The Null Subject Parameter and correlating properties: the case of Creole languages

Marco Nicolis Università di Siena – Queen's University nicolism@post.queensu.ca

Abstract

The existence of correlations between the positive setting of the Null Subject Parameter and other grammatical properties has recently been called into question (see Newmeyer (2005)). In this paper, I show that the $pro_{ref} \longrightarrow pro_{-ref}$ correlation appears to be exceptionless and that it follows directly from the theory of pro-drop in Rizzi (1986). Rizzi (1982) proposes that the availability of Free Inversion is what allows for the lack of that-t effects in pro-drop languages; this, I further show is empirically untenable. I present data from several Creole languages that suggest that the lack of that-t effects in these languages is related to the availability of null expletive pro. I take the latter to be a sufficient, but not necessary, condition for the lack of that-t effects. I finally discuss the implication of this finding for the Parametric model.

1 Introduction¹

Much research in the 80s has uncovered the existence of several correlations between the positive setting of the Null Subject Parameter (NSP henceforth) and other apparently unrelated grammatical properties. While no less than a dozen such correlations were proposed (according to Rizzi (2004)), only a handful have widespread consensus. In particular, Null Subject Languages (NSLs) are generally taken as adhering to the properties in (1) (Referential Null Subjects, Non referential Null Subjects, Free Inversion, No that-t effects), see Rizzi (1982), Rizzi (1986).

- (1) a. Mangio la pizza Eat.1s the pizza
 - b. *(I) eat pizza
 - c. pro_{expl} è arrivato un uomo is arrived a man
 - d. *(There) came a man
 - e. *Ha telefonato Gianni* Has telephoned Gianni
 - f. *(*There) has telephoned John

- g. Chi credi che verrà?

 Who think.2s that will come
- h. *Who do think that will come?

As seen in (1), Italian and English, prototypical examples of a NSL and non-NSL respectively, contrast on all four properties of Null Referential Subjects, Null Non-Referential Subjects, Free Inversion, No that-t effects. However, a large number of languages show partial clusterings only. Different theoretical approaches to the NSP make different predictions with respect to the status of partial clusterings; but no model predicts an 'anything goes' situation.

While the theoretical status of the NSP has given rise to a very lively debate, especially in the late 80s and early 90s (see Jaeggli and Safir (1989) for a representative sample of the issues involved), very few studies have offered a systematic analysis of the crosslinguistic distribution of the properties in (1).

A notable exception is Gilligan (1987), who compiled a balanced sample of one hundred languages, carefully selected with respect to geographical distribution and genealogical family. The results of Gilligan's study were roughly that out of the sixteen possible combinations of the four properties in (1), only seven occurred more than once, and two others only once. A numerical breakdown for six theoretically relevant correlations is reported in the table in (2), adapted from Gilligan (1987), Newmeyer (2005)

| | | yes-yes | yes-no | no-yes | no-no |
|-----|-------------------------------|---------|--------|--------|-------|
| (2) | $pro_{+ref} - pro_{-ref}$ | 24 | 0 | 15 | 2 |
| | pro_{+ref} – Free Inversion | 22 | 49 | 11 | 15 |
| | pro_{+ref} – that- t^2 | 5 | 3 | 2 | 1 |
| | pro_{-ref} – Free Inversion | 14 | 25 | 1 | 1 |
| | pro_{-ref} – that- t | 7 | 2 | 0 | 1 |
| | Free Inversion – that- t | 4 | 0 | 3 | 4 |

Gilligan's work is still commented upon in the literature and scholars belonging to different traditions have expressed radically different opinions on the theoretical relevance of his findings. Several recent works by Newmeyer (Newmeyer (1998), Newmeyer (2005), Newmeyer (2006)) have considered Gilligan's results damning for generative approaches to the Null Subject Parameter and for the Parametric model at large. Gilligan showed that certain correlations, unexpected under mid-80s theories such as Rizzi (1986), hold; conversely, other correlations predicted to hold by such theories do not. About a half of the logically possible combinations of the properties in (1) were not attested at all. Yet, as noted by Roberts and Holmberg (2005) and Baker (2001) among others, the many gaps in the paradigm and the substantial occurrence of several of the predicted correlations appear to provide important support for the Parametric model. A global assessment of Newmeyer's proposal is beyond the scope of this paper (see Roberts and Holmberg (2005) for a critical assessment of it). Nevertheless, I would like to note that his proposal to entirely abandon the Parametric Model and to revert to EST-type rules appears questionable at least from a historical perspective; work in comparative syntax clearly began to flourish exactly when the EST model was aban-

doned in favour of the Parametric Model.

