

South Dravidian Languages: Consistent Null Subject or Discourse *Pro*-Drop?

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Abstract

Indian languages are not mentioned in any of the canonical literature on null subject languages as they do not fall in a specific subcategory neatly. They show a relatively consistent conjugation system, but have more features of Radical *pro*-drop languages than Consistent Null-Subject languages. (Note 1) I examine South Dravidian languages (henceforth SDLs), which show consistent conjugation system, much like the Romance languages yet drop arguments and adjuncts profusely, especially if they are once established in the discourse. There is a sense of hesitance amongst scholars to concede and group them among Radical *pro*-drop languages. I follow Sigurdsson (2011) in that generative literature has ‘misjudged the role of agreement for licensing and identifying of null arguments’ (Sigurdsson, 2011, p. 276) and argue that the special nature of SDLs as radical *pro*-drop languages that have agreement prove to be a prime example of this. SDLs prove as prime examples to suggest a unified theory of *pro* in line with Barbosa (2019).

Keywords: Agreement, *Pro*-drop, Incorporation, Null subject

1. Introduction

The study of *pro* (the phonologically null pronoun) in natural languages has a long tradition starting from the works of Rizzi (1986). The research has come a long way from the initial analysis of *pro* in terms of (a) licensing by T and (b) identification by the ϕ -features on T. When there is enough information on the agreement markers on the verb (or T), the subject can be dropped. Initially the study revolved around Romance languages that showed very productive *pro*-drop in subject position and other languages like English and French which did not (Perlmutter, 1971).

(1) a. *Parla italiano*

b. *Habla espanol*

c. *Speaks English

d. *Parle français

Later studies discovered various languages that show varying levels of distribution of empty pronouns. Rizzi (1982, p. 143) proposes two cases of null subject languages: one where the null pronoun gets a referential reading and another where the empty pronoun can have only expletive reading. In the following sentences (examples from Cardinaletti, 1990, pp. 5-6), in (2a) the expletive pronoun *es* has to be covert. The same pronoun in (2b) has a referential interpretation and has to be overt.

(2) a. *Gestern wurde (*es) getanzt.* (German)

yesterday was (it) danced

‘Yesterday there was dancing.’

b. *Gestern war *(es) geschlossen.*

yesterday was (it) closed.

‘Yesterday it was closed.’

Huang (1984) introduced East Asian languages to the discussion, showing that they have more liberal distribution of empty pronouns (in in argument and adjunct positions) even in the absence of verbal agreement.

(3) Speaker A: *Zhangsan kanjian Lisi le ma?*

Zhangsan see Lisi ASP Q

‘Did Zhangsan see Lisi?’

Speaker B: a. *ta kanjian ta le.*

he see he ASP

‘He saw him.’

b. *e kanjian ta le.*

‘[He] saw him.’

c. *ta kanjian e le.*

‘He saw [him].’

d. *e kanjian e le.*

‘[He] saw [him].’

Holmberg (2005) introduced yet another set of languages which can have null subjects under restricted conditions called Partial null subject languages. Generally, four types of null subject languages are identified (See Figure 1).

Table 1. Types of Null subject languages (Biberauer, Holmberg, Roberts & Sheehan, 2010, pp. 5-12)

Consistent languages	null subject	referential pronouns in subject position are null; has rich verbal agreement	Italian, Spanish, Greek
Expletive languages	null subject	Only expletives are null; referential pronouns are overt	German, Dutch, Afrikaans, Jamaican
Discourse Radical languages	<i>pro</i> -drop or <i>pro</i> -drop languages	Any pronominal can be dropped under appropriate discourse conditions	Chinese, Japanese, Korean, Thai, Vietnamese
Partial null subject languages		Third person referential pronoun can be null when bound by a higher argument	Finnish, Hebrew, Russian, Icelandic

In Section 2, we see that Dravidian languages show various features of both consistent null subject languages and discourse *pro*-drop languages, that they prove to be difficult to categorise, according to the above table. A detailed comparison of characteristic features of different types of null subject languages are discussed to understand what makes the categorisation of Dravidian languages difficult.

In section 3, different theoretical explanations are provided to show that Dravidian languages are radical *pro*-drop, specifically the Chinese-type rather than the Japanese type of radical *pro*-drop. These include, Tomioka (2007), Frascarelli (2007) and Sigurdsson (2011).

Section 4 digresses from the main question to address the exceptional case of Malayalam which gets more mentions among Discourse *pro*-drop languages than any other language in the family. Using the Finiteness in MoodP model from Amritavalli & Jayaseelan (2005), it is seen that Malayalam is quite similar to other SDLs and is the rule rather than the exception, in terms of agreement and *pro*-drop.

Section 5 examines Sigurdsson's (2011) C/edge linking principle as a viable approach to the phenomenon of *pro*-drop, regarding its applicability to SDLs. Section 6 concludes the paper suggesting further investigation of the topic on lines of a unified theory that considers both syntactic features outside TP/IP (Sigurdsson 2011) and semantic functions and operations (as in Barbosa 2019).

