Title: Radical Pro Drop and the Role of Syntactic Agreement in Colloquial Singapore English

Abstract: This article presents a re-working of Huang's (1984) parametric theory of null arguments through an in-depth examination of the so-called radical pro drop phenomenon and the role of syntactic agreement in Colloquial Singapore English/CSE, an English-lexified contact variety spoken in Singapore. We present a hitherto unnoticed observation that the otherwise liberal omission of the subject in CSE is blocked by the subject agreement *−s* appropriated from its English lexifier. Our central idea here is that meager agreement in CSE must be licensed/valuated by an overt NP through the specifier-head relation (Speas 1994, 2006); however, this requirement effectively blocks the subject empty category either through a *pro* or a variable bound by a zero topic proposed in Huang's theory. Our proposed reworking not only correctly predicts subject-object asymmetries with respect to reference and crossover effects in CSE but also derives the new observation that poor agreement blocks the generation of the empty category in subject position, but not in object position. We further compare our analysis with two recent alternative theories of the radical pro drop phenomenon presented by Neeleman and Szendröi (2007) and Saito (2007). We show that our analysis successfully circumvents the empirical problems CSE raises for these theories.

Radical Pro Drop and the Role of Syntactic Agreement in Colloquial Singapore English[∗]

1.   Introduction

This article discusses the so-called radical pro drop and the relevance of syntactic agreement to this phenomenon in Colloquial Singapore English (henceforth, CSE), an English-lexified variety spoken in Singapore that has emerged and developed out of intense language contact among the vernacular varieties of Chinese, Malay and English. Developing Huang's (1984) parametric theory of null arguments with special focus on the role of syntactic agreement, we propose that the null argument option (either a silent pronoun or a variable bound by a zero topic) is blocked by the meager syntactic agreement under T. Our proposed analysis provides a straightforward account for the new observation that the otherwise liberal omission of the subject, but not that of the object, is blocked in the presence of meager subject agreement. We also compare our proposed analysis with two recent alternative approaches to radical pro drop presented by Neeleman and Szendröi (2007) and Saito (2007). We show that there are a number of empirical problems with these approaches, which can be successfully resolved/circumvented in our theory.

The organization of the present article is as follows. In the following section, we review a recent influential theory of radical pro drop proposed by Neeleman and Szendröi (2007), which attempts the establish the link between the radical pro drop and the agglutinative morphological profile of personal pronouns. We show that this theory is called into question by CSE, which is a radical pro drop language but its personal pronouns are fusional, just as in its lexifier language (English). In section 3, we establish a new observation, based on the examination of the naturally occurring utterances collected in the *National Institute of Education Corpus of Spoken Singapore English* (NIECSSE) and on grammaticality judgment tasks, that the otherwise liberal omission of grammatical arguments is blocked by the syntactic agreement marker –*s* under T. In section 4, after reviewing Huang's (1984) parametric theory of null arguments within the Government-and-Binding Theory (Chomsky 1981) based on the *pro*-drop parameter and the zero-topic parameter, we suggest our reworking of his theory with special attention to the role that

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agreement plays in the null argument possibility. The central idea behind our revised theory is that the impoverished agreement must be licensed (Speas 1994, 2006). We show that this requirement effectively blocks any type of empty category in the subject position (whether it is a *pro* or a variable bound by a zero topic), not in the object position, an asymmetry which would not follow from Huang's original theory. We also examine Saito's (2007) theory, which argues that the radical pro drop is possible only in languages that lack syntactic agreement and have Case-less *pro*'s. We conclude that the CSE facts examined here are problematic for this theory because CSE shows radical pro drop despite its absence of Case-less *pro*'s.

2.   Radical Pro Drop and the Morphology of Pronouns in CSE

In this section, we review one recent influential theory of radical pro drop presented by Neeleman and Szendröi (2007) (henceforth, N&S). N&S propose that a language exhibits the radical pro drop option if its personal morphology is agglutinating. We present data from CSE showing that this English-lexified variety presents an empirical challenge to their theory.

2.1.   *Agreement-Based Pro Drop and Radical Pro Drop*

It is well known that European languages such as Italian, Spanish and Greek allow omission of understood pronominal subjects in a tensed clause. Example (1) from Italian illustrates this phenomenon.

(1)   Gianni$_i$ ha   detto   che $\varnothing_{i/j}$ ha   telefonato.

         Gianni   has   said   that   has   telephoned

         'Gianni$_i$ said that he$_{i/j}$ telephoned.'   (Italian)

A common observation about this subject drop within the framework of Generative Grammar (Taraldsen 1978; Rizzi 1982) has been that "rich" agreement provides a means to identify the subject and hence licenses the occurrence of the little *pro* (Agreement-Based *Pro* Drop). Thus, the verb 'to eat' in Italian

allows for the identification of an understood subject due to its rich morphological inflections, as shown in (2).[1]

(2)   mangio   I.eat   mangiamo   we.eat

       mangi   youSG.eat   mangiate   youPL.eat

       mangia   he/she.eats   mangiano   they.eat   (Italian)

However, this observation is based solely on the contrast between European languages and Germanic languages; rich agreement languages like Italian, Spanish and Greek allow subject *pro* drop whereas poorly inflected languages like English, Dutch and Swedish do not. As Huang (1984) first points out, this agreement-based theory of *pro* drop is immediately called into question once we bring the facts of pro drop in Asian languages (e.g., Japanese, Chinese, Korean, Indonesian) into the picture because *pro* appears rather freely in any one of the argument positions (subjects, objects, possessors, etc.) *despite* the fact that these languages lack the agreement system altogether. This liberal omission of a pronominal argument, widely known in the literature as Radical Pro Drop, is illustrated in (3a-c) from Japanese and in (4a-c) from Chinese.