In this paper, I will show that the Parametric Model is, in fact, capable of accounting for both gaps in the paradigm and the observed correlations; the 80s formulation of it is too rigid to account for the observed variation and certain proposals in it need to be weakened.

2 Descriptive correlations and theoretical justification

While uncovering correlations between different grammatical properties is in itself important, what is crucial for any model is offering a theoretical account for such correlations. The structure of Parametric Theory has been long implicitly conceived in such a way that it leads one to predict exceptionless correlations as opposed to crosslinguistic tendencies. The latter have virtually no status in the theory. This state of affairs, it seems to me, derives largely from a general misconception concerning the nature of parameters. The view of Parameters as macroparameters (in the 80s' sense) has led researchers to consider parameters as objects endowed with some internal deductive structure, itself automatically causing the emergence of the observed correlations.

Such an idea, in its most radical form, has never been proposed to my knowledge. Nevertheless, this idea has led researchers to expect an all-or-nothing situation with respect to certain linguistic properties. In fact, however, the standard assumption within the generative framework has always been that parameters are simple, binary-choice points that the language learner has to set.³ The observed correlations (or lack thereof) follow from the peculiar position that a given parameter occupies within the entire grammatical system and, more specifically, from its relation with respect to other Principles and Parameters (see Rizzi (2004) for details).

Rizzi (2004) exemplifies this state of affairs by contrasting the rich array of properties associated with the availability of null subjects with the lack of such correlating properties in the case of null objects.

Subjects occupy a much more crucial position than objects in the grammatical system (the EPP and ECP are principles essentially dealing with subjects), while objects are typically much less constrained. Hence, it follows that the intricate interaction between a parameter regulating subjects (say the NSP) and other grammatical principles (ECP, EPP among others) will give rise to a set of correlating properties in several domains (see the discussion below concerning subject extraction and that-t effects). On the contrary, since there is no EPP for objects and the ECP is usually trivially satisfied in cases of object extraction, etc., Rizzi assumes that a parameter regulating the distribution of objects will not give rise to as many correlations as a parameter regulating the distribution of subjects.

Furthermore, the existence of crosslinguistic tendencies ('relative' correlations) can be thought of as one of the possible ways adopted by a group of languages to solve the tension between structural constraints and the needs of communication. All languages need to solve the tension between the necessity of questioning subjects (root and embedded) and their

general unmovability, under the 'Subject Criterion', Rizzi (2006). Different languages adopt different strategies for this. One of these, very common among NSLs and Creole languages, consists in satisfying the Subject Criterion via the insertion of a null expletive and extracting the subject across from a lower position (see below and Rizzi and Shlonsky (2005)). Given that this is not the only possible strategy a language may choose, even among NSLs (see the Hebrew case below), the correlation between the availability of null expletives and the lack of that-t effects cannot be an absolute one. Rather, it is but a crosslinguisic tendency. Hence, the availability of null expletives is a sufficient, but not a necessary, condition for the lack of that-t effects.⁴

2.1 An 'absolute correlation': $pro_{+ref} \longrightarrow pro_{-ref}$ correlation

If the approach sketched out above is on the right track, at least two different types of correlations can be thought of. Certain correlations are expected to be exceptionless: their status entirely follows from the 'logical structure' of the theory. I would like to propose that an example of this kind of correlation is the $pro_{+ref} \longrightarrow pro_{-ref}$ correlation (first row in the table in (2)). Consider Rizzi's classical theory of pro-drop:

- (3) Theory of pro (Null Subject Parameter):
 - a. Formal licensing: pro is licensed by X^0 under agreement or government
 - b. Identification: pro inherits features from licensing X^0