2. The Problem

Indian languages do not feature in the discussion of null subject languages in canonical literature. This is because they do not adhere to the features used to define different categories of null subject languages. Languages that are acknowledged are Marathi (Holmberg, Nayudu

and Sheehan 2009) and Malayalam (Neeleman and Szendrői 2007), recognised as Partial NSL and radical *pro*-drop language respectively. Jayaseelan (1999) points out that Dravidian languages are radical *pro*-drop languages, like other East Asian languages, identified by lack of overt articles. However, Finnish and other Slavic languages, which do not have overt articles, do not allow radical *pro*-drop. Sudharshan (2017) calls Kannada as “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” (p. 26). Suman (2014) tries to show Telugu as a consistent null-subject language that allows partial *pro*-dropping. It is further interesting that Holmberg & Sheehan (in Biberauer et.al., 2010, p. 132) list Telugu among Consistent null subject languages.

Historically, Dravidian languages, including Malayalam, used to have agreement in all types of sentences. This encourages the view that SDLs are consistent NSL. The fact that pronominals in Dravidian are derived by inflecting ϕ -markers to deixis features and a null D (Jayaseelan 1999) encourages the idea of incorporation of subject into T and the subsequent mechanism of deriving null subject in these languages. While consistent null subject languages are usually represented as the inverse of radical *pro*-drop languages (Saito 2007), here we have a set of languages that seem to share the features of the two types. Thus SDLs pose as quite the example to separate the fine lines between different null subject languages.

Consider the following analysis of discourse *pro*-drop put forward by Saito(2007) which suggests that both radical *pro*-drop and argument ellipses are the result of the same grammatical mechanism. According to him, certain set of discourse-given entities are copied into argument position. Understood arguments in a discourse or antecedents of elided arguments fall in this set. This occurs under the precondition of absence of surface agreement triggers. Since there is no requirement of arguments to trigger agreement, they are not required in the Numeration. The arguments are copied from a higher clause only in the LF.

This analysis provides a clear contrast to the agreement-based analysis of Consistent null subject languages. According to Roberts (2007) if the set of features on the goal (the null subject) is a perfect subset of the features on the probe (T, which in addition to the ϕ -features and the D-feature, has the EPP feature), then the goal is defective and is not phonologically realised. If T does not have a specified set of ϕ -features (impoverished ϕ P), it cannot have a D feature, and *pro* will not be a defective goal. Thus in languages where the D-feature is not present on T (non-null subject, partial null subject and radical *pro*-drop languages), *pro* cannot be deleted or not have a PF realisation. This also validates the relation between presence of the D-feature on T and rich agreement observed in such languages.

Roberts’(2007) theory of incorporation of pronouns into T is used to analyse the I-subjects. Definite null subjects in consistent NSLs are incorporated ϕ Ps which are interpreted as definite by virtue of a valued D-feature in T. When T enters into an Agree relation with a null pronoun ϕ P, T’s features become a superset of the pronoun’s feature, the probe and the goal form a chain. This undergoes chain reduction and only the highest copy, the pronominal T, is pronounced as an affix on V. Since the T has the D-feature valued by the A-topic in SpecCP (Frascarelli’s 2007 model, discussed in Section 5), the resulting chain represents a referential

definite null subject.

Given the above widely accepted analyses of *pro* in Consistent NSL and Radical *pro*-drop languages. On closer inspection, we see that many of the characteristic features of Consistent null subject languages are found in Dravidian languages. Consider the following features of Consistent null subject languages:

- Rich subject verb agreement
- Non-root, non-controlled, ‘topic’ pronouns are null
- an emphatic change caused by the presence of the overt pronoun.
- No null generic pronoun; it has to be overt.
- Embedded subject is null when controlled by an antecedent
- strong preference of disjoint interpretation of overt pronoun when it is embedded in an adjunct phrase.

We find that each of these features are present in SDLs. Consider the following examples to illustrate each of the above features.

Table 2. Agreement morphology in SDLs for the verb *va* 'come' in Past tense (Steever 1998)

	Tamil		Early Malayalam		Kannada		Telugu		Modern Malayalam	
	SG	PL	SG	PL	SG	PL	SG	PL	SG	PL
M	<i>vandān</i>		<i>vandān</i>		<i>banda</i>		<i>vaccādu</i>			
		<i>vandār</i>		<i>vandār</i>		<i>bandaru</i>		<i>vaccāru</i>		
F	<i>vandāḷ</i>		<i>vandāḷ</i>		<i>bandaḷu</i>					<i>vannu</i>
							<i>vaccindi</i>			
[-HUM] (Note 2)	<i>vandatu</i>	<i>vandava</i>	<i>vandatu</i>	<i>vandava</i>	<i>banditu</i>	<i>bandavu</i>		<i>vaccāyi</i>		

SDLs have a rich system of subject-verb agreement for every person in all tenses. Though Modern Malayalam does not have agreement morphology, the absence of agreement markers is a phonological phenomenon. (Note 3)

Consider the examples from (1). A direct translation of, say (1b) in Telugu is,

(4) *Spanish maaTlaaDataaru*

Spanish speak.PRES.3.M.PL

‘He speaks Spanish.’