(3)   a.   ∅   siken-ni   otita.

                          exam-DAT   failed

              'pro failed the exam.'

       b.   Bill-ga   ∅   otita.

              Bill-NOM   failed

              'Bill failed pro.'

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[1] The following abbreviations are used in this paper: A, anaphoric; ACC, accusative; ASP, aspect; COMP, completive; DAT, dative; K, kase; M, masculine; MOD, modification; NEG, negation; NOM, nominative; P, pronominal; PL, plural; POSS, possessive; Q, question marker; SG, singular; 1/2/3, first/second/third person.

c.   [_{NP} ∅   mimi-ga]   nagai.

         ear-NOM   long

     'pro's ears are long.'   (Japanese)

(4)   a.   ∅   kanjian   ta   le.

                           see   he   COMP

          'pro saw him.'

      b.   Ta   kanjian   ∅   le.

           he   see   COMP

          'He saw pro.'

      c.   Zhangsan,   [∅   baba] hen   youqian.

           Zhangsan   father very   rich

          'Zhangsan, pro's father is very rich.'   (Chinese)

The question, then, is two-fold: a) what is the underlying principle governing the radical pro drop option and b) whether this pattern can be reconciled with the agreement-based theory of *pro* drop.

2.2.   *Neeleman and Szendröi's (2007) Radical Pro Drop Generalization*

N&S observe that the presence vs. absence of rich agreement is not the crucial feature behind the occurrence of radical pro drop in a language. They propose instead that this phenomenon is linked to the internal morphological structure of personal pronouns in the language. Their generalization is shown in (5).

(5)   N&S's (2007) Radical Prop Drop Generalization

      Radical pro drop requires agglutinating morphology on pronouns.   (N&S 2007, p. 673)

This generalization states that a language *L* allows radical pro drop if its personal pronouns are agglutinating for Case, number, gender, or some other nominal feature. N&S tested this generalization against some twenty typologically different languages and observations based on *The World Atlas of Language Structures* (Haspelmath et al. 2005). The languages examined in N&S survey include Japanese, Jamaican Creole, Swedish, Dutch, Afrikaans, Italian, Pashto, Greek, Papiamentu, Tok Pisin, Korean, Burmese, Assamese, Hindi/Urdu, Kokota and Chek Ho. N&S derive their generalization from three independently motivated assumptions summarized in (6a-c). The Elsewhere Principle in (6c) has three prominent features stated in (7a-c).

(6) a. Null arguments are zero spell-outs of regular overt pronouns (Perlmutter 1971).

  b. Spell-Out rules for pronouns may target non-terminal nodes in the syntax (Weerman and Evers-Vermeul 2002).

  c. The Elsewhere Principle (Kiparsky 1973) is respected.

(7) a. All else being equal, a phonological realization of a category C takes priority over a phonological realization of the categories contained in C.

  b. All else being equal, a phonological realization of a category C that spells out more of C's features takes priority over a phonological realization that spells out fewer features.

  c. Optionality results if the phonological realization of a category C spells out fewer of C's features than the phonological realization of the categories contained in C.

(N&S 2007, p. 687)

We illustrate how N&S establish the link between the agglutinative morphology of pronouns and the radical prop drop property with these assumptions, using Japanese and English as examples. N&S use the features [+ p(ronominal), −a(naphoric)] to indicate that K(ase)P is a pronoun.

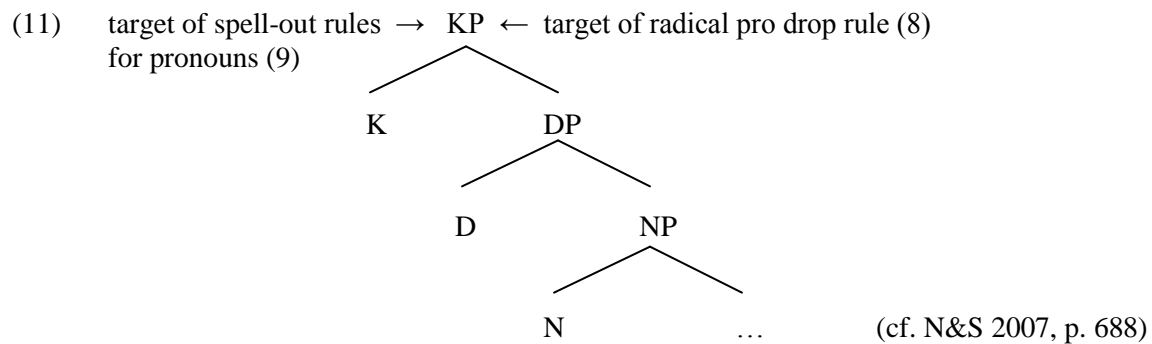(8) $[_{KP}$ +p, −a]   ⟺   ∅ (radical pro drop rule)

English pronouns are fusional for case whereas Japanese pronouns are agglutinating. This difference is captured by rules for *him* and *kare* shown in (9) and (10a, b), respectively.

(9) $[_{KP}$ +p, −a, 3, SG, M, ACC]   ⟺   /him/   (cf. N&S 2007, p. 687)

(10)   a. $[_{KP}$ +p, −a, 3, SG, M]   ⟺   /kare/

        b. $[_{K}$ ACC] ⟺ /o/   (N&S 2007, p. 688)

Radical pro drop is unavailable in English because the Elsewhere Principle always prefers overt spell-out rules such as (9) over the zero spell-out rule in (8). Consider the derivation in (11) for the English personal pronoun *him*.

