
          'Raghu beat himself in anger.'

(12) *niinu*ᵢ *koopadalli* *maguvanna*ⱼ *hoDede/*hoDedukoNDe*
you anger.GEN child.ACC beat.PAST.2S/*beat.PTCPL.koL.PAST.2S

'You beat the child in anger.'

(13) a. *Naanu*ᵢ *maaDida* *tappige* *nannann* *naanee*ᵢ *baiKoNDe*
I.NOM done.REL mistake.DAT I.ACC I.EMPH scold.koL.PAST.1S

'I was mad at myself for the mistake I made.'

b. *Niinu*ᵢ *maaDida* *tappige* *ninnann* *niinee*ᵢ *baiKoNDe*
you.NOM done.REL mistake.DAT you.ACC I.EMPH scold.koL.PAST.2S

'You were mad at yourself for the mistake you made.'

Examples (11a-c) are reflexive sentences. In (11a), the choice between the reflexive *taan* and *pro* in the object position indicates that *taan* is optional. When there is emphasis, however, the presence of *taan* is mandatory, as in (11c). The ungrammatical (11b) shows that *taan* cannot refer to 2nd (or even 1st) person subjects. When the object NP is disjoint from the subject NP, then *koL* cannot occur as shown in (12). As stated earlier, the reflexive *koL* can occur with 1st and 2nd pronominal subjects as well, as in (13a-b). It is perfectly grammatical to use an overt 3rd person pronoun in place of *taan* or *pro* with 3rd person subject pronouns, as it is shown in (14) in which case the overt 3rd person object pronoun is bound by the 3rd person subject.

(14) *raaju*ᵢ *avanigavanee*ᵢ *maataaDkoLtaane*
Raju he.DAT he.EMPH talks.koL.PRES.3SM

'Raju talks to himself.'

We see that in root clauses the object *pro* can be bound by a subject of any person and that the verb agrees with the subject, as shown in the examples above. On the assumptions of the null subject theory proposed in Rizzi (1980), and in Jaeggli & Safir (1989), a null subject has to be identified. Generally speaking, Agr is supposed to identify the referential content of *pro*. So in root clauses (with non-negative and non-modal verbs), it is *koL* which renders the object *pro* reflexive, which means that Agr(eement) on *koL* identifies both the object and the subject *pros*.

In the foregoing discussion, we looked at different types of *pro* licensed by rich agreement on the finite verb. However, *pro* can appear only when there is a person feature on the verb. In Kannada, non-verbal predicates like nominals are devoid of person features, hence they cannot have a *pro* subject. As for adjectives, there are pure adjectives and there are derived adjectives. Most of the adjectives are derived adjectives, derived by attaching the adjectival suffix, –*ge* to the adjective base. And some of the pure adjectives can also be turned into derived ones by attaching the suffix –*ge*. And the derived adjectives have to occur with the copula *iru*, 'to be' which inflects for tense and agreement. These derived adjectives can have a *pro* subject, since they have a person feature. The pure/underived ones show only number and gender features and they cannot have a *pro* subject, as illustrated in the following examples.

(15) *raaju*/pro *saNNagiddaane*
Raju/*pro* thin.*ge.iru*.3SM

'Raju is thin.'

(16) *raaju/avanu*/#pro *jaaNa*
Raju/he/*pro* intelligent.SM

'Raju/he is intelligent.'

(17) pro *bahaLa* *saNNagiddaaLe*
very thin.*ge.iru*.3SF

'(She) is very thin.'

Examples (15) and (17) have a null subject since the derived adjectives occur with the copula *iru* which shows a person feature. In (16), the pure adjective *jaaNa* 'intelligent' has number and gender features but lacks a person feature, so it cannot have a null subject. Thus the person feature is mandatory for licensing *pro*. This suggests that it is the person feature which renders agreement 'rich' enough to allow a null subject. There can be a null subject even in the absence of agreement, but when agreement is present, a person feature is mandatory for the occurrence of a null subject. We will see shortly that in embedded clauses, the verb shows person and number features but lacks a gender feature, but nonetheless, it can have a null subject.

**2.2. Arbitrary *pro*.** Kannada allows a *pro* subject with arbitrary reference in indicative and imperative sentences. Take a look at the sentences below with a generic *pro* subject:

(18)  Arb *namma maneyahattira ondu devasthanavannu kattiddare*
      *Arb* our    house.near   one   temple.ACC        build.is.3PL

      '*Arb* have built a temple near our house.'

(19)  *devaalayavii kempuhuvinatota,*  Arb *kaimugidu,  olage   ba*
      temple.this  red.flower garden, *Arb* hands.fold  in.DAT  come.IMP.2S

      'This red flower garden is a temple, fold your hands (in respect) and come in.

Sentence (18) is an indicative sentence and has a 3rd person plural Arb and (19) is an imperative with a 2nd person singular Arb. The nominalised gerund *–udu* clause in Kannada is devoid of agreement. It is marked for tense and aspect and it also licenses a nominative subject. When the nominalised verb does not inflect for a specific tense and aspect, it lacks a specific time reference. It indicates timeless/generic present by default. In that case, it allows an arbitrary *pro*.

(20)  [pro *sigareeT  seduvudu]    aaroogyakke  haanikara*
           cigarette smoke.GER   health.DAT   harmful

      'Smoking cigarettes is harmful to health.'

(21)  #[pro *sigareeT   seduttiruvudu]         arogyakke   haanikara*
           cigarette  smoke.PRES.PROG.GER   health.DAT  harmful

      'Smoking cigarettes is harmful to health.'

(22)  [*niinu*/#pro *namma  tandeyedurige        sigareeT  seduttiruvudu]      sariyilla*
      you/*pro*    our     father.in front.DAT  cigarette smoke.PRES.PROG  not appropriate

      'Your smoking cigarettes in front of my father is not appropriate.'

In (20), *pro* has an arbitrary reference. The verb is not overtly marked for a specific tense, in which case it receives a timeless present reading by default. Sentence (21) is odd and unacceptable because *pro* is not bound; it cannot have an arbitrary reference either, because the verb is in present progressive and so has a specific time reference. In (22) again, *pro* in the subject position is unacceptable since there is no binder in the matrix; nor can it be used in an arbitrary sense, since the clause refers to a specific situation. Only the overt pronoun *niinu* 'you' would be acceptable in the subject position. In indicative clauses, on the other hand, an arbitrary *pro* is allowed even with specific time reference, as seen in sentence (18) above.

**2.3. Empty expletive constructions.** Consider the following empty expletive constructions:

(23)  [*krSNanu        paramaatmana swaruupavendu]    bhaagavatadalli  heelalpattide*
      [Krishna-NOM  God.POSS     incarnation-COMP]  Bhagavata-LOC    say+*al*+*padu*-PRES.PERF-3SN

      'It has been said in the Bhagavata that Krishna is God's incarnation.'

(24)  [*namma hosa  upaadhyaayarige  maduveyagide       endu]   nanage  annisuttade*
      [our    new   teacher-DAT      marriage-become-is COMP]  I-DAT   feels-3SN

      'It feels to me that our new teacher is married.'

(25) *[draaviDare        moTTamodalu  bhaaratakke  bandarendu]          illi      heeLalaagide*
     [Dravidians alone   very first    Bharat-DAT   came-3PL-Comp]      here     say+*al*+*agu*-3SN
     'It is said here that Dravidians came first to Bharat (India).'