However, in some cases, the sentence is acceptable only when there is an established

conversation about a person who is referred to by the empty *pro*. Therefore, the sentence works better in a discourse rather than as an isolated sentence.

(5) a. # *Spanish samsaarikkum*

Spanish speaks

‘He speaks Spanish.’

b. *Avan ethu bhasha samsarikkum?*

he which language speaks

‘Which language does he speak?’

c. *Spanish samsarikkum.*

Spanishspeaks

‘He speaks Spanish.’

The above sentences are also examples of how, if a subject pronoun is established by the context, i.e., is in the topic position, the non-root, non-controlled pronoun is generally null. Unmarked sentences do not have overt subjects in finite clauses. The overt pronoun adds an emphatic reading in Romance languages.

(6) *EL/ELLA habla español*

(Spanish)

he/she speak.3.sg Spanish

‘(HE/SHE) speaks Spanish’

However, in SDLs an overt pronoun does not bring an emphatic reading. It rather brings a redundancy but no difference in the interpretation. Furthermore, an overt topic pronominal subject is neither ungrammatical nor unacceptable.

In the case of null generic impersonal subject, Consistent null subject languages must express the indefiniteness overtly using a generic pronoun (like the English ‘one’), while partial null subject languages have empty pronoun. It is one of the few features that unequivocally distinguished the two types from each other. However, in SDLs, there are no generic impersonal pronoun that is similar to the English ‘one’ or Romance reflexive morpheme ‘se’. The generic impersonal pronoun in SDLs is derived by using indefinite quantificational expressions like ‘who-even’ which can be optionally null. Thus in this regard, it is similar to consistent null subject languages in that it cannot have a null generic version of ‘one’ but different as the generic expression can optionally be null.

(7) a. *Si deve lavorare fino all’eta’ di 65 anni.* (Italian; Egerland 2003)

‘One has to work until the age of 65.’

b. *Aqui nã o se pode nadar.*

(European Portuguese)

‘One can’t swim here.’

c. *Ta šsa* *istuu mukavasti.* (Finnish)

here sits comfortably

‘One can sit comfortably here.’

d. (*Ewaru-aynaa*) *ii kurcii loo sukham gaa kuurcoo waccu.* (Telugu)

who even this chair in comfortably sit may

‘Anyone can sit comfortably in this chair.’

Controlled subject is null in Consistent null subject languages. Consider the following sentence. In (8a) the covert pronoun, the null subject, gives a strict reading where the person ‘arriving’ and ‘speaking’ is ‘the professor’. The overt pronoun gives a disjointed, sloppy reading where the person ‘arriving’ is not the ‘the professor’. This is similar in SDLs as in (8b).

(8) a. *Il professore ha parlato dopoche (lui) e’ arrivato.*

The professor has spoken after that (he) is arrived

‘The professor spoke after he arrived.’

b. (*addeham*) *vannathinu sesham professor samsarichu*

He.Hon.SG come.PTCP after professor spoke

‘The professor spoke after he arrived.’

From the above examples, it appears that SDLs do have most of the characteristics of consistent null subject languages. More importantly, the analysis of null subjects proposed in Roberts (2007) seems applicable to SDLs *prima facie*. I shall argue that this is not the case in the next section.

Impoverishment is the deletion operation which “neutralises differences between syntactic contexts in morphology” (Müller 2005:3), thus giving a syncretic effect by giving the same realisation to distinct bundles of features. According to Müller (2005), ‘an argumental *pro* DP cannot undergo Agree with a functional head α if α has been subjected (perhaps vacuously) to a ϕ -feature neutralising impoverishment in the Numeration’ (p. 10). Thus impoverishment removes ϕ -features from a head. In that case The head cannot have the D-feature. In order for a head to have D-feature, the definiteness has to be encoded through existence and uniqueness, through a set of fully specified ϕ -features. If T has impoverished ϕ -features, it cannot bear a D-feature. Do SDLs have impoverished ϕ -features? Consider the pronominal paradigm and the subject verb agreement given below.

(9) *Naa-nu maaD-id-e-nu*

1.SG do.PERF.1.SG

Naa-vu maaD-id-e-vu

1.PL do.PERF.1.SG

<i>Nii-nu</i>	<i>maaD-id-e-nu</i>
2.SG	do.PERF.1.SG
<i>Nii-vu</i>	<i>maaD-id-i-ri</i>
2.PL	do.PERF.2.PL
<i>A-(v)a-nu</i>	<i>maaD-id-a-nu</i>
3.M.SG	do.PERF.3.M.SG
<i>Avalu</i>	<i>maaDidaLu</i>
3.F.SG	do.PERF.3.F.SG
<i>Avaru</i>	<i>maaDidaaru</i>
3.HUM.PL	do.PERF.3.HUM.PL
<i>A-du</i>	<i>maaDitu</i>
N-HUM.SG	do.PERF.N.HUM.SG
<i>A-vu</i>	<i>maaDidavu</i>
N-HUM.PL	do.PERF.N.HUM.SG

We see a clear presence of the pronominal features in the verb. We also see that the pronouns and the verbal agreements are both fully specified for all the ϕ -features. This would indicate that T can carry a D feature.