(11)   target of spell-out rules → KP ← target of radical pro drop rule (8)
        for pronouns (9)

        K   DP

               D   NP

                      N   …   (cf. N&S 2007, p. 688)

The rules (8) and (9) both target the KP. (9) blocks (8) due to (7b) because (9) realizes more features (i.e., Case and φ-features) than (8). Now, compare the derivation in (11) with (12), the derivation for the Japanese personal pronoun *kare*.

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(12)   KP   ←   target of radcial pro drop rule (8)

           DP   K   ←   target of spell-out rules for case (10b)

   D   NP   ←   target of spell-out rules for pronouns (10a)

         …   N   (cf. N&S 2007, p. 688)
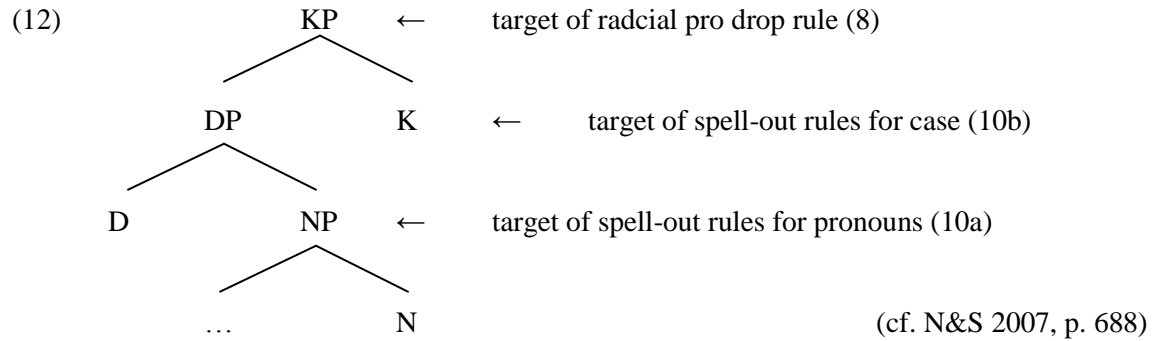
The rules (8) and (10a) do not compete in (12). (8) is more compliant with (7a) than (10a), but (10a) is more compliant with (7b) than (8). As a result, neither rule blocks the other. Thus, Japanese emerges as a radical pro drop language.

Two notes are in order here. First, N&S's analysis allows for the possibility that languages with fusional pronominal morphology as in English have *some* version of the pro-drop. As we saw earlier, Italian permits agreement-based subject drop. This observation is captured by the context-sensitive rule in (13). This rule is not in an elsewhere relation with (the Italian equivalent to) rules like (9); (13) contains agreement that (9) lacks whereas (9) mentions particular φ-features that (13) is insensitive to.

(13) $[_{\text{KP}} \, +p, -a, \varphi_i] \quad \Leftrightarrow \quad \underline{\hspace{2cm}} \, [\varphi_i]$ (N&S 2007, p. 687)

Second, N&S's analysis predicts that radical prop drop is possible in a language as long as its pronominal paradigm has *some* KP-internal agglutinative morphology with respect to case, number, or some other nominal feature. Thus, Chiense allows this option, N&S argue, because plural pronouns are derived from singular variants by the agglutinative plural suffix *–men*, as illustrated in (8a-f).

(14) a. $[_{\text{NP}}\ +\text{p}, -\text{a}, 1, \text{SG}]\ \Leftrightarrow\ /\text{wǒ}/$ d. $[_{\text{K}}\ \ldots]\ \Leftrightarrow\ \varnothing$

   b. $[_{\text{NP}}\ +\text{p}, -\text{a}, 2, \text{SG}]\ \Leftrightarrow\ /\text{nǐ}/$ e. $[\text{POSS}]\ \Leftrightarrow\ /\text{de}/$

   c. $[_{\text{NP}}\ +\text{p}, -\text{a}, 3, \text{SG}]\ \Leftrightarrow\ /\text{tā}/$ f. $[\text{PL}]\ \Leftrightarrow\ /\text{men}/$

<div align="right">(N&S 2007, p. 689)</div>

In the next subsection, however, we provide evidence from CSE that question the robustness of N&S's radical pro drop generalization.

2.3. *Radical Pro Drop but Fusional Pronominal Morphology in CSE*

CSE is an English-lexified variety spoken in Singapore that has emerged and developed as a result of intense language contact between English and local vernacular varieties of Chinese (Hokkien, Teochew, Cantonese), Malay (Baba Malay, Bazaar Malay), and, to a lesser extent, Tamil. Some linguists, notably, Platt (1975), have termed CSE a "creoloid", a contact variety which has many creole-like features but lacks the usual predecessor pidgin stage hypothesized in a traditional pidgin-creole continuum. As extensively documented in the literature on Singapore English (Bao 2001, 2005; Bao and Lye 2005; Deterding et al. 2003; Ho and Platt 1993; Pakir 1991; Platt and Ho 1983, 1989; Platt and Weber 1980; Ritchie 1986), this variety exhibits a spectacular range of syntactic differences from Standard English that can be traced back to the substratal influences of Sinitic languages.

Alsagoff and Ho (1998), Bao (2001), Gupta (1994), Platt and Weber (1980), Tan (2003, 2007, 2009) and Tay (1979) observe that CSE allows liberal omission of subjects, objects and possessors, as shown in (15a-c), like Japanese and Chinese. (Omitted pronouns are underlined.)