Sentences in (23-25) are examples of empty expletive constructions. (23) is a passive expletive construction which is no longer used in Contemporary Kannada. This construction type is similar to the English *it*-construction such as "It has been said that Jesus rose from the dead." The construction in (24) is based on the raising verb *annisu* 'to feel'. Sentence (25) has been analyzed as an impersonal passive in Sridhar (1979). This sentence is formed on a complex predicate composed of *V-al(inf)+aagu(become)+iru(to be)*, but it can also be analyzed as a biclausal structure, containing an infinitival *–al* clause with an arbitrary PRO as its subject. The finite verb in each of them carries the default 3rd singular neuter inflection and the subject position is occupied by an empty expletive corresponding to the English expletive *it*. In each of these examples, the main verb has a caseless *endu*-clause complement which cannot occur in a case-marked position. Since the subject position is non-thematic and caseless, I assume that there is no empty expletive in the canonical subject position; but the *endu*-clause is coindexed with the subject position. Since the clause cannot occupy a case position, it does not raise to the canonical subject position but remains in its complement position until LF. It raises to the subject position only at LF. So I assume that in these expletive constructions the Spec, IP position comes into existence only at LF.

**2.4. The radical *pro*.** All along we have looked at null subjects licensed by 'rich' agreement. As we noted earlier, Kannada also has a radical *pro* with verbs such as negatives and modals which are devoid of agreement inflection.

(26)  Speaker A: *[Nimma  magaLu   [pro      maisuurnalli  kelasa  sikkide]   anta]]   heeLidlu.  Innu*
                  [Your    daughter  [*pro*.DAT  Mysore.LOC   job     got.3SN]   COMP]]   said.3SF   yet

      *kelasakke  seerillava?*
      job.DAT    joined.NEG.Q?

      'Your daughter told (me) that she has got a job in Mysore. Hasn't she yet joined the job? (hasn't she reported for duty yet?)'

      Speaker B: *innu   seerilla.      Ondu  vaaradoLage   seerbeeku*
                  yet    joined.NEG    one    week within    join.has to

      '*(pro)* hasn't joined yet. *(pro)* has to join within one week.'

In speaker B's utterance, the referential features of the *pro* subject can be recovered only from the discourse, that is from Speaker A's utterance, since the negative verb *illa* lacks agreement.

We have noted that Kannada has almost a full paradigm of null subjects in spite of the fact that rich agreement is not found in all clauses. There are only two possibilities with regard to agreement. It is either rich or totally absent.

**2.5. The anaphoric *pro*.** *Pro* has been generally regarded as a purely pronominal empty category, unlike the big PRO which has been characterized as a pronominal anaphor. An anaphoric *pro* was first proposed for Kannada in Sudharsan (1998) and subsequently one was proposed for Marathi in Holmberg (2005). We noted that in reflexive sentences, a null anaphor, i.e. an anaphoric *pro* occurs in the object position and is licensed by the reflexive verb *koL*. This null object *pro* is locally bound by the subject. Similarly, Kannada allows an anaphoric *pro*, i.e. a null anaphor in the subject position of embedded clauses. Whereas the pronominal null subject occurs in argument clauses, the null anaphor occurs only in the adjunct *endu*-clause, and also in the appositive *endu*-clause. So, the pronominal *pro* and the anaphoric *pro* occur in mutually exclusive environments. We will consider these two types of *pro* in detail in section 4.

# 3. Spellout analysis of *pro* licensed by rich agreement

In Kannada the null subject is the basic unmarked option and the overt pronominal subject appears only when there is emphasis or some other special feature on *pro*. So when *pro* has emphasis or some special

feature, it gets phonetic realization. So I assume that *pro* is the basic underlying option and the presence of special feature on *pro* triggers an overt spellout of *pro*. In this way my analysis departs from Roberts' (2010) deletion analysis, although I do adopt some of Roberts' ideas in developing an account of *pro* in Kannada.[1]

Following Roberts (2010), I assume that in the case of *pro* licensed by rich agreement on the verb, finite T is pronominal as in the case of consistent null subject languages. T has an unvalued D-feature (φ-features) and also an EPP feature. I treat *pro* as any argument, except that it is not pronounced. And the φ-features on *pro* are interpretable (intrinsically valued) since φ-features are intrinsic properties of arguments (Chomsky, 1995). However, null subjects have to be identified by φ-features on T at LF which means that φ-features on T should be available at LF. So I assume that φ-features on T are interpretable in Kannada. Accordingly, valuation means copying of valued features of *pro* on to T; it does not mean deletion of features after checking is done. On Minimalist assumptions, T probes for a goal, and an Agree relation between T and *pro* are established and *pro*'s interpretable φ-features are copied on to T and hence T's features are not deleted; they are available for further computation. Besides, *pro* satisfies the EPP feature by raising to Spec, IP.

I have shown in Sudharsan (2012) that case alternation on arguments in Kannada results in differences in meaning even though the thematic structure remains unaltered. So I assume that case feature is also interpretable. This way φ-features on T and case feature on *pro* are available at all levels of derivation.

As for the 'radical' pro in Kannada which occurs in negatives and clauses with modals and in subordinate clauses which are devoid of agreement, I propose that it is inserted at Spec, IP straight from the discourse at LF. It is at LF that the ambiguous reference of *pro* is disambiguated. Similarly, null objects – with the exception of null objects in reflexive sentences – are also recovered from the discourse context. This is similar to Saito's (2007) view about null subjects and ellipsis.

Earlier we noted that Kannada has a *pro* subject with an arbitrary reference. It can be 3rd person plural, or 2nd singular. An overt 1st person plural pronoun *naavu*, 'we' can also be used with arbitrary reference. These three types of pro with arbitrary reference are discussed in Sudharsan (1998). *Pro* is specified for φ-features as in the case of other types of *pro*. It is the lack of *u*D in T that renders *pro* arbitrary. Another important difference between arbitrary *pro*s and the definite *pro*s is that the former are obligatorily null and the latter are optionally null. The arbitrary *pro* can be derived in almost the same manner as the definite *pro*.

We saw in section 2.3 that Kannada licenses an expletive *pro* as well. The empty expletive construction occurs with a default 3rd person singular neuter inflection on the verb. And generally the unaccusative/passive verb takes an *endu*-clause as its complement unlike some of the unaccusatives in English which can take an infinitive as their internal argument. I argue that since the expletive *pro* lacks case and a θ-role, there is no need to assume a non-thematic *pro* subject at Spec,IP. The *endu*-clause is not a case-marked clause and hence it cannot occupy a case position; so it stays *in situ* in the complement position until LF. It is co-indexed with the subject position and so it raises to Spec IP at LF. This way, the Spec, IP position in the expletive constructions comes into existence at LF.

In the foregoing sections we have considered briefly different types of *pro* in Kannada and how they can be derived within the framework of Minimalist theory. Due to space constraints, it is not possible to provide a detailed account of the different types of *pro* in Kannada.