Roberts'(2007) theory of incorporation of pronouns into T is borrowed from clitic incorporation where, say, direct-objects are incorporated to v -V where features of the clitic are properly included in the features of the host. The clitic features (goal) enter check the features of v (probe) under Agree, and the copying of features results in a chain. The PF effect of movement is achieved when only the higher copy is realised. The difference between incorporation and Agree lies in the role of EPP. EPP triggers pied piping of features that are not included in the probe, while in incorporation, EPP does not involve in the process. A similar process involves the verb (v -V complex) to T movement if T has a V-feature as in some VSO languages. Clitics and *pro* and similar in that they are both ϕ -elements. While definite null subjects in consistent NSLs are incorporated ϕ Ps which are interpreted as definite by virtue of a valued D-feature in T, definite null subjects in partial NSL are DPs which have been second-merged with SpecTP. The definite null subject in partial null-subject languages is in SpecTP and checks the EPP, while the generic null subject is in Spec vP and does not check the EPP. Furthermore, since the indefinite, generic null subject does not have an A-topic antecedent, the EPP must be checked by some other category (like adverbials) in these sentences. When T enters into an Agree relation with a null pronoun ϕ P, T's features become a superset of the pronoun's feature, the probe and the goal form a chain. This undergoes chain reduction and only the highest copy, the pronominal T, is pronounced as an affix on V. Since the T has the D-feature valued by the A-topic in Spec CP, the resulting

chain represents a referential definite null subject.

3. SDLs as Radical *Pro*-drop Languages

SDLs have fully specified ϕ Ps present on T. However, we see that, they are not consistent null subject languages. The association of rich agreement with null subject is perhaps misguided and the real deciding factor of whether a language can have null subject is the presence of D feature on T. In spite of what appears like pronominal incorporation on T in (9), there is no D present on T in SDLs.

Dravidian languages known to have a null D (Jayaseelan 1999). The third person pronouns in SDLs are formed by affixing person, number, gender markers to distal and proximal determiners, ‘*aa*’ and ‘*ii*’ respectively. Jayaseelan 1995 points out that the definite article in Dravidian in null. *Pro* in Malayalam is then the null definite article affixed with ϕ -features.

(10) a. *aa /ii + -an > avan /ivan*

Distal/proximal M.S

b. $\emptyset + -an > \emptyset$

Null Det. M.S. *pro*

Thus, SDLs can have D feature on T, but it remains unvalued as it is covert. Therefore unlike Consistent null subject languages, it is possible to have a null subject with a generic impersonal interpretation in South Dravidian languages. Moreover, this is a characteristic that SDLs share with other radical *pro*-drop languages of East Asia. In (11) the null subject can have both a strict reading when bound by the higher subject, or a sloppy reading with a generic interpretation.

(11) a. *Ah John waa hai Jinggwok jiu gong Jingman* (Cantonese)

Prt John say in England need speak English

‘John says that one/he needs to speak English in England.’

b. *England lo english lo maatalaadutaaru ani John ceppaadu*

England-in English-in speak.IMPF.3.PL COMP John said

‘John said that in England, (he/people) speak English.’

The null definite article gives the strict interpretation by transferring the index from the higher topic while the sloppy interpretation is derived from an elided quantificational phrase (as seen in example 7). Thus, in spite of having a definite null article, SDLs behave more like radical *pro*-drop than consistent null subject languages.

This fact is corroborated by Tomika (2003) and Boskovic (2009). NP languages are languages that can have a definite reading from bare NPs. Radical *pro*-drop is possible only in NP languages as the absence of D ensures the argument drop is licensed by discourse entities rather than agreement licensing. Saito’s (2007) LF-copying and Neeleman and Szendrői’s

(2007) analyses provide different approaches to the same phenomenon. (Note 4)

On comparison with other radical *pro*-drop languages, we see that SDLs show subject object asymmetry in the availability of strict and sloppy interpretation. Sloppy interpretations are available to both null subjects and null objects in Japanese (12a), whereas in Chinese (12b), the null subject can have only the strict reading.

(12) a. *Taroo-wa [zibun-no kodomo-ga eigo-o hanasu to]omotteiru.*

Taroo-TOP self-GEN child-NOM English-ACC speak that think
 ‘lit. Taroo thinks that self’s child speaks English.’

b. *Ken-wa [e furansugo-o hanasu to] omotteiru.*

Ken-TOP [e French-ACC speak that] think
 ‘lit. Ken thinks that e speaks French.’ (^{ok}strict, ^{ok}sloppy)

(13) a. *Zhangsan shuo [ziji-de haizi xihuan Xiahong]*

Zhangsan say [self-MOD child like Xiahong]
 ‘Zhangsan said that self’s child liked Xiahong.’

b. *Lisi shuo [e xihuan Xiaoli]*

Lisi say [e like Xiaoli]
 ‘Lisi said that e like Xiaoli.’

