Null subjects and polarity focus, Studia Linguistica 2007, 61 3 212-236.
NULL SUBJECTS AND POLARITY FOCUS*

Anders Holmberg

Abstract. Some null-subject languages cannot drop the subject pronoun in the second conjunct in sentences which translate as They say that John doesn’t speak French, but he does, where the pronoun is coreferent with John. Among the null-subject languages which do not allow a null subject in this context are Chinese (various dialects), Finnish and European Portuguese. Among the languages that allow it are Japanese, Persian, and Spanish. An explanation is proposed of this variation, based on the following correlation: The languages which do not allow a null subject standardly reply to yes/no-questions by repeating the finite verb of the question. The languages which allow a null subject standardly reply by using a special affirmation particle yes. The connection between these two properties is that both involve polarity focus. The proposal is that a null subject in the second conjunct is prohibited in the former class because of a competition of derivations involving ellipsis. This hypothesis is based on the theory of polarity focus in Finnish articulated in Holmberg (2001).

1. Introduction

Some null-subject languages cannot drop the subject pronoun in the second conjunct in sentences which translate as (1), where the pronoun is coreferent with John.

(1) They say that John doesn’t speak French, but he does.

Among the null-subject languages which do not allow dropping the pronoun are Chinese (various dialects), Czech, Finnish, European Portuguese, and Malayalam. Among the languages that allow it are Arabic, Hungarian, Japanese, Persian, and Spanish. The prohibition against dropping the pronoun in this position is quite unexpected, given extant theories of pro-drop/null subjects (for example Rizzi 1986, Jaeggli and Safir 1989, Huang 1989, Grimshaw & Samek-Lodovici 1998, Holmberg 2005; see Huang (2000: 50–90) for an overview): In the languages which rely on agreement to license a null subject, the agreement is exactly the same in (their counterparts of) the second conjunct in (1) as in other finite clauses. Furthermore, the subject

* The research for this paper was part of the project ‘Null subjects and the structure of parametric theory’, funded by the AHRC. The following persons helped me with the data, either relying on their own intuitions or by collecting data from unnamed informants: David Adger, Ricardo Bermudez-Otero, Peter Biskup, Ilhan Cagri, Anna Cardinaletti, Aniko Cîrmaș, Girma Asligew Deneke, Abdelkader Fassi Fehri, Kook-Hee Gill, Mayumi Hosono, Atakan Ince, Patrícia Jablonska, Nader Jahangiri, K.A. Jayaseelan, Marit Julien, Katalin É. Kiss, Dimitra Kolliakou, Aniko Liptak, Ove Lorentz, Pasqual Masullo, Mohsen Mubaraki, Makiko Mukai, Ur Shlonsky, Michelle Sheehan, K.V. Subbarao, Balazs Suranyi, David Willis, Nianling Yang, Winnie Yu. Thanks also to Ian Roberts, Theresa Biberauer, Chris Johns, the audiences at NELS 35 and the Cambridge Workshop on Null Subjects October 2004, and especially to two anonymous referees for Studia Linguistica.

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9600 Garsington Road, Oxford OX4 2DQ, UK, and 350 Main Street, Malden, MA 02148, USA
pronoun is old information, not focused, not introducing a new topic, and there is an antecedent for the pronoun in the preceding clause. For some null-subject languages this is sufficient to allow dropping the subject in (1), but for other null-subject languages it is not.

In this paper I will propose an explanation of this variation. It is based on a correlation which appears to hold, albeit not perfectly, between how languages deal with a null subject in the context (1) and how the languages reply to yes/no-questions (YNQs): The languages which do not allow a null subject in (1) can reply affirmatively to YNQs by repeating the finite verb of the question, as in (2), from Finnish.

(2) – Puhuuko Joni ranskaa?
  speaks-Q John French
  ‘Does John speak French?’
  – Puhuu.
  speaks
  ‘Yes.’

They all have it as an option, and most of them have it as the unmarked option. The languages which allow a null subject in (1) instead standardly reply by using a special affirmation particle, as in (3), from Hebrew.

(3) – Ha’im John medaber corfatit?
  Q John speaks French
  ‘Does John speak French?’
  – Ken.
  yes

The reason why the syntax of expressions such as (1) and the syntax of replies to YNQs might be related is that both involve polarity focus. A YNQ is a question about the polarity of a proposition (true or false, yes or no). In the reply, therefore, polarity is focus, while the rest is presupposed. In (1), the second conjunct asserts the falsity of a proposition made in the first conjunct; thus here, too, polarity is focus while the rest is presupposed.

I will call the languages which allow a null subject in the second conjunct in (1) **A-languages**, and the ones which do not allow it **B-languages**. What needs to be explained is why the B-languages exclude a null subject in this context. The proposal is that they do so because of a competition of derivations. In languages where YNQs are standardly answered by a bare finite verb, a subjectless sentence has two derivations. One is the null-subject derivation, employing a null pronoun (or deleting a pronoun) in specIP. The other derivation involves movement of the finite verb to C with deletion of IP. In a context forcing polarity focus, the latter derivation wins. However, since the context does not provide a good antecedent for a deleted IP in (1), the result is ill formed. Thus pronouncing the pronoun is a must.

The formal explanation, articulated in section 7 below is heavily based on the theory of replies to YNQs in Finnish in Holmberg (2001). The
assumption is that the explanation will generalize to the other
B-languages. There are several reasons why this generalization remains
tentative, though. As will be discussed, the correlation between the
possibility of a null subject in (1) and the form of reply to YNQs is
difficult to establish in some cases, and clearly does not hold in some
other cases. One problem is that little research has been done to date on
the syntax of replies in the languages of the world (in addition to
Holmberg (2001), see Martins (1994, 2006, forthcoming) on Iberian
Romance languages, and Jones (1999) on Welsh). Thus, formulated more
modestly, the aim of the present paper is to explain the ban against a null
subject in the context (1) in one language, namely Finnish, but to also
present and discuss some data which suggest that the explanation might
apply much more generally.