Formal licensing is, by and large, a parametric property that each language sets independently for relevant functional heads.⁵ If a language is capable of formally licensing pro, then expletive pros (which do not require Identification, since they are not endowed with Person, Number features) are licit in that language. A subset of the languages able to license pro can also Identify pro (3-b). Only languages with a rich enough inflectional morphology can do so.⁶ Therefore, if [-ref] pro is a subcase of [+ref] pro, then, in languages where we find the latter, we will always find the former. This is exactly what Gilligan found in his sample (see the first row in the table in (2): no language in Gilligan's sample allows for referential pro without also allowing for non referential pro). More recently, some languages (partially) violating this correlation have been described in the literature, as we shall see below. However, the facts presented do not seem to constitute conclusive evidence that the correlation does not hold in these languages. In fact, it seems to me, the only definite conclusion can be that some NSLs allow for the coexistence of null and overt expletives, which is a very common state of affairs in Creole languages, as discussed below.

Holmberg and Nikkane (2002) describe Finnish as an NSL that features no null expletives and obligatory overt expletives in virtually all contexts.⁷ The authors, however, concede that the language allows for some instances of non-referential pro, in particular quasi-referential pro (4-a) and the subject pro found in extraposition structures. Notice, in fact, that, in these contexts, the expletive used is se, which I take to correspond by and large to the English expletive it, rather than the locative $sit\ddot{a}$, which I take to instantiate a there-type expletive:

(4) a. Nyt (se) taas sataa Now it again rains 'Now it's raining again'
o. (Se) oli hauskaa että tulit käymään
it was nice that came.2s visiting

Moreover, instances of null expletives also appear to surface in presentational contexts such as (5).

- (5) a. (Sitä) on ilmennyt ongelmia (There) have appeared problems
 - b. (Sitä) sattui onnettomuus (There) occurred accident
 - c. (Sitä) tuli kiire (There) came haste 'We/they are in a hurry'

Holmberg and Nikkane (2002) account for the paradigm in (5) without appealing to null expletives. Rather, they propose, following Alexiadou and Anagnostopoulou (1998), that verb movement can itself check the Case feature in I (in morphologically rich languages) and that the EPP feature in F is optional in Finnish.⁸ This idea appears, nonetheless, to be straightforwardly translatable into a system in which null expletives are postulated.

The coexistence of null and overt expletives has also been noted for Galician (see Raposo and Uriagereka (1990)) and Dominican Spanish (see Kaiser (2004)). Kaiser (2004), quoting work by Silva-Villar, observes that in Galician Portuguese overt expletives are restricted to root contexts, but that they are ungrammatical in postverbal position, in embedded clauses and in non-finite impersonal clauses, as shown in (6).

- (6) a. El choverá hoje? It will rain today?
 - b. *Choverá el hoje?
 Will.rain it today
 'Will it rain today?'
 - c. *Xa sei que el chove of.course know.1sg that it rains
 - d. *... pra el chover ... for it to rain

An anonymous reviewer correctly points out that the subject of metereological verbs is unlikely to be a pure expletive and, therefore, the existence of overt expletives in the language does not immediately follow from the data in (6). In a recent paper, Hinzelin and Kaiser (2006) show that I, while never obligatory, surfaces in about 30% of the elicited answers in existential, impersonal constructions such as (7):⁹

(7) Ello hay muchos mangos este año 'There are many mangos this year' The Finnish and Dominican facts reported in this section do not show that the $pro_{ref} \longrightarrow pro_{expl}$ correlation does not hold, since null expletives are available in several contexts and, crucially, in embedded contexts. They, rather, cast doubt on the universal applicability of the Avoid-Pronoun-Principle, which would predict a null pronoun to always be preferred over an overt one when both are available.

In this section, I have shown that the $pro_{ref} \longrightarrow pro_{expl}$ appears to be indeed exceptionless, as predicted by Rizzi's (1986) model. This is so purely by virtue of the logical structure of the theory: null expletives need only to be licensed, but null referential subjects need to be identified as well as licensed. The availability of the latter immediately guarantees the availability of the former.

3 Lack of *that-t* effects and Free Inversion

Rizzi (1982) made the very influential, and still generally accepted, proposal that the lack of that-t effects in NSLs depends upon the possibility of extracting the subject from the free-inverted position, allowing the subject not to go through the [Spec, IP] position. This, in turn, would give rise to the banned that-t configuration. Since non-NSLs lack the free-inversion position, the subject is, consequently, forced to go through the preverbal subject position; this gives rise to that-t effects.