SDLs show similar subject object asymmetry and are like Chinese rather than Japanese.

(14) a. *John tanna hendatiyannu preetisuttaane* (Kannada)

John self-GEN wife-ACC loves
 ‘John loves his wife.’

b. *Bill-uu e preetisuttaane*

Bill-also loves
 ‘Bill loves too.’

(15) a. *[tannoḍa kuzhandai English-lai pesuvaan nu] John sonna* (Tamil)

self-GEN child English will.speak COMP John said
 ‘John said that his child would speak English.’

b. *[e French pesuvaan nu] Mary sonna*

French will.speak COMP Mary said.

Lit. Mary said that *e* would speak French.

Tomioka (2003:336) states that ‘all languages which allow discourse *pro*-drop also allow robust bare NP arguments. He also argues that this difference between Japanese and Chinese in the availability of sloppy reading of null subject is due to the structural difference in their noun phrases. The Japanese noun phrase does not project a DP, whereas Chinese does (Li 2007). SDLs are similar to Chinese because they too have a DP projection to accommodate the null D.

According to Liu (2014) the subject *pro* in Chinese is defective for ϕ -feature and referential index. The *pro* gets both ϕ -features and the referential index from the Topic. Yang (2014) suggests that subject *pro* can either occupy the Topic position or Spec TP; with the latter, it can refer only to an antecedent within the sentence, the closest subject, whereas in the former position, it can refer to antecedents outside the clause. Miyagawa (2019) combines Liu (2014) and Yang (2014) and argues that if *pro* receives ϕ -feature agreement, from its local T/AGR, the *pro* stays in Spec TP and it can only take the closest subject as its antecedent. If *pro* does not take on the ϕ -features of the local T/AGR it moves to the Spec CP that has the topic feature, and it becomes a topic that can refer to an entity outside the sentence. Thus a topicalized *pro* can have only strict interpretation, not a sloppy reading.

4. Is Malayalam Different?

The beginning of this paper is from the question, ‘Why is Malayalam the only SDL given as an example of radical *pro*-drop languages in canonical literature?’, ‘Can it be possible that Malayalam is radical *pro*-drop and Telugu is consistent null Subject?’

The initial perception indicates the absence of verbal agreement in Malayalam as the reason it is considered as a prime example of radical *pro*-drop, along with Chinese. However, the grammatical structure of Malayalam is not different from other SDLs that it can be an exception. It would then suggest that SDLs are languages with rich verbal agreement that are radical *pro*-drop. Such a case is new in the literature. This dilemma can be addressed by understanding the verbal agreement in SDLs. The model proposed in Amritavalli and Jayaseelan(2005) provide an excellent explanation as to why agreement in SDLs is not a characteristic of consistent null subjects. Consider the following sentences.

(16) a. *Shyam naLe Mysorininda baruttaane.* (Kannada)

Shyam tomorrow mysore-from come.n-PST.M.SG

‘Shyam will come from Mysore tomorrow.’

b. *Shyam naaDiddu banglorige hoga beku.*

Shyam day after tomorrow bangalore-to go.INF need.

‘Shyam must go to Bangalore the day after tomorrow.’

(17) a. *Meeru intiki vellaaru.* (Telugu)

You home-to go.N-FUT.M.PL

‘You went home.’

b. *Nenu intikki vella ledu*

I home-to go.INF NEG

‘I did not go home.’

(18) a. *Avar rasam caappittar.* (Tamil)

They rasam eat.PST.M.PL.

‘They ate rasam.’

b. *Naan caappitavillai.*

I eat.PST.NEG

‘I did not eat.’

c. *Neengal kavalappeta vendaam.*

You worry.INF need.PERF.NEG.2.PL

‘You need not worry.’

We see that agreement is not present in all the sentences. In Kannada, there is no agreement in sentences with modal (16b). In Telugu agreement is not present in the sentences with negation (17b). Both (16a) and (17a), the positive sentences have agreement morphology. In Tamil, we see agreement in positive indicative sentences (18a), and sentences with negation and modal (18c). (18b) does not show agreement morphology in the negative sentence. It is evident that in Dravidian, sentences of negation and modality are constructed by adding constituent-negation morphology to the [\pm past] stems.

(19) a. *Avanu bar-ut-aane* (Kannada)

He come-N-PST-3.M.SG

‘He comes’

b. *Avanu baar-anu/ bar-uvud(u)-illa*

He come.NEG-3.M.SG come-gerund-NEG

‘He does not come’

c. *Avanu ban-d-anu*

He come-PST-3.M.SG

‘He came’

d. *Avanu ban-d-illa/ bar-al-illa*

He come-PST-NEG come-inf-NEG

‘He did not come’

In Kannada, the negation is either analytic or synthetic (Shiffman 1979). The two forms in (19b and d) are quite revealing in the general pattern observed in Dravidian. The morphological negation particle *-aa* is inflected on the stem *ba* to derive the analytic negation while the negative existential verb *illa* is used in the synthetic method. (Note 5) In non-past tense negation, the verb in gerundive form attaches to *illa*, whereas in past tense, the infinitive verb form attaches to *illa*.