2. A-languages and B-languages

The following are two lists consisting of the languages from which I have
so far gathered data, divided according to whether they allow or do not
allow a null subject in (1):

<table>
<thead>
<tr>
<th>A-languages (null subject OK)</th>
<th>B-languages (null subject not OK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amharic</td>
<td>Cantonese Chinese</td>
</tr>
<tr>
<td>Arabic</td>
<td>Czech</td>
</tr>
<tr>
<td>Greek</td>
<td>Finnish</td>
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<tr>
<td>Hebrew</td>
<td>Indonesian</td>
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<td>Hungarian</td>
<td>Malayalam</td>
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<tr>
<td>Italian</td>
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<tr>
<td>Japanese</td>
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<td>Korean</td>
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<tr>
<td>Persian</td>
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<td></td>
<td>speakers)</td>
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<td>Turkish</td>
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<td>Welsh</td>
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<tr>
<td>Scots Gaelic</td>
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</tbody>
</table>

The following are translations of (1), in some cases slightly modified, in
some of the B-languages:

(4) a. Finnish

Ne sanoo että (minä) en puhu ranskaa, mutta
they say that I not-1SG speak French but
*(minä) puhun.
I speak-1SG
‘They say I do not speak French, but I do.’

b. Cantonese Chinese
Keoidei waa Siuming m-sik gong faatman, daanhai they say Siuming not-know speak French but *(keoi) sik. he know
They say John doesn’t speak French, but he does.’

c. Czech
Říkají, že John nemluvi francouzsky, ale *(on) mluvi.
say-3PL that John not-speaks French but he speaks

The following are translations of (1), or an equivalent sentence, in some of the A-languages:

(5) a. Amharic
yohannes fărânsayiNNa a -y -nagârî -m yilalu,
John French NEG -3MSS -speak-NEG say-3PL
but 3MSS-speak-PRES

b. Hungarian
Azt mondjak, hogy Janos nem beszel franciaul, de beszel. that say-3PL that John not speak French but speaks
that say-3PL that John not speak French, but in-reality it speaks

c. Italian
Dicono che Gianni non parli francese ma invece lo parla. say-3PL that John not speak French, but in-reality it speaks

d. Japanese
Karera wa John ga furansugo hanasanai to itta, dakedo they TOP John French speak-NEG COMP say but
hanasu yo.
speak EMPH

e. Persian
Miguyand ke John engilisi sohbat nemikonad, amma say-3PL that John English speak not-does but
sohbat mikonad.
speak does

It is noteworthy that the A/B division cuts across the agreement pro-drop/discourse pro-drop division. In the A-group, Japanese and Korean are discourse pro-drop languages, entirely devoid of subject-verb

agreement morphology (except honorific agreement), while the others are agreement pro-drop languages, relying in some degree on rich subject-verb agreement to license the null subject. In the B-group the Chinese dialects, Indonesian, Malayalam and Telugu are discourse pro-drop languages, while all the others are agreement pro-drop languages.

Neither does the A/B division correlate with defective agreement or partial pro-drop. A comparison of Hebrew and Finnish is particularly instructive in this regard: As discussed in Vainikka & Levy (1999), Hebrew and Finnish are both partial pro-drop languages in very much the same way. Hebrew allows pro-drop of a 1st and 2nd person subject in the past and future tenses, but allows pro-drop of a referential 3rd person subject only when bound by an argument in a higher clause. Finnish allows pro-drop of a 1st and 2nd person subject in all tenses and moods, but pro-drop of a 3rd person referential subject only when bound by an argument in a higher clause; see Holmberg (2005). However, Hebrew is an A-language, Finnish a B-language.

The A/B division mostly follows family lines, but not perfectly: The Semitic languages checked so far, Amharic, Arabic, and Hebrew, are all A-languages. The Slavic languages checked so far (Czech and Polish) are both B-languages. The Dravidian languages checked so far (Malayalam and Telugu) are B-languages. The Chinese languages/dialects checked so far (Cantonese and Mandarin) are B-languages.1

Of the Uralic (Finno-Ugric) languages checked so far Hungarian is an A-language while Finnish and North Saami are B-languages. It could be noted, though, that Hungarian is very distantly related to Finnish and North Saami within the Uralic family, while Finnish and North Saami are fairly closely related, and have furthermore been in contact for a very long period of time.

Finally, of the Romance null-subject languages checked so far (Italian, Spanish, European Portuguese) Italian and Spanish are A-languages. In European Portuguese some speakers accept a null subject in (1), others do not. This is striking evidence that the A/B division is not that deeply rooted in genetic or ‘deep’ typological characteristics of languages, but is susceptible to change.

3. Some explanations which do not work

Conceivably the problem for the B-languages is that the antecedent in (1) is inaccessible, being the subject of an embedded clause in the first conjunct. This might be particularly crucial in discourse-pro-drop language, where there is no local licensing of the null subject by agreement. The difference between A and B-languages could then be that

1 I have been informed that Tamil, another Dravidian language, and Taiwanese Chinese are also B-languages.
the A-languages happen to be more tolerant than the B-languages as
regards the (hierarchic) distance between the null subject and the
antecedent (along the lines of Ariel’s (2001) accessibility theory). The
following examples from the B-languages Finnish, Cantonese and Telugu
show that the structural relation between the subject of the second
conjunct in (1) is not the crucial factor. (6) and (7), from Finnish and
Cantonese respectively, show that the antecedent of the null subject in a
but-conjunct may be the subject of an embedded clause in the preceding
conjunct, when the but-conjunct does not assert the falsity of a
proposition in the first conjunct.