The main objective of this paper is to examine the (definite) pronominal *pro* and the anaphoric *pro* licensed by rich agreement and to account for their distinct properties within the framework of Minimalist theory. The paper will address the following issues: Firstly, it will argue against the general view that *pro* is a pure pronominal empty category and show that *pro* in Kannada can be an anaphor also on a par with the big PRO, the pronominal anaphor. The pronominal null subject and the anaphoric null subject occur in root and in subordinate clauses as well. The case of the null subject in subordinate clauses is not as straightforward as in root clauses. These two types of null subject differ in their distribution in that the pronominal

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[1]In Sudharsan (1998), I have proposed a theory of *pro* based on what I call the Principle of Case Saturation to explain the nullness of pronominal subjects. This principle is available only in NSLs. According to this principle, Case gets saturated on the Case assigner itself and so case is not assigned to the subject or to the object NP. While I was working on my thesis, there was not much work done on null subjects, particularly on null subjects in Kannada, within the Minimalist framework. Over the past years, there have been several revisions within Minimalist theory which have led to different analyses of *pro*. This has helped me to consider some hitherto unnoticed issues related to *pro* in Kannada and revise my views about Kannada as a NSL. So, taking into consideration the recent developments in NSP studies, I have developed an account of the different types of null subjects in Kannada within the framework of Minimalist theory.

category occurs in argument clauses and the anaphoric one occurs in non-argument clauses. Secondly *pro*'s φ-features, particularly its person feature, and its referential orientation are closely related. In other words, *pro*'s person feature indicates whether it is pronominal or anaphor or both in its reference. And agreement on the embedded verb plays a crucial role here. It not only identifies pro's referential features but also indicates its pronominal/anaphoric orientation. There has not been any study to date that addresses these issues, hence in the rest of the paper I would like to focus on these aspects of *pro*.

## 4. *Pro* and the role of rich agreement in embedded clauses

In section 2.1, we considered *pro* in root clauses and we noted that Kannada allows 1st, 2nd, and 3rd person *pro*s in all tenses. More importantly, we noted that in reflexive sentences the object pronoun can also be null. And this null object is locally bound by the subject (pronoun) which can also be null. The verb in all these cases shows agreement with the subject. Similarly, in embedded clauses *pro* can also be pronominal or anaphoric depending where it occurs. And agreement plays an important role in relation to these aspects of *pro*. So we will now consider *pro* and the role of agreement in embedded clauses.

*Pro* occurs in a variety of embedded clauses and, in fact, it is the natural choice for the subject position in most of the embedded clauses. It invariably replaces the reflexive pronoun *taan* also unless there is a need to avoid ambiguity in its reference.

There are three types of CP clauses in Kannada: the quotative *endu*-clause which cannot be nominalised; the *embudu*-clause is a nominalised CP clause; and the Complex NP construction (CNPC), i.e. the *emba*+NP clause. Besides, there are finite IP clauses which also license a *pro* in the subject position. In Kannada some clauses are case-marked and some are not. The *endu*-clause is not case-marked. The nominalised *embudu*-clause, the CNPC, and the gerund *udu*-clause are case-marked.

*Pro* can be the subject of any of the clauses mentioned above. *Pro* can be subject-oriented, or object-oriented, or even speaker or listener-oriented. These different referential orientations are invariably determined by *pro*'s person features. On the basis of these properties of *pro*, I propose four types of (definite) *pro* licensed by rich agreement on the embedded verb. Each type of these null subjects is distinguished by its person feature which determines its pronominal or anaphoric status. Secondly and importantly, whether the embedded clause in which the *pro* occurs is an argument or a non-argument also decides the pronominal or anaphoric status of the *pro*. The four types of *pro* are as follows: the 1st person *pro*, the 2nd person *pro*, the 3rd person *pro*, and fourthly, *pro*, the anaphor.

The 1st and 2nd person *pro*s are null analogues of the corresponding overt pronouns in that they have both pronominal and anaphoric interpretations. When they have pronominal reference, they refer to the speaker and the listener, respectively. When they are anaphoric in their reference they refer to the matrix subject and the object, respectively, irrespective of the person feature of their antecedent. This way, they fail to share their φ-features with their antecedent.

The 3rd person *pro*, however, allows only pronominal interpretation just like its overt counterpart which also allows only pronominal interpretation.

The differences in *pro*'s and its antecedent's referential features which results in a person feature between *pro* and its antecedent, particularly in the case of 1st and 2nd person *pro*s, are due to the fact that quotative verbs in Kannada generally report direct speech. The person feature of the embedded subject is the same as that in direct speech and accordingly the agreement pattern on the embedded verb corresponds to 1st, 2nd, and 3rd person inflection in the direct speech situation.

The null anaphor, by contrast, occurs in the non-argument (adjunct) *endu*-clause, and the appositive *endu*-clause. Secondly, it does not exhibit any feature clash like the other *pro*s. *Pro* here is bound non-locally by an NP in the main clause. I argue that it is the semantic relation that holds between the subordinate and the matrix clauses that renders *pro* an anaphor.

**4.1. The 1st person *pro*.** As stated earlier, this *pro* occurs both in the caseless *endu*-clause, and the case-marked *embudu–* and *emba*+NP clauses.

We will first take up *pro* in the *endu*-clause. The *endu*-clause has a wide distribution and has multiple functions. It is generally used in formal written Kannada and its colloquial counterpart is the *anta*-clause.

The complementizers *endu* and *anta* are adverbial participials derived from the verbs *en* and *an*, respectively, and both mean 'say'. The verb *an* is the modern form of the earlier *en*. In this paper, I will use both versions interchangeably. However, wherever there is a significant difference between the written and the colloquial versions, it will be pointed out.

This clause occurs with several types of verbs, such as verbs of saying and thinking, performative verbs, stative verbs, etc., and it has different functions. Affirmatives, negatives, questions, and imperatives can all be embedded within the *endu*-clause. The clause has generally a quotative function when it occurs as an argument of verbs of saying, thinking, etc. Secondly, it can occur as an adjunct of the main verb and function as an adverbial clause of reason. Thirdly, it can also occur in apposition to the main verb, and function as an explanatory equivalent to the verb. Generally, the clause occurs in the preverbal position either before the matrix clause or embedded internally within the main clause. However, the colloquial *anta*-clause can occur in the post-verbal position in marked word orders in colloquial Kannada. The written version, that is the *endu*-clause, generally sticks to the preverbal position in formal written Kannada.

In the following discussion, I will examine 1st person *pro* as the subject of the quotative *anta*-clause and show that it ambiguously refers to the matrix subject and the speaker.

As we noted earlier, the function of the *endu*-clause is generally determined by the type of verb it occurs with. Firstly, as an argument of transitive verbs of *saying* and *thinking* such as *heeLu* 'say', *keeLu* 'ask', *nambu* 'believe', etc., its main function is to report direct speech. Kannada differs significantly from English in the behavior of reported speech.[2] In English, reported speech exhibits significant changes in the person feature of pronouns and tense feature of the embedded verb. While the tense feature of the embedded verb does not always match with that of the matrix verb, the person feature of the embedded (anaphoric) pronouns almost always changes to match with that of their antecedents in the matrix. It is in this respect that Kannada exhibits a marked difference from English. In Kannada, as we noted earlier, the embedded subjects in reported speech are just "copies" of the pronominal subjects in direct speech situation. They do not differ in their person feature from the subject pronouns in direct speech. And as a result, the agreement inflection on the embedded verb also corresponds to 1st, 2nd, and 3rd person inflection on the verb in direct speech. This results in a mismatch in person feature between *pro* and its antecedent, particularly in the case of 1st and 2nd person null subjects when they are anaphoric in their reference. Consider the examples (27-30) in which *pro* is subject/speaker-oriented.