(20) a. *Atanu vacc-aadu* (Telugu)

He come.PST-3.M.SG

‘He came’

b. *Atanu raa-leedu*

He come.inf-NEG

‘He did not come’

c. *Atanu vast-aadu*

He come-N-PST.

‘He comes’

d. *Atanu ra-a-du*

He come-NEG-3.M.SG

‘He does not come’

In Telugu, similarly, either the infinitival verb form is inflected with the NEG verb *leedu*, as in (20b), or the morphological NEG particle *-aa* inflects to the root, followed by agreement marking, as in (20d). The *-aa* particle is reduced as the verb root ends in the same vowel.

(21) a. *Avan van(d)-aan* (Tamil)

He come.PST-3.M.SG

‘He came’

b. *Avan var-uki-raan*

He come-PRS-3.M.SG

‘He is coming’

c. *Avan vara-(v)illai* (Note 6)

He come.inf-NEG

‘He did/does not come’ (Lehmann 1993:70)

In Tamil, once again the verb in infinitive form is inflected with the NEG verbal *illa*.

However in Malayalam we see quite a different pattern.

(22) a. *Avan vann-u* (Malayalam)

He come.PST-Ø

b. *Avan vann-illa*

He come.PST-NEG

c. *Avan var-unn-u*

He come-N-PST-Ø

d. *Avan var-unn-illa*

He come-N-PST-NEG

e. *Avan var-um*

He come-FUT

‘He will come’

f. *Avan var-illa*

He come.inf-NEG

‘He will not come’ Lit. He coming is not.

Amritavalli & Jayaseelan (2005) argue that Malayalam is similar to Kannada in that it has the tense/aspect markers in the matrix clauses in positive sentences. However, unlike Kannada sentences (19 a-d), Malayalam does not have agreement markers. They have been lost since the 14th-15th century, with the advent of Modern Malayalam. In the positive sentences, after the tense/aspect morpheme we see *-u* ending, in place of agreement features. This is a common empty morpheme that marks the word-boundary and we assume that the absentee agreement is in fact a null morpheme. (Note 7) *-u* demarcates the erstwhile position of agreement marking. Note that in (22 e-f) the *-um* is actually a modal verb that is often misconstrued as a future marker. Hany Babu(1997) shows that there is no putative future tense in Malayalam. *-um* is the universal quantificational morpheme/modal which affix on to the bare infinitive verb, where it indicates a prediction of an event. We also see that the modal suffixes are absent in negation, replaced by the NEG existential verb *illa*.

Thus in SLDs, the construction with modals have infinitive verbs affixed with modals (suffixes or auxiliaries) and lexicalised agreement marking. Negative sentences have the infinitive verb affixed with *-illa*. All these indicate SLDs having a fully specified agreement system that has been changing over the time. According to Amritavalli and Jayaseelan (2005) this is due to the emergence of new projections like NEG and Modality that can host finiteness besides AGR. They suggest that in SLDs, finiteness is encoded in MoodP as opposed to TenseP. There are predominantly three Mood heads that select different AspectP under it.

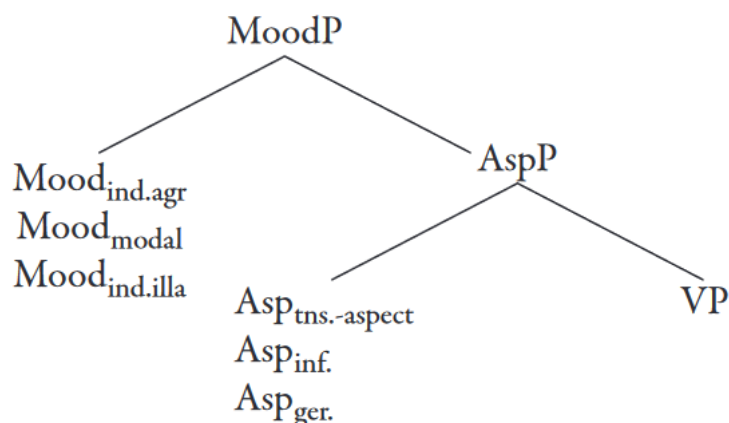


Figure 1. Structure of Dravidian Mood Phrase (Amritavalli & Jayaseelan, 2017, p. 398)

In Kannada for example, agreement markers are present only in a positive indicative mood. They act as the host of finiteness. In negation, finiteness is hosted by *-illa* and in sentences with modals the finiteness is encoded by modal verbs. These modals do not use auxiliaries. They occur independently. In Malayalam, a similar distribution is shown despite the absence of agreement markers. However, Tamil and Telugu do not show a complementary distribution of agreement with negation or modals. However, when agreement and negation/modal co-occur, agreement always acts as the host of finiteness (Amritavalli & Jayaseelan 2005, Amritavalli 2014). (Note 8) Thus absence of agreement in Malayalam does not make it different from other SDLs; if anything, it fits into the pattern of diachronic change in the language family. Thus despite the similarities between SDLs and Romance languages, SDLs are not consistent null subject languages.