(6) On totta että (minä) en puhu ranskaa, mutta (minä) luen
sitä mieleglötä.

(7) Mou-cho (ngo) m-sik gong faat man, daanhai (ngo)
No-mistake I not-know speak French, but I
soeng hok.
want learn
‘It’s true that I do not speak French, but I want to learn it.’

(8) and (9), from Cantonese and Telugu respectively, show that it makes
no difference if the antecedent is the main clause subject in the first
conjunct: A null subject in the but-conjunct is still impossible.

(8) Siuming waa (keoi) m-sik gong faatman daanhai *(keoi) sik.
Siuming say he not-know speak French but he know
‘John says he doesn’t speak French, but he does.’

(9) Prasaad tanu Hindii maaTlaDanu ani anTaaDu, kaanii *(tanu)
Prasaad he Hindi not.speaks that says but he
maaTlaaDataaDu.
speaks
‘Prasaad says that he doesn’t speak Hindi, but he does.’

(10), from Finnish, shows that the presence of but and assertion of the
falsity of a preceding proposition are not crucial.

(10) Ne sanoo että (minä) puhun ranskaa, ja *(minä) puhun.
they say that I speak-1SG French and I speak-1SG
‘They say that I speak French, and I do.’

The second conjunct in (10) does not contradict a proposition in the first
conjunct, but instead confirms it. Since confirmation as well as denial of

the truth of a preceding proposition involves focusing polarity, this indicates that that is, indeed, the crucial property which excludes a null subject in the second conjunct.

We can thus formulate the following generalization:

(11) **Generalization 1:** When polarity is focused, the subject cannot be null, in a class of null-subject languages.

The question is why polarity focus has this effect, and why it has this effect in some languages but not others.

### 4. A cross-linguistic generalization

The following generalization appears to hold.

(12) **Generalization 2:** In most A-languages a YNQ is standardly answered affirmatively by a special affirmative particle. In most B-languages a YNQ is standardly answered affirmatively by repeating the finite verb of the question (if the question contains a verb).

I repeat the examples from Hebrew and Finnish, as representatives of A and B-languages, respectively.

(13) a. – Ha’im John medaber corfatit? (Hebrew)
    Q John speaks French
    ‘Does John speak French?’
    – Ken.
    yes
b. – Puhuuko Joni ranskaa? (Finnish)
    speaks-Q John French
    ‘Does John speak French?’
    – Puhuu.
    speaks
    ‘Yes.’

Matters are complicated by the fact that several A-languages may reply to YNQs by repeating the finite verb. Consider English: YNQs are standardly answered affirmatively by the special particle *yes*, but may be answered by employing the dummy auxiliary *do* and VP-ellipsis, with or without *yes*.

(14) – Do you speak French?
    a. – Yes.
    b. – Yes, I do.
    c. – I do.

Now consider a null-subject language which has V-to-I movement (as many null-subject languages do; see Speas 1994). If the language in
question has VP-ellipsis, then the counterpart to (14c) in that language may end up consisting of just a finite verb. Alternatively, if the language has null object pronouns as well as null subject pronouns, an affirmative reply to a YNQ may end up consisting of just a finite verb. Both analyses have been proposed for object-less expressions such as (15c) in Japanese; see Otani & Whitman (1991), Hoji (1998) \( (h\text{on}) = \text{honorific}. \)

\[(15) \quad \text{– John wa huransugo o hanashimasu-ka?} \quad \text{(Japanese)} \]

\[\quad \text{‘Does John speak French?’} \]

\[\quad \begin{align*}
\text{a. – Hai.} \\
\text{yes} \\
\text{b. – Hai, hanashimasu.} \\
\text{yes speak-hon} \\
\text{c. – Hanashimasu.} \\
\text{speak-hon}
\end{align*}\]

By hypothesis this is not how replies to YNQs are derived in the B-languages, though. Instead, assuming that Holmberg’s (2001) analysis of Finnish (detailed below in section 7) carries over to other B-languages, YNQ-replies consisting of a bare finite verb in B-languages are derived by moving the finite verb to C and deleting IP, thus typically leaving only the finite verb to be spelled out. The conjecture here is that the Finnish verb-reply and the Japanese verb-reply in (15) have quite different derivations: The Finnish reply is derived by IP deletion, where IP includes the subject, while the Japanese one in (15) is derived by VP-ellipsis (Otani & Whitman 1991) or object pro-drop (Hoji 1998) and a null subject in specIP.

Another complication is that most, perhaps all, B-languages may reply to YNQs by a special affirmative particle. For example Finnish has the adverb \text{kylla}, and Cantonese Chinese has the particle \text{hai2}.\(^2\) In neither language is the choice between a verb-reply and a yes-reply free. For example, if the question does not contain a verb, the affirmative reply cannot contain a verb, while the affirmative particle or adverb is a viable option.\(^3\)

\[(16) \quad \text{– Ah John beng zo?} \quad \text{(Cantonese)} \]

\[\quad \text{prt John sick perf} \]

\[\quad \text{‘Is John sick?’} \]

\[\quad \text{– hai2.} \\
\text{yes}\]

\(^2\) This is \text{hai} with Tone 2. Marking the tone is particularly significant here because \text{hai} with Tone 6 is the copula. Except here I have followed the transcription convention of not marking tone in Chinese.