(27) *Siila*ᵢ [CP [IP proᵢ/*avaLuᵢ/#taanuᵢ iidina skuulige leeTaagi hoogtiini] endu/anta] avaLa
     Shila            *pro*/she-NOM/self today school-DAT late    go-PRES.1S COMP    her
     *taayige        heeLidlu*
     mother.DAT  said.3SF

     'Shila said to her mother that (she) will go late to school today.'

(28) *niivu*ᵢ [CP [IP proᵢ/*naavu*ᵢ/*taavu*ᵢ uurige baruttiivi]     anta]   bareda   kaagada nanage
     you.PL          *pro*/we/self-PL         own-to come-PRES.1PL COMP written letter   I.DAT
     *seeralilla*
     reach.PAST.NEG

     'The letter you (Pl.) wrote (saying) that you will come to town did not reach me.'

(29) [CP [IP proᵢ *manege   leeTaagi bartiini]     anta]   naanuᵢ jaanakige foone   maaDheeLde
         *pro*  home-to  late     come-PRES.1S COMP   I.NOM  Janaki-to  phone  do say.1S

     'I phoned and told Janaki that I will come home late.'

(30) *jalaja*ᵢ      [CP [IP *taanee*ᵢ/*pro dineeSanige kaagada bareyuttiini]  anta]   nanage
     Jalaja-NOM            self.EMPH/*pro* Dinesha-DAT letter   write-PRES.1S] COMP   I-DAT
     *heeLidLu*
     said-3SF

     'Jalaja said to me that she herself will write a letter to Dinesha.'

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[2]I have discussed the issues related to reported speech in Kannada and English in Sudharsan (2001), but subsequently I revised my views regarding the pronominal and anaphoric *pro*s in subordinate clauses.

In these examples, *pro* is 1st person as indicated by the 1st person inflection on the embedded verb. Further, *pro* is coreferential with the matrix subject irrespective of the subject's person feature. *Pro* can also refer to the speaker. Only in (27, 30) can *taan* occur in the embedded subject position, although *pro* is much more natural than *taan*. When there is emphasis on the subject, *taan* occurs obligatorily, as in (30).

We also see that an overt 1st person pronoun in the embedded subject position is perfectly grammatical, since the verb has 1st person agreement. Consider Bhatt's (1978) observations about the interpretations of the overt pronominal subject in the example he cites.[3]

(31) *hari*<sub>i</sub>  [<sub>CP</sub> [<sub>IP</sub> *naanu*<sub>i/j</sub>  *jaagreteyellidde]*  *endu]*  *heeLida*
     Hari          I.NOM      care-in.am.1S  COMP    said.3SM

  'Hari said that (I/Hari) was careful.'

Bhatt observes that the overt 1st person subject pronoun in the embedded clause is ambiguous in that it refers either to Hari or to the speaker. However, for some speakers, *naanu* 'I' refers only to the speaker. There were hardly any speakers who said that *naanu* referred only to Hari. So in either case *naanu* is not bound in the strict sense of the term since it refers to the subject and to the speaker as well. It allows both pronominal and anaphoric interpretations. Consider again the following sentence from Bhatt (1978), in which *taanu* in the subject position disambiguates this sentence.

(32) *hari*<sub>i</sub>  [<sub>CP</sub> [<sub>IP</sub> *taanu*<sub>i</sub>  *jaagreteyellidde]*  *endu]*  *heeLida*
     Hari          I         care-in.am.1S  COMP    said.3SM

  'Hari said that self (he) was careful.'

Here, *taanu* refers to Hari only and it cannot receive pronominal interpretation. Now let's see what happens if *pro* is inserted in the subject position in place of *taanu*.

(33) *hari*<sub>i</sub>  [pro<sub>i/j</sub> *jaagreteyellidde endu]*  *heeLida*
     Hari          care-in.am.1S  COMP    said.3SM

  'Hari said that (I/Hari) was careful.'

Here again, there are speaker variations regarding the interpretation of *pro*. Many speakers said that it refers to the speaker and several others said that it refers either to Hari or to the speaker. The consensus that emerged from the informants' judgements is that both *pro* and the overt 1st person pronoun are ambiguous in their reference. Another important point we need to note is that in this case, the embedded verb has to have 1st person inflection. When the matrix subject is 3rd person, *taan* can replace *pro* in the embedded subject position, but the embedded verb has to have 1st person inflection.

In its anaphoric reference, *pro* in the above sentences does not share its person feature with its antecedent, that is, the subject of the main clause. It exhibits feature clash which goes against Binding Condition A and which disqualifies it to be an anaphor. Secondly, it does not meet the C-command requirement since the subordinate clause generally precedes the main clause. Besides, it has a pronominal interpretation also in that it refers to the speaker. Finally, it can be replaced by an overt 1st person pronoun which suggests that *pro* here is basically a pronoun.

The 1st person *pro* can be the subject of an embedded interrogative as well, as in the sentence below:

(34) *meeriy(u)*<sub>i</sub>  [pro<sub>i</sub> *kempu baNNada*   *siireyalli*   *cennagi kaaNisuttiina anta]*  *Dinesananna*<sub>j</sub>
     Mary-NOM     [pro  red     colour-GEN  saree-LOC  well    look-1S.Q    COMP]  Dinesh-ACC
     *keeLidlu*
     asked.SF

  'Mary asked Dinesh if she (or I) looked good in a red colour saree.'

---

[3]There are speaker variations about whether the overt pronoun refers to the subject or to the speaker or to both. Many speakers feel that the overt pronoun ambiguously refers either to the subject or the speaker. In my opinion, an overt pronoun in the subject position of the embedded clause is more appropriate in formal written Kannada, whereas *pro* is acceptable both in direct and indirect speeches. There are, of course, speaker variations regarding this and I have tried to offer a unified account of *pro* by taking into consideration the various opinions expressed by my informants.

Here *pro* can refer either to Mary or to the speaker (i.e *naanu*, 'I').

According to Rizzi's (1980) and Jaeggli and Safir's (1989) theories of null subjects, *pro* must be identified by the Agr(eement) in the embedded clause, which means that *pro* in this case is 1st person. We see that *pro*'s antecedent, that is the matrix subject, can be 2nd and 3rd person also, as in (28, 30), respectively. In other words, the 1st person *pro* or even a 1st person overt pronoun is always subject/speaker oriented. So we assume that agreement inflection on the embedded verb in these sentences identifies not only *pro*'s referential content, it also indicates its anaphoric orientation —that is, its subject/speaker orientation. So *pro* has the features +1st person, +Subj/Sp. According to the theory of null subjects proposed in section 3, a definite *pro* is specified for φ-features and T has *u*D-feature, and also has an EPP feature which requires *pro* to raise to Spec, IP. T probes for a goal, and the goal *pro* forms an Agree relation with T and its φ-features are copied on to T. These features are also available at LF, since in Kannada φ-features on T are interpretable.