Rizzi's (1982) account appears empirically untenable, though. While Gilligan's sample was made up of one hundred languages, the subject-extraction data were available for only eleven of these. However, out of the eleven languages, three are problematic for the correlation since they are insensitive to *that-t* effects, despite lacking Free Inversion. The three languages displaying these properties in Gilligan's sample are Basque, Papiamentu, Yoruba. The 'pro-drop properties' of these languages are reported in (8):

| | | pro_{+ref} | pro_{-ref} | Free Inv | No that-t |
|-----|------------|--------------|--------------|----------|-----------|
| (8) | Basque | + | + | _ | + |
| | Papiamentu | _ | + | _ | + |
| | Yoruba | + | + | _ | + |

Given the paucity of Gilligan's data on the issue, I have analyzed a total of eight Creole languages. My findings, described in the next section, are consistent with Gilligan's data in (8). The languages I have analyzed appear to all crucially lack Free Inversion, while still not displaying that-t effects.

4 The partial *pro-drop* status of Creole languages

Creole languages are 'partial *pro-drop*' languages in that they display properties typically associated with *pro-drop* languages, despite lacking the availability of null referential subjects, which is the defining property of a *pro-drop*.

The overall results of my inquiry, detailed in Nicolis (2005), are reported in the table in (9):¹⁰

| | pro_{+ref} | pro_{-ref} | Sub Inv | No that-t | Lexifier |
|----------------------------|--------------|--------------|---------|-----------|----------|
| Berbice Dutch Creole | _ | + | _ | + | Dutch |
| Capeverdean Creole | _ | + | _ | + | Portug. |
| Haitian Creole | _ | + | _ | _ | French |
| Jamaican Creole (basilect) | _ | +‡ | _ | -(?) | English |
| Jamaican Creole (mesolect) | _ | ? | _ | _ | English |
| Kriyol | _ | + | _ | + | Portug. |
| Mauritian Creole | _ | + | -(?) | + | French |
| Papiamentu | _ | + | _ | + | Portug. |
| | | | | | Spanish |
| | | | | | (Dutch) |
| Saramaccan | _ | + | -(?) | + | Portug. |
| | | | | | Spanish |

‡ Available in root clauses only

It is worth pointing that a couple of well-known properties are shared by all Creole languages. First, all Creoles are SVO languages. Moreover, they are generally characterized by the lack of any person/number morphology on the verb, which under standard assumptions concerning the relationship between morphological richness and pro-drop (Taraldsen's generalization) should make pro_{+ref} impossible. The prediction is borne out, as shown in (9). I will now discuss, in turn, each of the four properties summarized in (9) since some interesting asymmetries emerge among the languages under inquiry.

4.1 No Referential Null Subjects

As anticipated, the prediction that Creole languages should not allow referential null subjects holds. However, some alleged cases of referential null subjects are reported in the literature. These cases appear, however, to be accounted for on different grounds: their distribution appears to match that of Root Null Subjects (Rizzi (1994)) and/or that of the null subjects in English diaries, studied by Haegeman (1990), or even pure coordination. I exemplify this with a case in Berbice Dutch Creole, taken from Kouwenberg (1994: 180):

- (10) a. En justu mu mui, aplgi di.. potman ∫i gutwap, kap ∫i..
 3pl PASTHAB go PURP trouble the old=man 3poss thing-PL, cut
 junggwa: jef ∫i.. nana∫i
 3poss sugarcane eat 3poss pineapple
 'They would go to trouble the father's thing, cut his sugarcane, eat his pineapples'
 - b. Dreste alma gutu, krikteni.. gutu fi dekeni mu, mute bi main ju Dress-PF all thing, get-PF=3pl thing for take=3pl go go-PF say mind 2sg '(They) dressed and so on; (they) got their thing to carry them there; (they) went; (she) said: be careful'

All the null subjects of this sort are only attested in root contexts, which is consistent with what is predicted by Rizzi's (1994) theory. Moreover, the style employed seems to be very close to the diary style analyzed by Haegeman (1990) as not involving *pro*.