\(^3\) Another case where the verb-reply cannot be used in Finnish is when the question focuses on an argument or adverbial (‘Is it French that John speaks?’). Here the verb-reply cannot be used, while the affirmative adverb is a viable option.
The qualification “standardly” is therefore important in the formulation of Generalization 2, but unfortunately its meaning has to be left vague. It does not mean “most frequently”, or “in the unmarked case”, at least not across the board for all the B-languages. An indication regarding which reply form is the unmarked one is which form informants spontaneously use as their first alternative (that is without special prompting). Another indication is which reply form is given as the first alternative in teach-yourself books and grammars.\footnote{There are ambitious book-length grammatical descriptions which do not even mention how to answer affirmatively to a YNQ. I surmise that this will more often be the case when the unmarked reply form in the language in question is with a special affirmative particle, as the (Anglo-centric) grammarian might then consider the information grammatically trivial. Asher & Kumari’s (1997) grammar of Malayalam is a notable exception in that it contains a detailed account of answers, without, however, including any pure verb replies. According to Jay Jayaseelan (p.c.) this is because the grammar describes a not widely used formal, high-status form of the language, while ‘common Malayalam’ uses verb replies frequently – which is why I take Malayalam to conform to Generalization 2. Teach-yourself books are potentially more useful than grammars as they typically include much dialogue. On the other hand, various pedagogical and other (unstated) considerations may affect their presentation of the facts of the language.}

But by these criteria the Slavic languages Czech and Polish are exceptions to Generalization 2 among the B-languages. The informants’ spontaneous first choice is not the verb reply but the affirmative particle, and the teach-yourself books consulted also do not give a bare verb-reply as their first alternative. On the other hand informants judged the verb-reply as a perfectly normal, stylistically unmarked alternative, while, in the case of the A-languages, prompting a verb reply generally required more effort, or was not accepted at all. I have therefore opted for the deliberately vague formulation “standardly”\footnote{My informants are all linguists, in some cases only one or two per language, who have filled out a questionnaire, in most cases supplemented by communication by e-mail.}.

Among the A-languages, the Celtic languages Welsh and Scots Gaelic are clear exceptions to Generalization 2. As shown in (15a), Welsh allows a null subject in the second conjunct in the Welsh counterpart to (1), that is to say, Welsh is an A-language. Yet the verb-reply is the unmarked affirmative reply option, according to Jones (1999).

(17) a. Maen nhw’n dweud nad yw John yn
be-3PL. they PROG say NEG.COMP be-3SG John PROG
siarad Ffrangeg, ond mae yn.
speak French but be-3SG PROG
‘They say that John doesn’t speak French, but he does.’

b. – ydy hi wedi gorffen? (Welsh: Jones 1999)
be-PRES she PERF finish
‘Has she finished?’
The same holds true of Scots Gaelic. These exceptions are all to be taken seriously, and I will return to them in section 8.

5. A note on Portuguese

That European Portuguese does not allow a null subject in contexts such as (1) has not been observed before, to my knowledge. It is, however, well known that Portuguese differs from most, or all, of its Romance relatives except Galician in the way YNQs are answered by repeating the verb rather than using an affirmative particle; see Martins 1994.

(18) – Viste o João? (European Portuguese)
   ‘Did you see John?’
   – Vi. / #Sim.
   saw / yes
   ‘Yes.’

(19) – Viste a Juan? (Spanish)
   ‘Did you see John?’
   – Sí. / *Vi.
   yes / saw
   ‘Yes.’

The fact that European Portuguese as the only Romance null-subject language checked so far is a B-language thus provides interesting confirmation that Generalization 2, partial though it is, is on the right track, and offers promise of an explanation of the curious prohibition against a null subject in the context (1).

More research is required to account for the split between European Portuguese informants who accept a null subject in (1) and those who do not. What needs to be investigated is whether it corresponds to a regional division, and whether it correlates with how they reply to YNQs. All speakers consulted can reply by repeating the finite verb; what has not been investigated is whether there are subtle differences indicating that the grammar of such replies differs among speakers.

However, as a number of speakers have independently confirmed that they do not accept a null subject in (1), I am confident that there is a variety of European Portuguese, which may or may not be the majority variety, which is a B-language.  

6 Galician, which is spoken in Spain just north of Portugal, may present another counterexample to Generalization 2, along with the variety of Portuguese which accepts a null subject in (1): According to Ricardo Bermúdez-Otero (p.c.) the subject can be dropped in the second conjunct of (1) in Galician, although YNQs are standardly answered by repeating the verb.

6. The syntax of affirmation and negation

In this section I will lay the groundwork for an explanation of Generalization 2, that is the correlation between being a B-language and replying affirmatively to YNQs by repeating the finite verb. It is heavily based on the theory in Holmberg (2001).

6.1. English

Consider first English: If you want to contradict a negative statement, you cannot do it very well by simply uttering 'yes'. Instead you need the longer form which repeats at least the subject and the finite auxiliary of the statement, in affirmative form.

(20) – John doesn’t speak French.
   a. – #Yes.
   b. – Yes he does.

The reason why you need the longer form is quite clear, once we acknowledge that a reply ‘Yes’ or ‘No’ is an elliptical expression where an entire IP is elided, and recovered from the preceding yes/no-question.

(21) – Does John speak French?
   – Yes [IP John speaks French]

The long reply (20b), which is an acceptable alternative in this context, is derived by VP-ellipsis, the VP recovered from the preceding question.

(22) – Does John speak French?
   – Yes [IP he does [VP speak French]]

In (23), which is = (20), the antecedent IP is, however, specified for negative polarity.

(23) – John doesn’t speak French.
   – *Yes [IP John doesn’t speak French]

The short reply is therefore contradictory: an affirmative focus operator combined with a negative proposition. The long reply Yes he does is fine: In this case all that needs to be recovered from the preceding utterance is the VP, and therefore it doesn’t matter whether the sentence is negative or affirmative.