5. Beyond the Categories

The very existence of SDLs indicate that there can be radical *pro*-drop languages that have agreement morphology. It encourages one to re-examine the criteria of identifying different types of *pro*-drop or rather the necessity of such categorisation. Tomioka (2003, 2014), Sigurdsson (2011) and (Barbosa 2019) have suggested that what perhaps matters is the availability of discourse information and semantic functions that enable each language to provide various interpretation to the null arguments. One of the promising models are given by Sigurdsson (2011) where he proposes C/edge Linking principle.

The proposal is that in addition to the three types of Topic features in CP that Frascarelli (2007) and Frascarelli and Hinterhölzl (2007) propose, there are other silent but probing features in C-domain. C-domain contains “speaker” feature or logophoric agent (Λ_A), and “hearer” feature or logophoric patient (Λ_P). Together, they are referred to as C/edge linking features (CLn) (Sigurdsson 2011, p.282). These probes match with goals under Agree and are positively valued. When there is a 1st person argument in the T-domain, under Agree, it matches with Along with Λ_A in the C-domain, to be valued as [+ Λ_A , ...]; a 2nd person argument is [+ Λ_P , ...]; and a definite 3rd person argument is [+Top, ...] while an indefinite argument do not positively match with the C/edge linking features. This is generalised as the

C/edge-Linking Generalization which states, ‘Any definite argument, overt or silent, positively matches at least one CLn in its local C-domain, CLn is a member of $\{\Lambda_A, \Lambda_P, \text{Top}, \dots\}$ ’ (Sigurdsson 2011, p. 282). Sigurdsson also provides a cartographic approach, inspired by Rizzi (1997 et. Seq.) and Cinque (1999 et seq.), just to sketch the position of these features within the C-domain, without delving further into the different Top types, Focus and left dislocated constituents

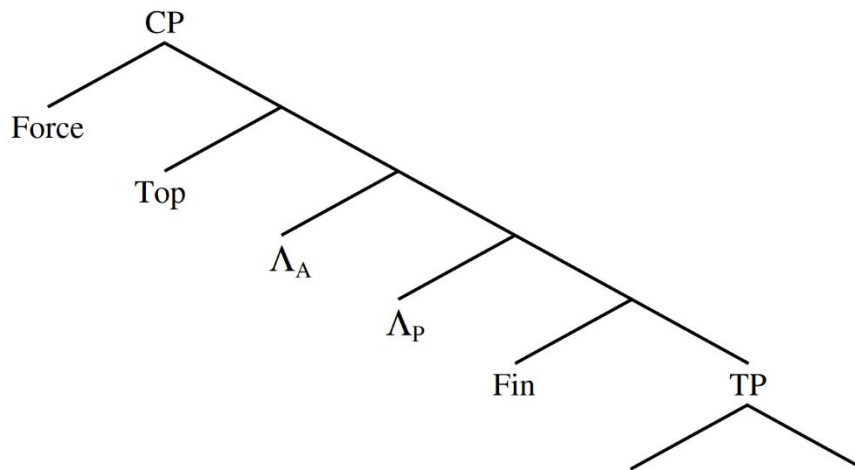


Figure 2. The Left periphery (Sigurdsson, 2011, p. 282)

Following is an example of how the arguments link with the C/edge linkers.

- (23) a. He said to Mary, ‘‘I will help you.’’
 b. $[\text{CP} \dots \{\Lambda_A\}_i \dots \{\Lambda_P\}_j \dots [\text{TP} \dots he_k \dots Mary_l \dots [\text{CP} \dots \{\Lambda_A\}_k \dots \{\Lambda_P\}_l \dots [\text{TP} \dots I_k \dots \text{you}_l \dots$

We see a deictic switch here, when the embedded Λ_A and Λ_P redefine the local speaker and hearer respectively. The same switch is seen in many languages including Indo- Aryan and Dravidian languages.

- (24) a. Hindi-Urdu:

Saritane kahaa thaa ki mainN aapse kal miluungii.

Sarita.ERG said had that I you-with tomorrow will-meet

‘Sarita had told me that she’d meet me tomorrow.’

(also: ‘... that I will meet you tomorrow.’)

- b. Telugu

neenu mi photo cusaanu ani Maya Rajuki ceppindi

I your photo saw that Maya Raju.ACC told

Maya told Raju that I saw your photo. (also: ‘...that she saw his photo’.) (Note 9)

Given the C-Edge linking generalisation, we can analyse overt subjects as follows.