*Pro* exhibits similar properties in the *embudu* and *emba*+NP clauses. In the *embudu* and *emba*+NP clauses, the embedded verb shows full agreement when it is affirmative. Consider these examples:

(35)  *Dineesa*ᵢ  [ₙₚ[CP[IP  pro_{i/j}  *odookke    amerikagge   hogtiini*]    *emba/anno*]  *visayavanna*]  *yaariguu*
       Dinesh                *pro*      study-to   America-to   go.PRES.1S   comp.REL      news.ACC       nobody.to
       *heeLilla.*
       said.NEG

       'Dinesh has not told anybody the news any that he will go to America.'

(36)  *dineeSa*ᵢ  [DP[CP[IP  pro_{i/j}  *odookke    amerikagge   hogtiini*    *embudannu/annodanna*]  *yaarigu*
       Dinesh              *pro*      study-to   America-to   go.PRES.1S   COMP.NOM].ACC            nobody.to
       *tiLisalilla.*
       told.PAST.NEG

       'Dinesh has not told anybody that *pro* will go to America.'

In (35-36) *pro* is subject-oriented, as the 1st person inflection on the verb indicates. At the same time, *pro* can refer to the speaker as well. In fact, the speaker orientation is stronger than the subject orientation of pro in (35-36). This may be because the *embudu* clause is a DP-clause and the *emba*+NP clause is a complex NP construction, both of which probably act as islands for coreference. This suggests that *pro* is probably sensitive to island constraints. However, further investigation is required before we can say anything conclusive about *pro* in these clauses.

Taking into account these various interpretations of *pro*, we can conclude that the subject-oriented *pro* functions like a pronoun and hence it is not bound in the true sense of the term.

**4.2. The 2nd person *pro*.**  A 2nd person *pro* can occur in the subject position of an embedded declarative, interrogative or an imperative as well. Just like the 1st person *pro*, this *pro* also ambiguously refers either to the object NP or to the listener. The embedded verb has 2nd person inflection. Here is an example in which 2nd person *pro* occurs in the indicative *endu*-clause. Here, *pro* is coreferential with the object NP irrespective of the person feature of the object NP.

(37)  *dineSa*          [CP[IP  pro  *kempu  baNNada  siireli     bahaLa  chennaagi  kaaNistii*]       *anta*]
       Dinesha.NOM              red     colour   saree.LOC   very    good       look.PRES.2S   COMP
       *(jaanhavige/nanage/ninage)*        *heeLida.*
       (Jaahnavi.DAT/I.DAT/you.DAT)     said.3SM

       'Dinesh said to Jaanhavi/me/you that (pro: you) look good in a red colour saree.'

We notice that the embedded subject can refer to the dative NPs *Jaanhavige* or *nanage*, 'me' irrespective of the person feature of the object NP. Besides, it can also refer to the listener represented by *ninage* 'you', mentioned within the brackets. And the object NP can be dropped and recovered from the context. But *pro*'s referential features will be 2nd person singular.

*Pro* can be the subject of an embedded interrogative or imperative *endu*-clause which occurs as an argument of verbs like *keeLu* 'ask' or *heeLu* 'say'.

(38)  *meeriyu*ᵢ      *jaananna*ⱼ   [CP[IP *pro/niinu*ⱼ  *partige*      *baruttiiya*]      *anta*]  *keeLidlaa?*
      Mary-NOM  John-ACC        *pro*/you     party-DAT  come-PRES.2S  COMP  asked.3SF.Q

      'Did Mary ask John if he is coming to the party' (Did Mary ask John if you are coming to the party?)

(39)  *meeri*        *nannannu*ᵢ  [CP[IP pro*ᵢ *sinimaage*  *baruttīya*]           *anta*]  *KeeLidla?*
      Mary-NOM  I-ACC           [*pro* cinema-to  come-PRES.2SF.Q]  COMP]  asked.1S

      'Did Mary ask you if you were coming to the cinema (movie)?'

(40)  *namma taayi*    *nanage*   [CP[IP pro *kattalige  munce  manage*        *baa*]        *anta*]  *heeLidaru*
      my        mother  I.DAT           *pro* dark.to  before  home.DAT  come.IMP  COMP]  said.3PL

      'My mother told me to come back before it gets dark.'

In (38-40), *pro* is co-referential with the object of the matrix verb, that is the person addressed by the subject. Hence, *pro* stands for *you* (in direct speech situations) and accordingly the embedded verb has 2nd person inflection. In (38), an overt 2nd person pronoun *niinu* 'you', in place of *pro* would also ambiguously refer either to the object or to the listener. In (39) *pro* unambiguously refers to the direct object *nannannu*, 'me'. If the object is not expressed then *pro* implicitly refers to the listener. In the case of (40) the verb is in the imperative form and hence *pro* is 2nd person singular. Since the object pronoun is not expressed, *pro* implicitly refers to the listener, unless it is decided otherwise from the discourse context.

This way, the 2nd person *pro* shares several characteristics with the 1st person *pro*. Both can have anaphoric and pronominal interpretations. In their anaphoric reference, they exhibit a feature clash in that they do not share their person feature with their antecedent. Besides, corresponding overt pronouns can be used in place of the null subjects without affecting the meaning of the sentences. This shows that they are null analogues of the corresponding overt pronouns.

**4.3. The 3rd person *pro*, a pure pronominal category.** The 3rd person *pro*, on the other hand, is a pure pronominal empty category, in the sense that it allows only pronominal interpretation unlike the 1st and 2nd person *pro*s. Here is an example:

(41)  Speaker A: *raaman bagge meeSTru yenu heeLidru        ninage?*
                     Rama    about master   what  said.3PL(HON)  you.DAT

      'What did the master (teacher) say to you about Rama?'

      Speaker B: [CP[IP pro/*avanu        pariikSeli  tumba  chennaagi  maaDiddane*]        *anta*]  *heeLidru*
                     *pro*/he.NOM  exam.LOC  very    well          do.*iru*.PERF.3SM  COMP  said.3PL

      'He (the teacher) said that he has done well in the exam.'

In (41) we notice that the embedded verb inflects for 3rd person only. This kind of sentence with a pronominal *pro* occurs quite frequently in written Kannada, as shown in the example below:

(42)  *Rama raav avaru        kannaDa  bhaaSeya              samSodaneyannu        ondu viSaalavaada*
      Rama Rao he.HON  Kannada  language.GEN  investigation.ACC  one    broad
      *druSTikooNadinda neDesiddaare.*            [DP[CP[IP pro/*avaru        bhaaratiiya bhaaSaa      tagyāra*
      perspective.INST   has carried out.3PL                *pro*/he.HON  Indian          language  specialists
      *mattu paaschaatya sampradaayada vichaaragaLannu aLavaDisikoNDiddare*] *embudu*]]        *prastuta*
      and    Western      tradition.GEN  ideas.ACC            has adopted.3PL        COMP.NOM  present
      *kritiyalli    spaSTvaagi  kaNDUbaruttade.*
      work.LOC  clearly        see.come.PRES.3SN

      'Rama Rao has carried out an investigation of Kannada language from a broad perspective. It is clearly seen in the present work that he has adopted ideas of Indian linguists and of Western traditions also.'