Referential null subjects have also been claimed to exist in Haitian Creole in Degraff (1993) and in Cape Verdean Creole in Baptista (2001). The issue has been the subject of considerable debate in the case of Haitian Creole, mainly involving Michel DeGraff and Vivienne Deprez: Degraff (1993) proposes that Haitian Creole pronominal subjects should be analyzed as INFL heads, following the proposals by Rizzi (1986b) and Brandi and Cordin (1989) accounting for the distribution of clitics in two Northern Italian Dialects (NIDs), while Deprez (1994) considers such clitics full subjects, much like French clitic subjects which are generally considered phonological clitics.

As noticed by Deprez (1994), Haitian Creole, unlike NIDs, allows for some XP to intervene between the subject clitic and the verb, thus suggesting that 'Haitian pronouns do not necessarily form a unit with the verbs or with the inflectional aspectual particles' (Deprez 1994: 11).

- (11) a. Jan/ li toujou ap travay fò 'John/ he is always working hard'
 - b. Jan/ m pokò ap rakonte yon istwa 'John/ I am not yet telling a story'
 - c. M fout rayi sa 'I fucking hate this'

Degraff has argued that, despite the data in (11), certain properties of clitics in the language still suggest that these clitics are heads after all. In particular, the properties of relevance are that the clitics cannot occur in isolation or be contrastively stressed and that they cannot head complex NPs in e.g. appositive relatives. However, as pointed out by Roberts (1999), all these properties only show that Haitian Creole subject pronouns are phonological clitics. In fact, Standard French clitics also share these properties. I therefore conclude, following Roberts, that Haitian Creole does not allow referential null subjects. I also extend the same conclusion to Cape Verdean Creole, for which Baptista (2001) proposed an analysis fully parallel to Degraff's.

$4.2 \quad pro_{expl}$ available

All the languages in (9) allow for at least some instances of null expletives, with the likely exception of the Mesolectal Jamaican Creole variety described by Veenstra and den Besten (1995), which appears to be fairly close to standard English.

The most common situation across these languages is where both null and overt expletives coexists, much like in Galician and Dominican Spanish, as discussed above. Cape Verdean Creole is the only language in (9) in which null expletives are attested in every context where they may surface and in which no expletives exist. This is an important fact on which I will briefly comment on below.

The languages in (9) display a wide variation with respect to the contexts in which a null or

overt expletive is required and in the contexts where either one can be used. Thus, to advance any kind of generalization concerning the language-internal or cross-linguistic distribution of null vs. overt expletives is virtually impossible. Notice that it does not seem to be the case that the nature of the expletive (say, broadly speaking *there* vs. *it* type expletives) plays a role in the observed pattern of variation (at least in a crosslinguistically consistent way). Consider for example the following two contexts:

- Extraposition Contexts: In Haitian Creole, in extraposition contexts a null expletive is impossible and an overt expletive must therefore surface (12) (taken from Deprez (1994)), while the mirror image case is attested in Saramaccan (example from Byrne (1987: 75))¹¹
 - (12) *(Li) difisil pou pale ak Jan

 It difficult for speak with Jan

 'It is difficult to speak with John'

 (Haitian Creole)
 - (13) (*A) tuủ tàa di wòmi gò disà déé fàmii feen

 It true that the man go leave the the(pl) family of him

 'It is true that the man left his family' (Saramaccan)
- Raising Contexts: While Kouwenberg (1994) claims that Berbice Dutch Creole has no raising verbs, she also admits that some raising contexts are indeed attested, a fact she attributes to the influence of Guyanese English. Be that as it may, an overt expletive is still required in raising contexts in this language:
 - (14) Or lur kɛkɛ, hosen bif,...
 3sg look like, how=3pl say,...
 'It looks like, how do they say (it)'
 (Berbice Dutch Creole)

The mirror image case is attested in Papiamentu, where expletive subjects of raising verbs must be null (example from Kouwenberg (1990)):

(15) pro (tawata) parse ku Maria ta(wata) malo
(PAST) seem COMP Maria be(PAST) ill

'It seems/seemed that Mary is/was ill' (Papiamentu)

The intermediate case, namely *pro* alternating with an overt expletive, is also attested as the exemplified in the following Jamaican Creole (examples from Durrleman (2004), Durrleman (2003)):

- (16) a. (I) komiin kile seh di pickney a go run weh (EXPL) seem like seh the child PROG PROSP run away 'It seems like the child is going to run away'
 - b. (I) look like im nuh like yu (EXPL) look like 3sg NEG like 2sg 'It looks like s/he does not like you'

(Jamaican Creole)

As mentioned above, Cape Verdean Creole exhibits a partly different pattern: null expletives are mandatory. See Nicolis (2006) for an account of this property. According to Baptista (2001), Cape Verdean Creole has recently developed an inflectional affix (-ba) and has, probably as a consequence, V-to-T movement. These facts are considered preconditions for the generalized syntactic licensing of pro_{expl} , following Robert's (1993) idea that Licensing is itself dependent upon V-to-T at least in languages where nominative is assigned under government by T.