(15) a. After $\varnothing$ get some sickness, $\varnothing$ can't help it. (subject omission)

      'After <u>one</u> falls ill, <u>one</u> can't help it.'

b.   I never try ∅ before.   (direct object omission)

        'I have never tried <u>it</u> before.'

c.   ∅ Head very pain.   (possessor omission)

        '<u>My</u> head is very painful.'

((15a, b) from Tan (2003, p. 1))

Thus, N&S predict that the pronominal system in CSE should have some KP-internal agglutinative morphology. This prediction is false because pronouns in CSE are fusional in every sense that pronouns in Standard English are. The form each pronoun takes is based on case and number, as in Standard English (i.e., *i/me/my, you/you/your, he/him/his, she/her/her, we/us/our, you/you/your and they/them/their*). Thus, examples (16a, b) show that nominative pronouns are possible in subject position but not in object position and that accusative pronouns are possible in object position but not in subejct position. Therefore, CSE pronouns are clearly fusional for Case.

(16)   a.   He/*him like Cindy a lot.

        b.   Cindy like him/*he, meh?   (*meh* = discourse particle)

Recall from section 2.2 that a language with the otherwise fusional morphology could have the agreement-based prop drop under N&S's analysis if it exhibits syntactic agreement. Agreement in CSE, if any, does not play the same role as rich agreement in languages like Italian, Spanish and Greek in recovering a missing pronominal subject, given its highly impoverished nature of the inflectional morphology in this variety (see section 4 for more detailed discussion on the status and function of agreement morphology in CSE). Furthermore, Platt and Ho (1983) and Tan (2003, 2007, 2009) observe that the inflectional suffix –*s*, the morphophonetic reflex of the obligatory third person singular present

agreement in Standard English, is not the mandatory exponent of the same feature set in CSE. This point is illustrated in (17a, b) (see also (16a, b)).

(17)   a.   I got very kind mother. (She) ***Look*** after the kids.

'I have a very kind mother. She looks after the kids.'

b.   So (he) ***have*** to go there or not?

'So, does he have to go there?'

((17a) from Platt and Ho (1983, p. 39); (17b) from Tan (2003, p. 5) with a slight modification)

Recall that, under N&S's system, it suffices for a language to have at least one recognizable agglutinating morphology on personal pronouns to trigger the radical pro drop option. It is, of course, difficult to prove that CSE has no agglutinating morphology on any of the features of the pronouns. However, there is by now a cross-linguistically established inventory of morphosyntactic features within the (extended) nominal projection, namely, case, number, gender, classifier and determiner, and in none of these regards are pronouns in CSE agglutinating. More importantly, the pronominal paradigm in CSE is fusional as that in the superstrate lexifier English in all relevant respects. Therefore, CSE presents a genuine challenge to N&S's radical prop drop generalization.

3.   Syntactic Agreement in CSE: When Radical Prop Drop is Blocked in CSE

We have shown thus far that CSE is a radical pro drop language like Chinese. In this section, we make a new observation that the availability of the radical pro drop in CSE is conditioned by syntactic agreement. We show that a close examination of the interaction between topic-prominence and syntactic agreement allows one to establish the hitherto unnoticed link between the presence of agreement and the null argument possibility.

It is a matter of considerable controversy whether CSE exhibits syntactic agreement as its superstrate lexifier language (English) does. Consider a typical discourse in CSE shown in (18). In this conversation, speakers A and B are discussing Charles Dickens' novel *Great Expectations*.

(18) B: And how the benefactor **appear** in the first and last part …

B: He **was** confused already. He **was** like part of the upper class but …

A: Mmm…

B: At the brink of it.

A: Ya.

B: Just, ya, it**'s** very sad. (Wee and Ansaldo (2004, p. 65))

In this discourse, Speaker B's first utterance does not exhibit correct agreement (*appear* instead of *appears*). The later utterances by the same speaker, however, do show correct copula agreement. Therefore, it is incorrect to say that CSE lacks syntactic agreement altogether. We are inclined to think that the seemingly free variation of agreement is a natural outcome of ongoing grammatical competition between the substrate languages (Hokkien, Teochew, Cantonese, Mandarin, and/or Malay; no agreement) and the suprastrate language (English; forced impiverished agreement). We and Ansaldo (2004, p. 66) observe, for example, that verb-subject agreement in CSE is essentially sporadic rather than rule-governed and that it has not yet been stablized to the extent that we can tell with certainty whether its manifestation is clearly diagnosed as due to sociolinguistic and/or strictly grammatical factors.

We concur with Wee and Ansaldo that the manifestation of agreement in CSE is optional. Our central observation here, however, is that once verb-subject agreement *is* manifested in a sentence in CSE, the radical prop drop option becomes unavailable. This observation is illustrated by examples (19-20).

(19)   A: John plays soccer well hor?

     B1:   Yah, he plays well.

     B2: * Yah, ∅ plays well lor.

     B3:   Yah, he does lor.

     B4: * Yah, ∅ does lor.

(20)   A: John wants to go zoo or not?

     B1:   Don't want lah.

     B2: * ∅ doesn't want lah.

     B3:   Yak/okay/go lor.

The utterances in (19B1-B4) list four possible replies in CSE to the question in (19A). The contrast in grammaticality between (19B1) and (18B2) shows that the null subject option is impermissible in the reply with verb-subject agreement. The same point can be made by the contrast between (19B3) and (19B4) as well as the contrast between (20B1) and (20B2).