In (42), the *endu*-clause in the second sentence has a 3rd person *pro* subject as indicated by the verb inflection and *pro* refers to Rama Rao in the previous sentence. Here *pro*'s "antecedent" is in the discourse

although its ɸ-features are determined by the inflection on the embedded verb. Consider again this example:

(43)   *dineSa*ᵢ  *ravina*ⱼ   [pro*ᵢ/*ⱼ/k  *paarTige*   *baruttaanaa*]    *endu*]  *keeLida*
     Dinesh  Ravi.ACC  [*pro*       party.DAT  will.come.3SM.Q]  COMP]  asked.3SM

     'Dinesh asked Ravi if (*pro*/he) is coming to the party.'

Here, the 3rd person *pro* cannot refer either to Dinesh or to Ravi. It can only refer to someone else as indicated by the index. This is true of an overt 3rd person pronoun also.

(44)   *dineSa*ᵢ  *ravina*ⱼ   [*avanu*\*ᵢ/*ⱼ/k  *paarTige*   *baruttaanaa*]    *endu*]  *keeLida*
     Dinesh  Ravi.ACC  [he.NOM     party.DAT  will.come.3SM.Q]  COMP]  asked.3SM

     'Dinesh asked Ravi if he is coming to the party.'

As sentence (44) shows an overt 3rd person pronoun is perfectly acceptable and the sentence means the same as (43). So following these observations, we assume that a 3rd person *pro* and a 3rd person overt pronoun can have only pronominal interpretation. In this respect, the 3rd person overt and null pronouns differ from the 1st and 2nd person overt and null pronouns. The overt 3rd person pronoun differs from the corresponding overt pronoun in English also, since in English an overt 3rd person pronoun subject (in embedded clauses) can have both pronominal and anaphoric interpretations.

In sum, 1st and 2nd person null subjects allow both anaphoric and pronominal interpretations and they also exhibit feature clash, especially in their anaphoric reference. The 3rd person null subject, on the other hand, is exclusively pronominal in its reference. However, they all occur in argument CP and DP clauses. This way, these null subjects share a structural relationship with the matrix clause. Thirdly, an overt pronoun can be used in place of *pro* in all of these cases. Hence, they are basically pronominal and they obey Binding Condition B.

In section 4.2, I have described how a 1st person *pro* is derived. The same analysis holds for 2nd and 3rd person *pro*s as well. Just like the 1st person *pro*, the 2nd and 3rd person *pro*s are also specified not only for ɸ-features but for their anaphoric/pronominal reference as well. The 2nd person will have the feature +object, +listener and the 3rd person *pro* will have the feature +pronominal. When an Agree relation is established between T and *pro*, *pro*'s (interpretable) features are copied on to T so that they are available at LF. In both cases, *pro* raises to Spec, IP of the embedded clause in fulfillment of the EPP requirement.

**4.4. *Pro* as an anaphor: Evidence from the adjunct *anta*-clause.** *Pro* as an anaphor occurs only in adjunct *endu/anta*-clauses and also in the appositive *endu*-clause. The adjunct clause is non-quotative and invariably functions as an adverbial clause of reason. So, there is a cause-and-effect/result relation between the *endu*-clause and the main clause. Secondly, *pro* in the adjunct clause does not exhibit any feature clash. Nor does it have pronominal interpretation like the other *pro*s in the argument *endu*-clauses. We have seen that the null (and overt) subjects in the argument *endu*-clause are mere "copies" of the pronominal subjects in direct speech and hence they are basically pronominal in character. The null anaphor, on the other hand, occurs in a non-quotative (adjunct) *anta*-clause and hence it is not pronominal in character. Furthermore, *pro* in the adjunct clause is non-locally bound by an NP in the main clause and I argue that the cause-and-effect relation that holds between the adjunct and the matrix clause is responsible for an anaphor-antecedent relation between *pro* and an NP in the main clause. Here are some examples.

(45)   [CP[IP  proᵢ  *maneyalli bahaLa galaaTemaaDtiini*]     *anta*]  *namma taayi*   *nannanna*ᵢ *pakkada*
              house-in  very   noise-make-PRES.1S  COMP  our      mother  I-ACC     next

     *manege*    *kaLisibiTTru*
     house-to   sent-3PL(HON)

     'Our mother sent me away to the neighbour's house (thinking) that I make a lot of noise at home'

(46)   [CP[IP  *pro*ᵢ/*niinu*ᵢ  *yaaaagalu Saaliniyannu kiiTalemaaDtii*]  *anta*]  *Saamu*   *ninnannu*ᵢ  *paartige*
              *pro*/you  always   Shalini-ACC  tease-make-2S  COMP  Shamu  you-ACC   party-to

     *kareyalilla*
     invite-PAST.NEG

'Shamu did not invite you to party (because) you always tease Shalini.'

(47) [CP[IP pro_i/*avaLu_i     kattaleyalli   obbaLee horage hoogalu hedaruttaaLe] anta]  raamu
         pro/she.NOM darkness-in alone    out    to go   fears-3SF      COMP  Ramu-NOM
     giitaLasangada_i   timmanannu   kaLisidanu
     Gita's-with        Timma-ACC   sent-3SM

     'Ramu sent Timma with Gita (thinking) that she fears to go alone in the dark.'

(48) [CP[IP pro_i/*avaLu_i    maneli      ella kelasa obbaLee maaDtaaLe] anta]  raamu  tanna
         pro/she.NOM house.LOC   all   work  alone   does.3SF   COMP  Ramu  self
     heNDatige_i   obba  kelasadavaLannu   tandiTTanu
     wife.DAT    one   maid.ACC        brought.3SM

     'Ramu brought a maid for his wife (thinking) since (she) does all the work alone (by herself) at
     home.'

In (45), the 1st person *pro* is bound by the object pronoun *nannannu*, 'me' and the subordinate verb
shows 1st person inflection accordingly. In (46), the 2nd person *pro* refers to the 2nd person object pronoun
*ninnannu*, 'you'; here again the verb has 2nd person inflection. In (47), the 3rd person *pro* is bound by the
oblique NP *GitaLa*. In (48), the 3rd person *pro* is bound non-locally by *tannaheNDati*, 'his wife'. Interestingly
enough, if the 3rd person *pro*s in (47-48) are replaced by the corresponding overt pronouns, the overt pro-
nouns will not to refer to *GitaLa* and *tannaheNDati*, respectively. In other words, the 3rd person anaphoric
*pro* and the corresponding overt pronoun are not interchangeable in these sentences. However, if the sub-
ordinate clauses in (47-48) are extraposed to the clause-final position, the overt pronouns do refer to *GitaLa*
and *tannaheNDati*, respectively, as shown in the following examples.

(49) *Raamu         giitaLasangada_i  timmanannu  kaLisidanu* [CP[IP pro_i/avaLu_i    kattaleyalli   obbaLee
     Ramu.NOM Gita's-with      Timma-ACC sent-3SM          pro/she.NOM darkness-in alone
     *horage hoogalu hedaruttaaLe] anta]*
     out    to go   fears-3SF      COMP

     'Ramu sent Timma with Gita (thinking) that she fears to go alone in the dark.'

(50) *Raamu tanna heNDatige_i obba kelasadavaLannu tandiTTAnu* [CP[IP pro_i/avaLu_i    maneli*
     Ramu self  wife.DAT   one  maid.ACC        brought.3SM          pro/she.NOM house.LOC
     *ella kelasa obbaLee maaDtaaLe] anta]*
     all  work  alone   does.3SF   COMP

     'Ramu brought a maid for his wife (thinking) since she does all the work alone(by herself) at home.'