(24) – John doesn’t speak French.
   – Yes he does [VP speak French].
6.2. Finnish

In Finnish you reply affirmatively to a yes/no-question by repeating the finite verb of the question.

(25) – Puhuu-ko Joni ranskaa?
    speaks-q John French
    ‘Does John speak French?’

    – Puhuu.
    speaks
    ‘Yes.’

The reply *Puhuu* ‘speaks’ is an elliptical expression where the verb, incorporated in Pol(arity) has moved to the C-domain, and IP is deleted and recovered from the the preceding utterance. This is a somewhat simplified analysis; the more precise analysis will be presented below in section 7.

(26) puhuu C [IP Joni ranskaa] (IP = PolP)
    speaks John French

We know that IP is deleted in the reply in (26), because Finnish does not allow 3rd person referential null subjects (see Vainikka & Levy 1999, Holmberg 2005). Therefore the subject in the reply in (25) must be deleted as part of a larger constituent.

An alternative affirmative reply is found in (27).

(27) – Puhuu se.
    speaks he
    ‘Yes, he does.’

This is derived by moving verb+Pol to the C-domain, and deleting VP, recovered from the preceding utterance (*puhu* is the root form, *puhuu* is Present 3sg). (Copies to be deleted are put within angled brackets.)

(28) puhuu C [IP se <puhuu> [IP <see> <puhuu> ranskaa]]

That is to say, (27) corresponds to the English long reply. The difference is (a) that Finnish but not English has V-movement out of VP, and (b) that Finnish expresses affirmative focus (‘reply focus’) by moving Pol with the incorporated verb to the C-domain, while English merges an affirmative focus particle *yes* in the C-domain.

As predicted, given the English facts discussed, when contradicting a negative statement in Finnish you cannot use the short form (the bare verb).
(29) – Joni ei puhuu ranskaa.
   John not speaks French
   a. – #Puhuu.
      speaks
   b. – Puhuu se.
      speaks he
      ‘Yes he does.’

The reason is that the short form is derived by IP-ellipsis, but in this case, since the antecedent IP in the preceding utterance is specified for negative polarity, the result is ill formed, just as in the English case (23).

(30) – Joni ei puhu ranskaa.
    John not speaks French
    Puhuu [rp Joni ei puhu ranskaa]
    speaks John not speaks French

The long form, on the other hand, is derived by VP-deletion, so the polarity of the preceding sentence doesn’t matter. Consequently it is well formed in this context. (The middle copy of the verb is obviously deleted as well, by ordinary copy deletion, before the derivation reaches PF.)

(31) Puhuu [rp se <puhu> [rp se <puhu> ranskaa]]
    speaks he speaks he speak French
    ‘Yes he does.’

6.3. Cantonese Chinese

Cantonese Chinese behaves in relevant respects like Finnish and English. There is a short and a long form of the reply to a YNQ:

7 Using the long form (29) is not the only way to contradict a statement. Another one is using a special contradiction-focus particle –pas/pas, affixed to the fronted verb:

(i) – Joni ei puhu ranskaa.
    John not speaks French
    Puhuupas.
    speaks-PAS
    ‘He does, too.’

Here, just as in the reply in (30) the IP recovered from the preceding utterance is specified for negative polarity. However, the effect of this focus particle is to neutralize the polarity of the proposition it c-commands (see Holmberg 2001).
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(32) – Siuming sik m-sik gong faatman?
   Siuming know not-know speak French
   ‘Does Siuming speak French?’

   – Sik.
   know
   ‘Yes.’

   – Sik, keoi sik.
   know he know
   ‘Yes, he does.’

Both reply forms are derived by moving the verb to the C-domain. In the short form this is followed by IP-ellipsis, in the long form by VP-ellipsis.

If you want to contradict a negative statement in Cantonese, you cannot use the short form, but you can use the long form.

(33) – Siuming m-sik gong faatman.
   Siuming not-know speak French
   ‘John doesn’t speak French.’

   – #Sik.
   – Sik, keoi sik.

As in Finnish and English, the short form is derived by IP-deletion, but as the antecedent IP is specified for negative polarity, the result when the IP is recovered is ill formed, yielding a contradictory reading. The long form, on the other hand, is derived by VP-deletion, so the polarity of the utterance which provides the antecedent does not matter.

(34)  sik  C [ ip keoi <sik> [ vp <sik> [ vp <keoi> gong faatman]]]
       know he know speak French

The only relevant difference between Finnish and Cantonese is that the middle copy, that is the copy of V + Pol, is deleted in Finnish, but spelled out in Cantonese.8

7. Null subjects and polarity

As mentioned, the second conjunct of (1), repeated here, asserts the falsity of a negative statement in the first conjunct, which is to say that it focuses affirmative polarity; everything else is presupposed.

8 When comparing Chinese with, for example, Finnish there is the added complication that the affirmative particle (in Cantonese hai) can be used to confirm a negative statement or a negative question, which is not possible in Finnish or English. This does not impact on the discussion in the text, however.

(1) They say that John doesn’t speak French, but he does.

Being presupposed, the VP can be deleted. On that account the subject could also be deleted, but English is not a null-subject language, and thus requires a pronounced subject, regardless of information-structural content.

The problem that we started out with is why a class of null-subject languages also resist deletion (non-pronunciation) of the subject in this context.9

(35) Ne sanoo etten puhu ranskaa, mutta
they say that-not-1sg speak French but
*(minä) puhun. (Finnish)
I speak-1sg

Taking Finnish as my example, the answer is that a verb pronounced without a subject in a context forcing polarity focus is necessarily analyzed as moved by Pol-movement to C, with IP-deletion. However, much as in the case of the discourses in (20), (29), and (33), where a speaker contradicts a negative statement made by another speaker, this does not yield a reading that can be made sense of, as the only available antecedent, the embedded statement in the first conjunct, is specified for negative polarity. (As will be clarified below, (36) is not just contradictory, but also violates Full Interpretation at LF.)