It is important to point out that speakers of Singapore English, be it informal or formal, use correct agreement morphology for copula verbs. This point is supported on two grounds. First, we saw above that in the later parts of speaker B's conversation, B demonstrates her ability to indicate correct copula agreement. Second, we have tested this finding against naturally occurring utterances by CSE speakers in the *National Institute of Education Corpus of Spoken Singapore English* (NIECSSE). Our analysis predicts that no examples should be found with missing subjects in the presence of a copula verb in the corpora. The prediction was indeed borne out. Three examples from NIECSSE are given below, wherein the copula verbs are in boldface for ease of exposition.

(21)   It**'s** cheaper and um… the food over … at the… those wet markets and all those *pasar malam* **are**

        very much better I think… but not the food over in the hawker centre…the restaurants.

        (NIECSSE, F1-b: 29)

(22)   Um… I… did a lot of reading which **is** very surprising, but anyway before that I **was** … I **was**

        very happy because it was … vacation finally, so I went to buy … colouring books… It**'s** very …

        strange, but I did that I went to buy colouring books, because … I thought that**'s** the most relaxing

        thing to do… to colour books just like … you **were** when you **were** a child. (NIECSSE, F2-a: 05)

(23)   Well … I have learned Japanese ever since I **was** young and I have learned for many years… and

        basically interested in their in their culture not forgetting their games I **am** interetsed in their

        games and their comics…yeah. Um … going there to … buy new games and game machine.

        (NIECSSE, M3-c: 03)

In all of these utternaces, whenever a clause contains one of the copula verbs, the clause also contains an

overt subject that agrees with it in terms of number and person. Conversely, our analysis predicts that

when copular deletion occurs in a clause, the sentence should be able to occur with the missing subject. It

is widely acknowledged in the literature that copula deletion is a ubiquitous feature of CSE (Alsagoff

2001; Alsagoff and Ho 1998; Ansaldo 2004; Chang 2009; Fong 2004; Ho 1993; Low and Brown 2005),

as shown in examples (24a, b).

(24)   a.   I _____ damn clever.   'I am very clever.'

        b.   The one _____ the wife lah.   'That lady is his wife.'   (Chang (2009, p. 6))

The prediction above is indeed verified as shown in (25):

(25)   A: You going lecture or not?

        B: Going lor/Yah.

These findings suggest that a) copula agreement has been stabilized into the grammatical system of CSE and that b) syntactic agreement, once manifested for whatever reason, blocks the subject drop option.

4.   Topic-Prominence, Radical Pro Drop and the Role of Syntactic Agreement

We show here that Huang's (1984) parametric analysis of null arguments provides a straightforward account for the CSE facts we have observed thus far. Our central idea, which follows the footstep of Speas (1994, 2006), is that the possibility of null arguments (either the radical pro drop option or the agreement-based pro-drop option) is blocked by *meager* agreement. Speas proposes that when T contains φ-features that lack a complete specification, its features must be valued through the specifier-head relation. Since *pro* lacks φ-features, languages with meager agreement do not allow insertion of *pro* in the subject position. When a language has a rich agreement under T which is fully specified, then the language allows the null subject. Finally when a language has no agreement at all, there is nothing to rule out the insertion of *pro* in the subject position. Speas' proposal thus derives the well-known generalization originally due to Jaeggli and Safir (1989) that null subjects occur in a language with rich agreement or no agreement at all.

4.1.   *Huang's (1984) Topic-Prominent Analysis of Radical Pro Drop*

Huang (1984) proposes a theory of null arguments on the basis of two independently motivated parameters. One parameter distinguishes zero-topic from non-zero-topic languages; the other distinguishes pro-drop from non-pro-drop languages. The former is derived from a more general typological parameter that distinguishes topic-prominent from subject-prominent languages (Li and Thompson 1976; Tsao 1977) whereas the latter is derived by a reduction of a several principles of grammar within the Government-&-Binding Theory (Chomsky 1981) such as the principle of

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recoverability, the status of the rich Agr as a potential antecedent of a zero pronoun, the Condition of Disjoint Reference (see (26)) and the Generalized Control Principle (see (27)).

(26)   Disjoint Reference/DJR

       A pronoun must be free in its governing category.   (Huang 1984, p. 552)

(27)   Generalized Control Rule/GCR

       Coindex an empty pronominal with the closest nominal element.   (Huang 1984, p. 552)

Here we concentrate on illustrating how the radical pro drop property in Chinese follows from Huang's theory. In Chinese, all of speaker B's answers are acceptable as a reply to speaker A's question, as shown in the following discourse.

(28)   Speaker A: Zhangsan   kanjian   Lisi   le   ma?

                     Zhangsan   see   Lisi   ASP   Q

                     'Did Zhangsan see Lisi?'

       Speaker B: a.   e   kanjian   ta   le.

                        I   see   him   ASP

                     '[He] saw him.'

                 b.   Ta   kanjian   e   le.

                       he   see   ASP

                     'He saw [him].'

                 c.   e   kanjian   e   le.

                          see   ASP

                     '[He] saw [him].'

d.	Bao$_i$	shuo	[e$_{i/j}$	kanjian	ta	le].
	Bao	said		see	him	ASP

'Bao$_i$ said [he]$_{i/j}$ saw him.'

e.	Bao$_i$	shuo	[ta	kanjian	e$_{*i/k}$	le].
	Bao	said	he	see		ASP

'Bao$_i$ said he saw [him]$_{*i/j}$.'