In the above sentences, the overt pronominal subjects in the subordinate clauses are co-referential with
the genitive NP and the dative NP, respectively, in the main clauses. This shows that in order for an overt
3rd person pronoun to be anaphoric, the binder has to precede the pronoun. In other words, it has to meet
the Leftness Condition. This constraint/condition can be stated as follows:

(51) When there is a potential binder in the main clause, an overt 3rd person pronoun in the subordinate
     clause can be bound non-locally *iff* it meets the Leftness condition.

This condition does not hold for the null subjects in (47-48). A *pro* is always bound irrespective of
whether it precedes or follows its binder.

We noted in sections 4.1 and 4.2 that both 1st and 2nd person null subjects and the corresponding overt
pronouns can replace each other without affecting the meaning of the sentence. And in section 4.3, we saw
that the 3rd person *pro* as well as the 3rd person overt pronoun cannot have anaphoric reference. They can
have only a pronominal interpretation. So the Leftness Conditon does not hold for 3rd person *pro* and overt
3rd person pronoun, or for the reflexive *taan* 'self'. Only bound pronouns which occur in adjunct clauses
have to meet the Leftness Condition.

Let's sum up our observations about *pro* in the adjunct *anta*-clause. *Pro* here has the same φ-features
as its antecedent, which means there is no feature mismatch between *pro* and its antecedent. The matrix

verbs in (45-48) are not verbs of *saying* or *thinking* and the *anta*-clause is not an argument of these verbs. The *anta*-clause here functions like an adverbial clause of reason. This means that the relation between *pro* and its antecedent cannot be defined structurally. There is, of course, a semantic relation between the adjunct and the main clauses. It is probably the cause-and-effect relation between the adjunct and the main clauses which forces *pro* to be bound by an NP in the matrix clause. This is again confirmed by the following example in which *pro* is bound in the matrix clause in spite of the fact that the verb in the negative adjunct clause lacks agreement.

(52)   [CP[IP   pro_i   *maneyalli kelasavee      maDodilla*]   *anta*]   *dineSanige*   *tanna*   *hendatiyamele*_i
              *pro*   house.in   work.EMPH   does.NEG   COMP   Dinesh.DAT   self.GEN   wife.GEN-on

       *koopa*
       anger

       'Dinesh is angry with his wife as she does not do any work at home.'

Here *pro* unambiguously refers to *henDati* 'wife'. I conclude that it is the cause-effect relation between the adjunct and matrix clauses that renders *pro* unambiguously bound. Lack of agreement in the adjunct *anta*-clause does not seem to affect the anaphoric status of *pro*.

**4.5. *Pro* as an anaphor in the appositive *anta*-clause.** We will now consider the appositive *anta*-clause which also licenses an anaphoric *pro*. Generally, when the *anta*-clause occurs with verbs like *hogaLu* 'praise', *Tiikisu* 'criticize', *bai* 'scold' (and other verbs such as *salahe koDu* 'give suggestion' *prakaTisu* 'announce'), etc., it is in apposition to these verbs as their complement, not as their argument, and serves as an explanatory equivalent to the verb. These verbs also have a quotative or a reporting function; but the *anta*-clause does not function as an argument of these verbs. This way the *anta*-clause has some kind of semantic relation with the matrix verb.

Interestingly enough, this clause has both a direct speech version and a reported speech version. However, in both versions, *pro* allows only anaphoric interpretation. In the direct speech version, there is a mismatch in person feature between *pro* and its antecedent. And in the reported speech version, *pro* and its antecedent share the same person feature. The reported version is similar to reported speech in English in that the anaphoric subject pronoun in the subordinate clause shares its person and number features with its antecedent, unlike in the case of 1st, 2nd, and 3rd person pronominal *pro*s in argument embedded clauses.

In the direct speech version, the appositive clause can license either a 1st person or a 2nd person *pro* in the subject position referring either to the speaker or to the listener, respectively, in which case the verb will have a 1st or a 2nd person inflection, respectively. Despite the 1st or the 2nd person inflection on the verb, *pro* here does not seem to show any ambiguity in its reference. Consider the following direct speech version in which the 2nd person *pro* can be coreferential with an NP of any person in the main clause.

(53)   [CP[IP   pro_i   *tumba chennaagi haaDtiiya*]   *anta*]   *music   meeSTru*
              *pro*   very   well   sing.2S   COMP   music   master.NOM
       *ninnanna*_i/*nannannu*/*Shantiyannu*   *yaavagalu*   *hogaLtaare*
       you.ACC/I.ACC/Shanti.ACC   always   praises.3(HON)

       'The music teacher always praises you/me/Shanti (saying), *pro* (you) sing very well'

As the above example illustrates, the null subject of the appositive clause is corerential with the object NP in the main clause irrespective of the object pronoun's person feature. Consider again the reported version of the appositive *anta*-clause:

(54)   [CP[IP   pro_i/*naanu   tumba   chennaagi   haaDtiini*]   *anta*]   *music   meeSTru*   *nannanna*_i
              *pro*/I.NOM   very   well   sing.1S   COMP   music   master.NOM   I.ACC
       *yaavagalu*   *hogaLtaare*
       always   praises.3(HON)

       'The music teacher always praises me (saying) that I sing very well.'

(55)  [$_{CP}$[$_{IP}$  pro$_i$/*niinu$_i$*      *tumba  chennaagi  haaDtiiya*]  *anta*]  *music    meeSTru         ninnanna$_i$*
         *pro*/you.NOM  very    well       sing.2S      COMP  music  master.NOM  you.ACC
      *yaavagalu    hogaLtaare*
      always        praises.3(HON)
      'The music teacher always praises you (saying) that you sing very well.'

(56)  [$_{CP}$[$_{IP}$  pro$_i$/**avaLu*      *tumba  chennaagi  haaDtaaLe*]  *anta*]  *music    meeSTru       Santina$_i$*
         *pro*/she.NOM  very    well       sing.3SF      COMP  music  master.NOM  Shanti.ACC
      *yaavagalu    hogaLtaare*
      always        praises.3(HON)
      'The music teacher always praises Shanti (saying) that she sings very well.'

The 1st person *pro* and the 2nd *pro* in (54, 55) unambiguously refer to the speaker *nannannu* 'me' and the listener *ninnannu* 'you' respectively. There is no feature mismatch between *pro* and its antecedent, nor is there any ambiguity in *pro*'s reference. An important point we notice in (54), is that the 1st person *pro* is not subject-oriented, as it generally happens in argument *endu*-clauses. As shown in the above examples, an overt pronoun can replace *pro* in (54, 55) without affecting the meaning of the sentence. However, an overt 3rd person pronoun cannot replace *pro* in (56), as indicated by an asterisk in front of the pronoun. We noted in section 4.4 that a 3rd person overt pronoun can replace a 3rd person *pro* in the adjunct *endu*-clause, if it meets the Leftness Condition. This is because the subject position of an adjunct *endu*-clause is a bound position, hence only a bound pronoun is licit in this position. So in order to meet the Leftness condition, the subordinate clause has to be extraposed. This seems to hold for the 3rd person overt pronoun in the appositive clause also, as shown in the grammatical sentence below in which either a *pro* or an overt pronoun is bound by the object NP *Shantina* in the main clause, when the subordinate clause is extraposed.