4.3 No Free Inversion

All the languages in (9) lack genuine cases of Free Inversion. However, some of the languages in (9) do allow postverbal subjects. However, these cases appear to be constrained in exactly the same way postverbal subjects in non NSL are: the verb must be unaccusative and the subject indefinite. Consider the examples from Cape Verdean Creole in (17) (adapted from Baptista (2001), Costa and Pratas (2003)) and the Haitian Creole examples in (18) (taken from Lumsden (1992: 273))

- (17) a. Txiga tres pesoa Arrived three people
 - b. *Txiga Djon Arrived Djon
 - c. Dja kai un abion TMA fell/crash a plane 'A plane crashed'
 - d. *Dja kai abion di Lisboa 'The Lisbon plane crashed'

(Capeverdean Creole)

- (18) a. (Li) rete / manke Jan yon liv (EXP) remain / lack Jan a book 'A book remains to Jan / Jan is missing a book'
 - b. *Li rete Jan liv la EXP remain Jan the book
 - c. *Rete Jan liv la Remain Jan the book

(Haitian Creole)

4.3.1 An aside on Null expletives and Free Inversion

Given the general availability of null expletives in Creole languages, it may come as a surprise that all of them appear to lack Free Inversion. Since Safir (1985), Free Inversion has been taken to involve a chain between a null xpletive in the preverbal subject position and the postverbal subject. So, why is Free Inversion never available in Creoles? Nicolis (2005), following Belletti (2005), argues that the kind of *pro* in subject position in Free Inversion structures is not a pure expletive, but must be a featurally richer *pro*, possibly a referential *pro*. Belletti (2005) suggests that, much like in Strong Pronoun Doubling Structures, the

free inverted subject and pro are generated as parts of a 'big DP' (see Cecchetto (2000)): it follows that the features of the subject are inherited/copied on to pro; the two parts of the big DP will then split during the course of the derivation. In particular, the free inverted subject will occupy a low, VP-external focus position and pro will move all the way up to the EPP position.¹² Abstracting away from the precise technical implementation of this idea, it is worth pointing out that very straightforward evidence from the diachronic development of Brazilian Portuguese suggests that referential pro might be, in fact, involved in Free Inversion structures.

The impoverishment of inflectional morphology has led to a progressive decrease of referential Null Subjects in the language (see Duarte (2000), Duarte (1996)). This change has co-occurred, by and large, with the loss of Free Inversion in the language (see Andrade Berlinck (2000), Kato (2000)), which directly argues in favour of the necessity of referential pro in order to have Free Inversion, along the lines discussed above. However, Gilligan (1987: 145) reports five languages which he takes to show Free Inversion, despite the lack of referential pro. The five languages are Babungo, Duka, Yebamasa, Icelandic, and Tagalog. While I have no data on the first three languages, the claim that Icelandic displays Free Inversion is simply untenable. Subjects in the language cannot be freely inverted, but they are restricted by the well-known (in)definiteness condition. Moreover, as Norvin Richards (p.c.) pointed out to me, testing the availability of Free Inversion in Tagalog is extremely problematic, given the VSO basic word order of the language.

4.4 No that-t effects

Creole languages clearly lack Free Inversion. Yet, they are still typically insensitive to that-t effects. Data comparable to the Cape Verdean Creole case in (19) (Baptista, p.c) are found for most of the languages in (9) (see below for detailed discussion of the Basilectal Jamaical Creole and Haitian Creole cases).

(19) Kenke ki bu pensa ma ben?
Who COMP you think COMP came?
'Who do you think that came?'