((28a-c) from Huang (1984, p. 533))

According to Huang's theory, a null element in principle can be a *pro* bound by an NP in an A-position or a variable discoursally bound by an empty topic in the sentence-initial position. In (28a), the empty subject cannot be a pronominal because nothing in the sentence would be able to identify it, in violation of the principle of recoverability. However, it can be a variable bound by a zero topic. Hence, the sentence is grammatical with the empty category interpreted as a zero topic. In (28b), the empty category cannot be a pronominal; if it were, it would have to be coindexed with the closest nominal element (i.e., *ta* 'he'), in violation of the Condition of Disjoint Reference. As a result, (28b) is grammatical only with the zero topic interpretation of the null object. (28c) is grammatical because both null arguments are variables bound by zero topics. The null subject in (28d) can be a pronominal or a variable. It can be a pronominal because it can be properly bound by *Bao*, the closest nominal argument, in compliance with the GCR. It can also be a variable because nothing prevents this mode of identification. The null object in the example in (28e) must be a variable; if it were a pronominal, it would be coindexed with the embedded subject, in violation of the DJR. These examples thus show that the embedded null subject can be a *pro* or a variable in contrast to the embedded null object, which must be a variable.

4.2.   *Extending Huang's (1984) Analysis to CSE*

We agree with Huang (1984) in his insight that the topic-prominent profile in a language underlies the availability of the radical prop drop/zero topics in the language. Indeed, CSE exhibits

signature properties of topic-prominent languages. Firstly, CSE lacks expletive elements such as *there* in Standard English. This is illustrated by the complex existential construction in CSE in (29a). Compare this example with the expletive construction in Standard English shown in (29b).

(29)   a.   *Got* people in the classroom.

          b.   *There* are people in the classroom.

Secondly, CSE allows topic chain constructions illustrated in (30B).

(30)   A: So, you can cycle now, can you?

          B: Yeah, $[\varnothing]_{Top}$ $\varnothing$ can cycle, not very well, $[\varnothing]_{Top}$ but $\varnothing$ can cycle, ah.

                   $[\varnothing]_{Top}$ $\varnothing$ knocked myself against the pillar, $[\varnothing]_{Top}$ but then $\varnothing$ managed to pick up cycling.

                                                        (NIECSSE, F13-c: 02)

In this discourse, B is introduced as the topic of the discourse initiated by A. Once this is established, each of the clause in (30B) has B as the topic to be predicated about. Thus, all clauses have null subjects, making a topic chain linked to the original topic. Thirdly, CSE makes extensive use of topic-markers such as *as for, wise, right* and other discourse-functional particles, as illustrated in (31a, b).

(31)   a.   *As for* filters *wise*, get a UV filter.

          b.   Your homework *ha/hor/la*, you better do $\varnothing$.

                                                       (Tan 2009, p. 26)

Finally, CSE possesses the Chinese-style/hanging topic construction (Xu and Langendoen 1985; Bao 2001), as illustrated in (32a, b).

(32) a.   <u>Australia</u>, I've been to Perth.

b.   <u>Local food</u>, you must try chicken rice.   (Tan 2009, pp. 26-27)

Thus, there is no denying that CSE is a topic-prominent language. This result is hardly surprising given the systematic grammatical influences on the grammar of CSE from topic-prominent Sinitic languages such as Hokkien, Cantonese, Teochew and/or Mandarin.

There are two pieces of independent evidence that the subject-object asymmetry Huang noted for null arguments in Chinese also holds for the CSE counterparts. First, consider examples in (33a-c) and (34a, b):

(33) a. $[\ldots]_j$ [Sar Che and Sar Ee]$_i$ said [$e_{i/j}$ go to the airport to fetch you and Li Sa].

(Platt, Weber and Ho 1983, p. 123)

b. $[\ldots]_j$ then [my mum]$_i$ said [$e_{i/j}$ must call her sister].   (ICE: Singapore)

c. $[\ldots]_j$ they$_i$ said [they will send $e_{*i/j}$ to you].   (Tay 1979, p. 104)

(34) a.   John$_i$ knows [e_i cannot persuade Mary].

b.   John$_i$ knows [even his girlfriend cannot persuade $e_{*i/j}$].   (Siraj (2000: p. 26))

(33a) is cited from a dialogue in a Singaporean play. The antecedent of the empty subject in this example could be the matrix subject *Sar Che and Sar Ee*, or someone else in the discourse. The same account holds for the subject gap in (33b). The null object in (33c), on the other hand, cannot take the matrix subject *they* as its antecedent but must refer to someone understood in the discourse. This interpretive asymmetry from CSE thus provides further support for Huang's theory. Siraj (2000, p. 26) also points out that in (34a), the default interpretation is for the subject to take the matrix subject as its antecedent whereas in (34b), the embedded object cannot take the matrix subject as its antecedent.

Second, Huang (1984) observes that there is a subject-object asymmetry with regards to the so-called crossover effect. The relevant examples are shown in (35a, b) from Chinese:

(35) a. Zhangsan$_i$,   ta$_i$ shuo e_i mei   kanjian   Lisi.

        Zhangsan   he   say   NEG   see   Lisi

        'Zhangsan$_i$, he$_i$ said that [he]$_i$ didn't see Lisi.'

      b. * Zhangsan$_i$,   ta$_i$ shuo   Lisi   mei   kanjian e_i.

        Zhangsan   he   say   Lisi   NEG   see

        'Zhangsan$_i$, hei said that Lisi didn't see [him]$_i$.'   (Huang (1984, p. 558))

The contrast here shows that strong crossover involving an embedded null object is prohibited but such a relation is permitted when it involves an embedded null subject. This asymmetry falls out from Huang's theory. The subject empty category in (35a) can be a pronominal because it is identified by the closest c-commanding *ta*. The object empty category in (35b), on the other hand, cannot be a pronominal but must be a variable because of the interaction of the GCR and the DJR. As a result, the crossover effect obtains. Exactly the same asymmetry holds in CSE, as shown in (36a, b).