- (25) a. [CP ... (Then) ... [TP he said to her ...
 b. [CP ... {CLn} ... (X) ... [TP pronoun T ... English
 c. [CP ... {CLn} ... (X) ... [TP \emptyset -T ϕ ... Italian
-

In English (5a and b) the presence of an overt element in Spec C does not affect the CLn features matching with the pronoun. In Italian, (5c) the agreement morphology acts as a pronoun incorporated into T (see section 3.1 for more details on Incorporation). The SDLs, with the exception of Malayalam, are ϕ -visible at T, like Italian. Unlike Italian, argument drop in the SDLs is radical and hence does not involve incorporation. SDLs also have right hand complementizers like Japanese. The plausible model for SDLs are. Therefore, lexical complementizer cannot act as a potential interference to C/edge linking.

- d. [CP ... {CLn} ... [TP ... [vP \emptyset ...
-

In SDLs, pronominal arguments are radical null arguments that can be dropped if they successfully match with CLn features. As there are only right-hand complementizers, they do not intervene C/edge linking. Therefore, the null arguments can match CLn features from the base generated position.

6. Conclusion

While SDLs show several characteristic features of consistent null subject languages, they are in fact radical *pro*-drop languages. The anomaly of being radical *pro*-drop with agreement morphology is explained by the model proposed in Amritavalli and Jayaseelan(2005). The Unifying theory of Sigurdsson (2011) encourages one to look beyond the four types of null subject languages and consider the possibility that, provided there are ample semantic functions and discourse features, languages can have null arguments irrespective of the presence or absence of agreement. Such an approach gains currency from the observations in (Barbosa 2019). Barbosa (2019, p. 502-505) deconstructs the categorial divisions of null subject languages by drawing similarities between partial null subject languages and discourse *pro*-drop languages. This encourages one to go beyond just agreement or control theory to analyse null subject languages and *pro*-drop phenomenon.

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Notes

Note 1. The only available studies in Indian languages are of Marathi as a Partial Null-Subject language (Holmberg, Nayadu & Sheehan 2009) and Malayalam as a Radical pro-drop language (Neeleman & Szendrői 2007). Sudharsan (2017) and Kothakonda (2014) discuss the status of Kannada as ambivalent and Telugu as a Consistent Null-Subject language that allows partial pro-dropping, respectively.

Note 2. SG = Singular; PL = Plural; M = Masculine; F = Feminine; [-HUM] = [-Human/Reason]

Note 3. Modern Malayalam retains agreement in DP structure which is visible in relative clause constructions.

Note 4. However, I do not take up these approaches in their entirety. Though Neeleman and Szendrői (2007) astutely point out that radical pro-drop languages have agglutinative morphology, this is contested in the case of Indo-Aryan languages which are radical pro-drop languages with inflectional morphology, something that warrants further study.

Note 5. *Illa* is derived from the verb *ir-* meaning ‘be’ and *-aa* morphological negation particle. However, according to some scholars, in Ta. *Illai*, the agreement marker *-ai* indicates 3.PL.N (Lehmann, 1993, p. 230). Similarly *leedu* is also composed of the existential verb *lee-* and the agreement inflection for 3.M.SG. *-du*. Though the expressions are lexicalised for the most part, in Telugu, the negative existential verb can agree with person as shown below. The second option involved the morphological negative particle *-aa*.

a. *Nuvvu raa-leedu*

You come-NEG

b. *Neenu ra-lee-nu / raa-nu*

1.SG come-NEG.1.SG / come.NEG-1.SG

I shall use *-illa* as the cover term for the existential NEG verb in all languages.

Note 6. Other forms of negation in present tense are available.

Avan var-(uv)-ath-illai

He come-IMPF-3.NSG-illai

‘He is not coming.’

The Imperfective/non-past marker indicates the incomplete/ ongoing nature of action. The stem inflected by the tense-aspect marker is then inflected by the monimalising markers, and negation verb. This is closer to the gerundive form observed in Kannada.

Note 7. Consider the past tense forms *poyi* (went), *kitti* (got), *vaangi* (bought) and *pokunnu* (going), *kittunnu* (getting), *vaangunnu* (buying). The *-u* ending in present tense, and the *-u/-i* ending past tense mark the finiteness whereas, the *-a* ending the participle forms *poya* (gone), *kiitiya* (got), *vaangiya* (bought) mark the relative (adjectival) participle and in Malayalam. The *-u/-i* ending is homophonous with the past participle forms as in serial verbs *poyi kandu* (went and saw), *kitti bodhiccu* (got and satisfied), *vaangi nokki* (bought and saw/tried).

Note 8. The model proposed in Amritavalli & Jayaseelan (2005) has been criticised for replacing TenseP altogether by Hany Babu & Madhavan (2003) and Swenson (2019). The assumption that there is a null agreement morpheme solves the issue in sentences with negation and modality in SDLs, especially in positive sentences in Malayalam, solves the issue. However, undeniably, Malayalam has exact syntactic structure as that of the other SDLs with respect to agreement, negation and modality.

Note 9. In SDLs, unlike Indo-Aryan languages, the subordinate clauses are usually topicalised and therefore the Λ_A and Λ_P features which are higher than TopP match with the pronouns thus giving the sloppy reading. However, when there is no topicalization, the sentence does give the strict reading, where the local Λ_A and Λ_P features match with those of the matrix antecedents.

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