4.4.1 The No that-t effects $\longrightarrow pro_{expl}$ correlation as a strategy of subject extraction

The table in (9) clearly shows that Rizzi's (1982) proposal, namely that the lack of that-t effects is dependent upon Free Inversion, is empirically untenable. On the theoretical side, it must be pointed out that Rizzi's analysis was elaborated in a model where subjects are generated in [Spec, IP]. Therefore, a real asymmetry was apparent between languages that allow and those that do not allow Free Inversion: only in the first type of languages could extraction take place from a position lower than [Spec, IP]. Such a theoretical stance cannot be maintained under current assumptions in which subjects are generated universally vP-internally. In principle, English could then extract the subject directly from the vP internal position and which fill the EPP position with an overt expletive. Crucially, this option is either very marginal or totally impossible in non-NSLs, where null expletives are not

available.¹⁴ I would like to propose that the availability of null expletives is a sufficient conditions for the lack of *that-t* effects. As pointed out above, all the languages in (9) (with the exception of Mesolectal Jamaican Creole) have, in fact, null expletives, consistent with the current proposal. An important validation of the proposed correlation comes from Basilectal Jamaican Creole. Durrleman (2003) shows that this language does allow for null expletives, though in root contexts only (where a null expletive alternates with an overt one, a familiar state of affairs in Creoles, as described above)

- (20) a. Im tell me seh *(i) komiin laik di pickney a go run weh 3sg tell 1sg seh (EXPL) seem like the child PROG PROSP run away 'S/he told me that it looked like the child is going to run away'
 - b. Im tell me seh *(i) look like im nuh like yu
 3sg tell me seh (EXPL) look like 3sg NEG like 2sg
 'S/he told me that it looks like s/he does not like you'

Given that a null expletive is unavailable in embedded contexts, we expect the language to be sensitive to *that-t* effects, since subject extraction across an overt expletive is, at best, a very marginal option. The prediction is borne out, as the subject object asymmetry in (21-b-c) shows:

- (21) a. Mi wanda ef Jan tief di mango-dem I wonder if Jan steal the mango-pl
 - b. Hmm? A wa yu wonda ef Jan tiif? Hm? A what 2sg wonder if John steal 'Hm? What do you wonder if John stole?'
 - c. *A huu yu wanda ef tiif di mango-dem? A who 2sg wonder if steal the mango-pl 'Who do you wonder if stole the mangoes?'

I have claimed above that the correlation between pro_{expl} and No that-t effects is, in fact, a one-way $pro_{expl} \longrightarrow No$ that-t effects relation. An anonymous rewiever correctly points out that this proposal is much weaker than Rizzi's original proposal. I entirely agree. On the other hand, I do not think this immediately translates to being an overall weaker theory. As I have anticipated above, the availability of pro_{expl} and the lack of that-t effects is the result of the application of one of the possible strategies that a language can adopt in order to grammatically extract subjects (in the sense of Rizzi and Shlonsky (2005)). What is absolute, non-violable, both in Rizzi's theory from the 80s and in current Parametric models (including my proposal), is the locality principle regulating the extractability of subjects, be it the ECP or the Subject Criterion (see Rizzi (2004), Rizzi and Shlonsky (2005). I am claiming (following the cited authors) that different languages can adopt different strategies to circumvent the general unextractability of subjects.

A strategy freely available and widely adopted by Null Subject Languages consists in satisfying the EPP (or the Subject Criterion) via a null expletive and extracting the subject across it from a lower position. However, nothing forces the adoption of such a strategy—thus, the sufficient but non-necessary status of the correlation. Data on Hebrew reported by Rizzi

and Shlonsky (2005) perfectly exemplify this state of affairs. The language is an NSL and it clearly allows for extraction across overt complementizers. The example in (22) (taken from Rizzi and Shlonsky (2005: 7)) can be analyzed along the lines discussed above: a null expletive satisfies the EPP in the embedded preverbal subject positions and extraction can take place from a lower position:

(22) kaniti et ha-šulxan še xana amra še dalya ta'ana še ya'ale harbe
(I) bought acc the-table that Hanna said that Dalya claimed that will cost a lot
kesef
of money
'I bought the table that Hannah said that Dalya claimed that will cost a lot of
money'

However, (22) is not the only way in which a relative clause can be formed in Hebrew; restrictive relative clause formation can also involve the use of a resumptive pronoun. An interesting asymmetry emerges: while the resumptive pronoun can surface in any intermediate [Spec, IP] in the case of object extraction (23), it can only surface in the most embedded one in cases of subject extraction (24). Rizzi and Shlonsky (2005) attribute the asymmetry to the Freezing Effect triggered by the application of the Subject Criterion:¹⁵ this principle affects subjects, but not objects (object position is not a Criterial position¹⁶).