(36) a. Lionel$_i$, he$_i$ say [e_i meet Sally already hor].

      b. * Lionel$_i$, he$_i$ say [Sally meet e_i already hor].

It is important at this point to observe the island-sensitivity of a zero object in CSE, as this property has been generally employed to test whether a movement is involved in a long-distance dependency. Siraj (2000, p. 15) points out that the object gap in CSE is immune to subjacency constraints, as shown in (37). Note that the same constraint is also not operative in the Chinese equivalent, as shown in (38).

(37)   [$_{CP}$ This question$_i$ [$_{TP}$ I don't know [$_{NP}$ anyone [$_{CP}$ who [$_{TP}$ can answer e_i]]]]]

'I don't know anyone who can answer this question.'   (Siraj (2000, p. 15))

(38)   Zhège wèntí   wǒ   cónglái méi   yùdào guo   néng   huídá de rén.

        This   question   I   ever   NEG   met   ASP   can   answer MOD man

'* This question, I have never met a person who can answer.'

(Xu & Langendoen (1985, p.15))

It seems to have been assumed in the literature (cf. N&S 2007) that Huang's analysis is based on empty operator movement, which allows a null topic operator to bind a variable, and hence that island-sensitivity can be used to argue against this analysis. However, what Huang actually suggests is that the topic-chain can be established either by syntactic movement or base generation plus coindexing. What the absence of island effects with the object gap in (37-38) shows for Huang is that the base-generation of an empty category bound by a zero topic is an available option; in other words, it does not show that the movement derivation of the topic-chain is not available. Consequently, we believe that Huang's analysis can be sustained in its original form.

We assume that the T-node in CSE is associated with either no φ-features or impoverished agreement. This optionality itself comes as no surprise due to the active endogenous multilingual contact ecology in Singapore where CSE has emerged and developed (see Ansaldo 2010 for a detailed socio-history of the contact ecology in Singapore); its grammar has been systematically formed on the basis of Sinitic syntax filtered through the morphosyntax of English (see Bao 2005, 2010). When CSE exhibits no φ-features under T, it behaves similarly to its Sinitic substrate language, as shown in (39).

(39)　　Speaker A:　　Zhangsan see Xu already ?

　　　　　　　　　'Did Zhangsan see Lisi?'

　　Speaker B:　　a.　　e　　see　　him　　already.

　　　　　　　　　　　'[He] saw him.'

　　　　　　　　b.　　He　　see　　e　　already.

　　　　　　　　　　　he　　see

　　　　　　　　　　　'He saw [him].'

　　　　　　　　c.　　e　　see　　　　　e　　already.

　　　　　　　　　　　see

　　　　　　　　　　　'[He] saw [him].'

　　　　　　　　d.　　Bao_i　　say　　$[e_{i/j}$　　see　　him　　already].

　　　　　　　　　　　'Bao_i said $[he]_{i/j}$ saw him.'

　　　　　　　　e.　　Bao_i　　say　　[he　　see　　$e_{*i/k}$　　already].

　　　　　　　　　　　'Bao_i said he saw $[him]_{*i/j}$.'

In (39a), the null subject is a variable discoursally bound by a zero topic set up in the discourse (*Zhangsan*); it cannot be a pronominal because nothing would recover the content of the null subject. Similarly, in (39b), the null object is a variable; if it were a pronominal, GCR would coindex it with the subject, in violation of DJR. Both null arguments in (39c) are variables bound by the zero topics. In (39d), the empty subject in the embedded clause can be a *pro* or a variable; it can be a *pro* because it can take the matrix subject as its antecedent without incurring the violation of DJR. In (39e), however, the empty subject in the embedded clause can only be a variable; if it were a pronominal, it would be coindexed with the embedded subject due to GCR, which would lead to the violation of the DJR.

When CSE adopts the impoverished agreement value for T's φ-features as its superstrate lexifier language does, it exhibits quite a different paradigm, as shown in (40):

(40)   Speaker A: Zhangsan meets Xu all the time or not?

'Does Zhangsan meet Xu all the time?'

Speaker B: a. * *e*   meets   him   all the time!

'[He] meets him all the time!.'

b.   He   meets   *e*   all the time!

'He meets [him] all the time!'

c. * *e*   meets   *e*   all the time!

'[He] meets [him] all the time!'

d. * Bao$_i$ say   [$e_{i/j}$ meets   him   all the time!].

'Bao$_i$ says [he]$_{i/j}$ meets him all the time!'

e.   Bao$_i$ say   [he   meets $e_{*i/k}$ all the time!].

'Bao$_i$ says he meets [him]$_{*i/j}$ all the time!'

Our central idea here is that the impoverished/poor Agr under T must be licensed by an overt NP through the specifier-head relation, but *pro* or a zero topic, being devoid of φ-features, won't do. As a result, the presence of incomplete agreement in CSE blocks the otherwise possible subject omission. Consider each example in turn. Suppose that the null subject in (40a) is a *pro*. Then, it must be coindexed with the closest nominal argument, which is Agr. However, the Agr in (40a) is too meager to determine its content. Thus, the sentence in (40a) violates the principle of recoverability and is thus ill-formed. Suppose instead that the zero subject is a variable. Note that the impossibility of the subject gap in this example does not follow from Huang's theory, which would allow the subject empty category to be a variable bound by a zero topic. We suggest here that the meager agreement under T is responsible for the ungrammaticality; the meager agreement remains unidentified. Note that the presence of meager agreement does not block the null pronoun in the object position, as shown in (40b). This fact follows from Huang's theory because the null object can be licensed as a variable bound by the zero topic in the sentence initial position. The example in (40c) is ungrammatical for the same reason that the example in (40a) is ungrammatical. The

example in (40d) is ungrammatical because the meager Agr within the embedded T cannot be licensed by either the *pro* or a variable. The example in (40e) grammatical only with the variable-reading of the embedded null object. Our proposed analysis also leads us to predict that the sentence in (40a) should become ungrammatical once it exhibits the verb-subject agreement in the embedded clause because then the meager Agr cannot be fully identified and the content of *pro* would not be recoverable from the meager Agr. This prediction is indeed borne out in (41).