(36) *Ne sanoo etten puhu ranskaa, mutta puhun [a minä en puhu ranskaa]
they say that-not-1sg speak French but speak I not speak French

Pronouncing the pronoun in (35) excludes the analysis where V + Pol is moved to C, and forces the analysis where only VP is deleted. This yields a well formed reading, since the first conjunct provides a good antecedent for the deleted VP.

(37) mutta [CP C [IP se puhuu [a se se puhu ranskaa]]]
but he speak he speak French

Why is the subjectless second conjunct necessarily analyzed as having V in C, though? This could only be the effect of a competition of derivations: There are in principle two derivations leading to (38).

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9 In Finnish negated finite sentences subject-verb agreement is marked on the negation; see Holmberg et al. (1993), Holmberg (2003). The negation, in turn, can be cliticized to the complementizer. None of this is of any consequence in the present connection. The reason why I use a 1st person subject in the Finnish example is that Finnish does not have 3rd person null subjects except in certain restricted cases (see Holmberg 2005).
(38) Puhun.
speak-1SG

Starting from the tree (39) where the verb has moved to Pol, via T, and the subject has moved to specPolP, there are two ways to continue the derivation. The first one is (40). (For ease of presentation I have omitted parts of the structure such as little v and possible additional copies of the subject; the analysis (39) will in any case be modified in section 8).

(40) 1. Delete VP;
2. Delete the subject.

As discussed in Holmberg (2001), Finnish has VP-deletion. Since Finnish always does V-raising out of VP, the raised verb is stranded by VP-deletion (as is the case in many languages; see for example Huang 1991). Furthermore, Finnish has 1st and 2nd person null subjects. In Holmberg (2005) I argue that these null subjects are derived by deletion of a pronoun, not merge of pro, but this is (probably) not crucial in the case at hand. Consequently the derivation (40) is predicted to be fine. The result is (41), where, after deletion of the lower copy of raised verb by ordinary copy-deletion, the only word that is actually pronounced is the copy of the raised verb puhun in Pol (main clause C has no lexical form).

(41) C [PolP minä [Pol puhun [TP puhun [VP minä puhun ranskaa]]]]
I speak-1SG speak-1SG I speak-French

The other derivation is (42):
1. Move Pol to C;
2. Delete PolP.

The result is (43):

\[(43) \text{puhun} + C \rightarrow \text{[\text{minä} - \{\text{puhun} - \{\text{minä puhu ranskaa}\}]}}\]

The derivation (42) always wins over (40), for reasons discussed below. This is fine, since the YNQ provides a good antecedent for the deleted PolP. Consequently (44) is a well formed discourse:

\[(44) \text{– Puhut-ko ranskaa?}
\text{\hspace{1cm} speak-2sg French}
\text{\hspace{1cm} ‘Do you speak French?’}
\text{\hspace{1cm} – Puhun.}
\text{\hspace{1cm} speak-1sg}
\text{\hspace{1cm} ‘Yes.’}\]

However, the derivation (42) gives an ungrammatical result as the derivation of a sentence asserting the falsity of a proposition, whether it is in a separate utterance, as in (30), or in a preceding conjunct, as in (45).

\[(45) \text{Ne sanoo etten puhu ranskaa, mutta puhun.}
\text{\hspace{1cm} they say that-not-1sg speak French but speak-1sg}\]

The reason is that the context does not provide a good antecedent for the deleted IP/PolP.

Let us be more precise at this point: The problem in (45), the second conjunct derived as in (42), is not, as implied earlier in connection with (36), that the antecedent of the elided IP is specified for negative polarity, but that it is specified for polarity at all. Note that (46) is as ill formed as (45), without a pronounced pronoun in the second conjunct.

\[(46) \text{Ne sanoo että puhu ranskaa, ja *(minä) puhun.}
\text{\hspace{1cm} they say that speak-1sg French and I speak-1sg}\]

Here the second conjunct is intended to confirm the truth of the embedded proposition in the first conjunct. The antecedent IP is specified for affirmative polarity, so the two conjuncts have the same polarity, still the result is ill formed when derived as in (42), by Pol-raising to C and deletion of IP, the derivation which is forced when the subject is not pronounced.

The reason is the following: C in (42) is a Focus-C, encoding an abstract polarity focus operator. This operator needs a polarity variable to bind, namely an unspecified Pol head, a variable with two possible values, negative or affirmative. Now consider the reply in (44). Mainly for the sake of presentation I will view it from the perspective of the listener/parser deriving the LF of the elliptical reply, and recovering the ellipsis by
copying the PolP of the preceding YNQ (47a) into the position of the deleted PolP in the reply. The result is (47b):

(47) a. Puhut CQ [IP D1 [Pol AFF/Neg] [VP D1 puhu ranskaa]]
    b. Puhun CPOLFOC [IP D1 [Pol AFF/Neg] [VP D1 puhu ranskaa]]

In the question (47a), C encodes a YNQ-operator, which must be merged with a PolP with unspecified Polarity, a variable with the two possible values Affirmative or Negative. In the reply, C encodes a polarity-focus operator. Both kinds of C attract Pol to specCP (see next section for details of this movement). The PolP of the reply is a copy of the PolP of the question, consequently it contains the required polarity variable. As the Pol head moved to specCP is affirmative-marked, the focus-operator will assign Affirmative as the value of the variable; see Holmberg 2001 for more details.