(57)  *namma  music  meeSTru  Saantina$_i$      yaavagalu  hogaLtaare*         [$_{CP}$[$_{IP}$  pro$_i$/*avaLu$_j$    tumba*
      our      music  master  Shanti.ACC  always      praises.3(HON)              *pro*/she.NOM  very
      *chennaagi  haaDtaLe*]  *anta*]
      well          sings.3SF  COMP
      'Our music teacher always praises Shanti (saying) that she sings very well.'

To sum up our discussion in this section, the appositive *anta*-clause is not an argument of the main verb just like the adjunct *anta*-clause. It is a complement in apposition to the matrix verb. In a way, it is semantically tied to the matrix verb. We also saw that the appositive clause occurs with verbs like *hogaLu* 'praise', *bai* 'scold', *Tiikisu* 'criticize', all of which have quotative function. So the *anta*-clause has a direct speech version and also a reported speech version. *Pro* in the former shows person feature clash with its antecedent; but it has only anaphoric interpretation. And *pro* in the reported speech version does not exhibit mismatch in person feature with its antecedent. I feel that *pro* in the reported version of the *anta*-clause alone meets the most important requirement of an anaphor that it match its φ-features with those of its antecedent. So it is a real anaphor, but the one in the direct speech version is a marginal one since it exhibits a feature clash.

## 5. Conclusions

Kannada, as we noted, is an inconsistent language, in that it possesses characteristics of both consistent null subject type and radical *pro*-drop type. This is because rich agreement is not present consistently in all types of sentences. In Kannada, either there is rich agreement or there is no agreement at all. In either case, a null subject is the basic unmarked option in all subject positions except when there is emphasis or some other feature. So the null subject option is assumed to be the underlying option in my account. Accordingly, I have provided a Spellout analysis of pro according to which *pro* gets pronounced when there is a special feature like emphasis, etc.

The main objective of this paper was to argue against the general view that *pro* is a pure pronominal empty category and to show that Kannada licenses a pronominal *pro* and an anaphoric *pro* as well. Therefore, *pro* in Kannada is on a par with the pronominal anaphor, the big PRO. However, as we noted, the

pronominal *pro* and the anaphoric *pro* occur in different syntactic environments. Besides, we also saw that the agreement inflection plays a crucial role, particularly in subordinate clauses, since agreement not only identifies the referential features of *pro* but indicates its pronominal/anaphoric status as well. So the main focus of this paper was on the pronominal and the anaphoric *pro* licensed by rich agreement. Besides, we considered in what respects null subjects are similar to overt pronouns and in what respects they differ from them.

We noted that the case of *pro* in root clauses was a fairly straightforward one. A null subject of any person is allowed in all clauses and in all tenses provided there is a person feature on the finite verb. This means that predicates such as nominals and adjectives which lack a person feature cannot have a null subject. The object pronoun can also be dropped and recovered from the discourse since in Kannada, (transitive) verbs do not show agreement with the object. In reflexive sentences, the reflexive light verb *koL* licenses a null pronoun in the object position and this null pronoun is locally bound by the subject pronoun, null or otherwise.

We saw that the case of *pro* in embedded clauses, by contrast, was a complicated one. The pronominal and the anaphoric *pro*s occur in different environments. The pronominal null subject occurs in argument CP and DP clauses while the null anaphor occurs only in non-argument clauses. Secondly, the person feature of the null subject determines its pronominal/anaphoric status. So four types of *pro* were proposed, each of them possessing a distinct referential property depending upon its person feature.

The 1st and 2nd person *pro*s can have both anaphoric and pronominal interpretations just like the corresponding overt pronouns. In other words, they refer to the subject and the object, respectively, irrespective of the person feature of the subject and object. So in these cases *pro*'s person feature does not match with that of its antecedent. The 1st and 2nd person *pro*s also refer to the speaker and the listener, respectively. The 3rd *pro* and the corresponding overt pronoun, on the other hand, are pure pronominal categories in that they allow only a pronominal interpretation. We noted that the feature mismatch in the case of 1st and 2nd person null subjects was due to the following factors: Kannada quotative verbs such as verbs of *saying* and *thinking* simply report direct speech. But there is no difference in person feature between the subjects of embedded clauses in reported speech and those in direct speech. The subjects in reported speech are just "copies" of the pronominal subjects in the direct speech situation. Accordingly, agreement on the embedded verb reflects the 1st, 2nd, and 3rd person agreement inflection in direct speech. It is this which leads to a mismatch in person feature between *pro* and its antecedent, especially in the case of 1st and 2nd person *pro*s when they have anaphoric meaning. It is these parallels between reported speech and direct speech that are responsible for the pronominal character of these *pro*s. An important property that the 1st, 2nd, and 3rd person null subjects share is they all occur in clauses which function as arguments especially of quotative verbs. The 1st and 2nd person null subjects exhibit feature clash which goes against Binding Condition A and disqualifies them to be anaphors. The 3rd person *pro* allows only pronominal interpretation. This way, these null subjects are basically pronominal categories in keeping with Binding condition B.

Since the null subject is the unmarked option in Kannada, I assumed that the null subject is the basic underlying option and proposed a Spellout analysis of *pro* according to which a null subject gets pronounced only when it has some special feature like emphasis, etc. Following Roberts (2010), I assumed that T is pronominal in Kannada especially in clauses which show rich agreement, and that it has a *u*D-feature and also an EPP feature. I also assumed that ϕ-features on T and case feature on arguments are interpretable in Kannada. *Pro* in Kannada is not only specified for ϕ-features, but also for its pronominal/anaphoric reference, since *pro*'s person feature largely determines its pronominal/anaphoric meaning. Accordingly, 1st and 2nd person *pro*s are marked for the features +subj/speaker, and +obj/listener, respectively, in addition to the ϕ-features. The 3rd person *pro* will have the feature +Pron. When an Agree relation is established between pro and T, the interpretable ϕ-features are copied on to T so that these features are not deleted, but are visible at LF as well.

*Pro*, the anaphor, does not share any structural relationship with its antecedent, since it occurs in non-argument adjunct and appositive *endu*-clauses. The adjunct and the appositive clauses share a semantic relation with the main clause. The adjunct clause in particular is not quotative; it acts as an adverbial clause of reason. *Pro* in the adjunct clause does not exhibit any feature clash; it shares its ϕ-features with its antecedent although it does not meet the structural C-command requirement; it is bound non-locally by an NP in the main clause. It is the cause-and-effect relation between the adjunct *endu*-clause and the main

clause that licenses an anaphoric *pro* in the adjunct clause.

As for the appositive *endu*-clause, it has a direct speech version and a reported speech version as well. In the former, *pro* shows a feature clash and in the latter, it does not. So I look upon the *pro* in the reported speech version alone as a real anaphor since it meets the morphological requirement that it has the same referential features as its antecedent.

In either of these clauses, the 3rd person overt pronoun in place of *pro* can be anaphoric only if the subordinate clause is extraposed to the clause-final position. This shows that the overt 3rd person pronoun in the adjunct and appositive clauses obey the Leftness Condition. This condition does not apply to the overt 3rd person pronoun occurring in the argument clauses.

There has been very little work done on null subjects in Kannada. The present study is a modest attempt to fill the gap and therefore it is by no means exhaustive. Further research is required before we can say anything definite about the two types of *pro* in Kannada.

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