(41)   *Lionel$_i$, he$_i$ say [e_i meet*s* Sally already hor].

Our rendition of Huang's theory here allows us to elaborate a difference between *pro* and the empty category bound by a zero topic. *Pro* is ruled out for two reasons: a) its content is not recoverable via the meager Agr and b) it cannot provide the formal features for the meager Agr. By contrast, a zero topic is ruled out, not because its content cannot be recovered from the meager Agr (it is not subject to the GCR), but because it cannot provide the necessary φ-features to validate the meager Agr.

Our current analysis allows one to go a step further and speculate that the role of the robust topic-comment in licensing a null argument, as stated in Huang (1984), could be made to follow from the nature of syntactic agreement. Suppose that a language has a fully specified Agr under T. Then, the formal features of the missing subject can be identified by Agr, yielding the possibility of subject drop. Suppose that a language has no agreement at all. Since there is nothing under T which must be licensed/checked/valued, an empty pronoun can be inserted into the subject position. However, such a pronoun must still be anchored with respect to the discourse so that its actual content may be recovered. We suspect that this may be the reason why topic-prominence comes into play in providing the null argument option along the lines suggested by Huang (1984). Suppose now that a language has impoverished Agr. Then, the uninterpretable/unvalued φ-features under T must be checked/licensed by an overt NP through the specifier-head relation. As a result, this language permits neither *pro* nor a variable bound by a zero topic. Therefore, our theory predicts that if a language has meager agreement,

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it should show two properties: a) it should not allow any type of empty category in the subject position and b) it should allow only the object empty category (bound by the zero topic). In other words, languages with meager agreement should allow no *pro*'s.

According to our analysis, then, the differences precisely among *pro*, radical pro and overt pronouns boils down to the following: a *pro* is an empty category bound to Agr or an overt NP with independent thematic role which is subject to the GCR. This definition follows Chomsky's (1981) functional determination of empty categories. A radical *pro*, on the other hand, is simply a descriptive umbrella term for genuine *pro's* as well as empty categories bound to zero topics. Finally, an overt pronoun is a pronoun bound either to an argument or a topic which is *not* subject to the GCR.

4.3. *Saito's (2004) Analysis of Radical Pro Drop*

As an anonymous reviewer points out, our proposed extension of Huang's (1984) analysis which integrates the insights of Speas (1994, 2006) brings us very close to the recent proposal made by Saito (2007). Saito argues that radical pro drop is possible in a language which a) lack (forced) syntactic agreement and b) have Case-less *pro*'s. More specifically, Saito assumes that *pro*, being a typical discourse entity, is always included in the set of LF objects for potential LF copying in any language. Under this assumption, if this discourse *pro* lacks an uninterpretable/unvalued feature, it can be copied into a DP argument position only in languages that have no agreement. Japanese lacks syntactic agreement and has Case-less *pro*'s (Kuroda 1988; Perlmutter 1972; Kuno 1973; see also Hiraiwa 2001 and Miyazawa 2001) and hence allow radical pro drop. Languages like Italian and Spanish have rich agreement and Case-marked *pro's*, and hence lack radical pro drop, though it does allow agreement-based subject pro drop due to the rich agreement morphology under T. Saito's analysis correctly predicts the observation made earlier that the null subject option is allowed only in the absence of meager syntactic agreement. Saito further proposes that the content of the null argument (more precisely, the *pro* of the radical pro drop) is provided by the previous discourse through LF copying. This proposal looks close to Huang's (1984) analysis whereby the content of an empty gap is provided by a zero topic determined

within the discourse. Accordingly, it is not a trivial matter to distinguish Huang's analysis from Saito's if empty topics can base-generated/merge at the sentence-initial position.

However, we believe that the particular cluster of morphosyntactic profile of CSE observed in section 2.3 still remains as a problem for Saito's analysis. The examples in (a, b) show that the CSE pronouns are clearly fusional for Case. Thus, under the reasonable assumption that the morphological structure of overt pronouns mirrors that of silent pronouns, Saito's analysis incorrectly predicts that CSE should not allow radical pro drop, contrary to facts, because CSE does not have Case-less *pro's*.

5.   Conclusions

In this article, we have discussed the so-called radical pro drop phenomenon and the relevance of syntactic agreement to this property in CSE. We have demonstrated that a reworking of Huang's (1984a) parametric theory of null arguments based on topic-prominence and pro-drop, coupled with the idea originally from Speas (1994, 2006) that meager agreement must be licensed, provides a straightforward explanation for an array of facts concerning argument drop in CSE. Particular important for our purposes was the new observation that in CSE, the otherwise liberal omission of the subject becomes impossible with meager subject agreement, a fact that would remain unexplained under Huang's original theory. In so doing, we have also presented arguments from CSE against two recent theories of radical pro drop presented by Neeleman and Szendröi (2007) and Saito (2007).

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