The subject in (46) is labelled D1, because the resolution of the ellipsis operates on a representation, call it LF, where the (pronominal) form is not relevant but only its reference, which is the same person in the question and the reply.

Now consider the resolution of the elliptical second conjunct in (45) or (46). Taking (46) as our example, (48a) represents the LF of the embedded PolP että puhun ranskaa ‘that I speak French’ in the first conjunct, specified for affirmative polarity.

(48) a. C [PolP D1 [Pol Aff] [VP D1 puhu ranskaa]]
    b. Puhun CPOLFOC [IP PolP D1 [Pol Aff] [VP D1 puhu ranskaa]]

(48b) is the result when this PolP is copied into the place of the ellipsis in the second conjunct. There is a polarity focus operator but no polarity variable to bind since Pol is specified Affirmative. The sentence ends up violating Full Interpretation.

The question that remains to be answered to complete the argument is: Why does the derivation (42) always win over the derivation (40)? On the face of it, from the point where they diverge, they need the same number of steps to derive the same PF output, the bare main verb. However, we are dealing with a context which induces polarity focus. This means that CPOLFOC must be merged. In Finnish CPOLFOC triggers movement of Pol to C. If so, then the derivation where VP and the subject are deleted by separate operations also involves movement of Pol to C. The derivations that are compared are thus (49) and (50), where (50) is less complex as it involves fewer operations.

10 An alternative is to view it from the point of view of the producer of the ellipsis, in which case the IP-ellipsis may be seen as blocked in the absence of an antecedent satisfying the identity conditions on the deletion. See Holmberg (2001) for some discussion of the implications of Finnish IP-deletion for theories of ellipsis.

11 The relation between the LF and the PF of a YNQ is particularly transparent in Chinese: see (32), where the polarity variable is spelled out as F-not-F.
1. Move Pol to C.
2. Delete the subject.
3. Delete VP.

(50) 1. Move Pol to C;
2. Delete PolP.

We can thus explain why (45), the Finnish counterpart to (1) with a null subject, repeated here, is ill-formed:

(45) *Ne sanoo etten puhu ranskaa, mutta puhun.
they say that-not-sg speak French but speak

The second conjunct can only be derived by movement of Pol to C, with deletion of IP (PolP). However, since the sentence is headed by a polarity focus operator, the deleted PolP requires an antecedent which contains a polarity variable. The antecedent here is the embedded sentence in the first conjunct, which has specified polarity. Consequently the sentence ends up violating FI, with a focus operator having no variable to bind.

I conjecture that the explanation for the absence of the null subject option in the second conjunct of (the counterparts of) (1) is the same in all the B-languages.

Why, then, do the A-languages allow a null subject in their counterparts of (1)? The simple answer is that they do not have Pol-to-C movement, as shown by the fact that they mostly reply affirmatively to YNQs by using an affirmation particle. To be more precise, C_{POLFOC}, the C employed in replies to YNQs does not have the requisite feature to trigger move of Pol to C. Instead, they employ merge of a polarity focus particle, affirmative or negative (yes or no). Therefore, to derive the second conjunct in (1), they can employ derivation (40), deleting VP (if they allow that deletion) and deleting the subject by separate operations.

In the next section I will present in more detail the derivation of polarity focus sentences, along the lines of Holmberg 2001. This will shed light on some outstanding issues, including some of the variation found among the A-languages.

8. The derivation of replies in more detail

Not just a single verb, but a string of auxiliaries and verb, can move to C in replies.

(51) – Onko Joni puhunut ranskaa?
    – On.
    has John spoken French
    has
As argued in Holmberg (2001), this means that Pol-to-C in a case like this is not head movement, but movement of a constituent including the auxiliary verb and the main verb, but excluding the subject and the object: \(^{12}\) a remnant PolP. The derivation is as follows:

\[(52)\]

\[
\[
\begin{array}{c}
\text{Top} \\
\text{[EPP]} \\
\end{array}
\]

\[
\begin{array}{c}
\text{PolP} \\
\end{array}
\]

\[
\begin{array}{c}
\text{on+Pol} \\
\text{T} \\
<\text{on}> \\
\text{Prc} \\
\text{vP} \\
\text{puhu+nut} \\
\text{Joni <puhu> ranskaa} \\
\end{array}
\]

In (52) the verb has moved to the Participle head merged with vP. The auxiliary, an exponent of T, is merged with PrcP. Pol is merged with TP, and T moves to Pol. Finally a head Top(ic) is merged. This head has an EPP-feature. In Finnish, [EPP, Top] usually triggers movement of the subject NP, but may trigger movement of other topic-worthy categories such as an object or a locative adverbial; see Holmberg & Nikanne (2002). It may also trigger movement of the remnant vP. This can be seen in (53) (CON = conditional mood).

\[(53)\] Milloin \[\text{TopP } [\text{vP Joni ranskaa} ]\] olisi puhunut? when \[\text{John French have-CON spoken}\] ‘When would John have spoken French?’

Applied to (52), vP-movement yields (54): \(^{13}\)

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\(^{12}\) It may also contain certain adverbs, namely adverbs high in the Cinque hierarchy; see Cinque 1999. This is explained under the theory summarized in the text below. See Holmberg 2001.

\(^{13}\) As shown in Holmberg 2001 the vP moved to specTopP also potentially contains adverbials low in the Cinque-hierarchy, such as manner adverbials and aspectual adverbials.
Next, $C_{POLFOC}$ is merged. $C_{POLFOC}$ triggers movement of Pol to C. Finnish has the option of moving just the head Pol or the entire PolP. The former will derive the word order (55), a well formed Finnish reply to the question in (51):

(55) On Joni ranskaa puhunut.
has John French spoken
‘John has (indeed) spoken French.’

PolP-movement yields (56):

(56)

This structure can be spelled out as (57a), or, if vP is deleted, (57b).

(57) a. On puhunut Joni ranskaa.
has spoken John French
b. On puhunut.
has spoken

Both are fine as replies to the question ‘Has John spoken French?’. None of them are acceptable as the second conjunct of (1), for the reasons articulated in the previous section.

What is the structure of the well-formed second conjunct of (1) with an overt subject?
At this point I will diverge from Holmberg (2001). In that paper I assumed, following Vilkuna (1995) and Holmberg & Nikanne (2002) that Finnish is a topic-prominent language in the sense that any category can satisfy the EPP of the finite clause provided it is interpretable as a topic. However, as discussed in Holmberg (2005), the subject need not be a topic to check the EPP. It can, for example, be an indeterminate pronoun.

(59) Kuka tahansa voi oppia puhumaan ranskaa.

who ever can learn speak-INF French
‘Anyone can learn to speak French.’

I suggest that the subject, in the unmarked case, moves to specPolP. This tallies with the fact that Pol is where subject agreement is located in Finnish; see Holmberg (2003). The 'unmarked case' is when the subject is not contrastive focus or a whP (in which case it moves to specCP), or is not topicalized along with the vP.

In the derivation of the second conjunct in (58) the subject pronoun moves to specPolP. Then Top is merged, triggering movement of vP, now containing only the object (and copies of the moved subject and verb).

(60) [TopP [vP <minä > <puhu> ranskaa] [Top [PolP minä
[puhun + Pol [<vP>]]]]]

Then C_POLFOC is merged, triggering movement of PolP, now including the subject and the verb. The structure so derived is (61) (omitting some copies for ease of exposition).

(61) [CP [PolP minä puhun <vP>] [C [TopP [vP ranskaa]
[Top [<PolP>]]]]]

This structure can be spelled out as (62a) or (62b):¹⁴

(62) a. minä puhun ranskaa.
I speak French

b. minä puhun.
I speak

(62b) is when vP is deleted. It is important that this should be vP-ellipsis, not TopP-ellipsis or PolP-ellipsis, even if no constituent inside TopP/PolP is actually pronounced. What should be recovered from the context is a vP, not a PolP.

¹⁴ In the context we are talking about, (62a,b) have focus on Pol, hence the verb is stressed.

Finally, and equally importantly, the reason why the subject cannot be deleted in (62) is that it is part of a focused PolP. This theory makes the prediction that if another category than PolP can check $C_{POLFOC}$, then the subject can be deleted. Consider (63):

(63) Ne sanoo etten puhu ranskaa, mutta itse asiassa they say that-not-isg speak French but in fact (minä) puhun. I speak

Here the affirmative polarity adverbial *itse asiassa*, roughly ‘in actual fact’, moves to specCP. The subject remains in specPolP, and can be deleted by ‘usual pro-drop’ (which in Finnish is a deletion operation, according to Holmberg 2005), as can the vP. In this light, consider the Italian example (5c). It seems clear enough that the structure is the same as in (63): The adverbial *invece* ‘in reality’ is in spec$C_{POLFOC}$, hence nothing prevents dropping the subject. Note also the emphatic particle in the Japanese example (5d). This indicates that some languages are A-languages by virtue of relying on a ‘special category’ to check $C_{POLFOC}$ (blurring the distinction between A and B-languages).

This may also explain the counterexample posed by Welsh: In Welsh, YNQs are standardly replied by repeating the finite auxiliary. Yet, as shown in (15), the subject can be dropped in the Welsh counterpart to (1). However, it can do so only if the sentence includes a focused PROG particle (focus indicated by capitals in (64a)).

(64) Maen nhw’n dweud nad yw John yn siarad Ffrangeg, ‘They say that John doesn’t speak French,
   a. ond mae YN. but be-3SG PROG but he does.’
   b. *ond mae. but be-3SG

If the focused PROG particle in (64a) is able to check $C_{POLFOC}$, then the subject may remain in specPolP, and be deleted by usual pro-drop. Thus (64) need not involve deletion of a constituent bigger than vP, and is therefore well formed in this context. In (64b) PolP itself, headed by the finite verb, checks $C_{POLFOC}$, which leads to a violation of FI in this context. The precise analysis of (64a) is still an open question, though.

9. Conclusions

The ban against a null subject in the second conjunct in sentences corresponding to *They say that John doesn’t speak French, but he does*, in a variety of languages which otherwise employ null subjects in finite

clauses under the usual conditions (the subject is not focused, there is sufficient agreement and/or a linguistic antecedent, etc.) is unexpected and has no obvious explanation in terms of well-known theories of pro-drop.

The paper argues for the following conclusions:

- The reason why the subject cannot be null in the Finnish counterpart to (1) is that it is part of a focused remnant PolP. The non-focused part of the sentence, that is the vP, is deleted (optionally). It is suggested, although this remains speculative, that this explanation carries over to the other so called B-languages.

- The reason why this only holds for B-languages is that A-languages, by hypothesis, lack Polarity focusing by movement to specCP. This is evidenced by their preference for answering yes/no-questions affirmatively by an affirmative particle rather than by repeating the finite verb.

At least some A-languages can derive sentences consisting of just a finite verb by deleting vP and the subject by separate deletions, also in contexts inducing polarity focus, and thus can derive subjectless verb-replies to yes/no-questions. B-languages cannot do this, since the derivation consisting of fronting PolP and deleting vP containing the subject and the object will always be preferred for reasons of economy of derivation.

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Received January 1, 2006
Accepted December 30, 2006

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