- (23) kaniti et ha-šulxan še {oto} xana amra še {oto} dalya ma'amina
 (I) bought acc the-table that {him} Hannah said that {him} Dalya believes
 še {oto} Kobi raca {oto}.
 that {him} Kobi wanted {him}
 'I bought the table that Hannah said that Dalya believes that Kobi wanted.'
- (24) kaniti et ha-šulxan še {*hu} xana amra še {*hu} dalya ta'ana
 (I) bought Acc the-table that {he} Hannah said that {he} Dalya claimed
 še {hu} ya'ale harbe kesef.
 that {he} will cost a lot money

So, while Hebrew certainly allows null expletives, it also clearly allows for the resumptive strategy in (24),(23), hence making apparent the sufficient but non-necessary status of the availability of null expletives for the suppression of *that-t* effects.

A well-known strategy adopted by French to avoid ECP/Subject Criterion effects is the so-called que/qui alternation. The que/qui alternation has been given various interpretations over the years. In Rizzi (1990), the alternation was directly linked to the ECP. French cannot fill the subject position with a null expletive, since it is a non-NSL.¹⁷ Subject extraction, therefore, proceeds through the embedded subject position and the trace in the embedded subject position needs to be properly head-governed. Rizzi (1990) proposes that agreeing complementizers qualify as proper governors: qui is in essence the agreeing form of que and, therefore, the trace in the embedded subject position is properly governed. Rizzi and Shlonsky (2005) refine in various ways the ECP analysis of Rizzi (1990) in order to make it compliant to the criterial approach adopted in that paper, which entirely dispenses of the ECP. In particular, modifying a proposal by Taraldsen (2002) according to which qui is to

be analyzed as que + il, the authors propose that -i is the head of FinP which is able to satisfy the subject criterion via head-head agreement (see Rizzi and Shlonsky (2005) for a precise description). The precise characterization of the que/qui alternation is immaterial for the goals of this paper. All that needs to be noticed in this context is that the que/qui alternation certainly constitutes a subject extraction strategy different from the one involving a null expletive and it appears to be available in languages that allow for some kind of Agreement in the Comp system (see Rizzi and Shlonsky (2005)).

Going back to Creole languages, an interesting contrast between Haitian Creole and Mauritian Creole further shows that the availability of null expletives does not force the grammar of a language to adopt the skipping-strategy typical of *pro-drop* languages described above

Both Haitian Creole and Mauritian Creole clearly allow null expletives (see (25) for Mauritian Creole, taken from Syea (1993: 92) and (26) for Haitian Creole, data from Deprez (1994))

- (25) a. ec posib Pyer lakaz

 possible Peter house

 'It is possible that Peter is at how
 - 'It is possible that Peter is at home'
 - b. ec ena en voler dã lakaz be a thief in house 'There's a thief in the house'
 - c. Li dir [ec posib li pa pu vini]
 He say possible he NEG MOD come
 'He says it is possible he will not come'

(Mauritian Creole)

- (26) a. Jak kwè rète twa nèg nan kamyon an 'Jack believes that there remain three man in the truck'
 - b. Mari kwè gen lè Jak damou'Mary believes that Jack appears in love'
 - c. Mwen kwè gen yon poblèm'I believe there is a problem'

(Haitian Creole)

The data in (26) and (25-c) show that, in both languages, null non-referential subjects are available in embedded clauses, contrary to the Jamaican Creole case discussed above. Therefore, both languages could, in principle, extract subjects from the base generation position, filling the embedded subject position with a null expletive. However, the two languages, both lexified by French, differ in this respect. Both languages have lexified the finite complementizer as ki, clearly homophonous to qui in Standard French. It is well known that in French, a non-NSLs, the complementizer has a different form in cases of subject extraction and object extraction: que in cases of object extraction and qui in cases of subject extraction.

Haitian Creole, despite the availability of null expletives, has retained the French extraction strategy. Ki in Haitian Creole appears to be an agreeing complementizer used only in cases of subject extraction (see (27) and the ungrammatical (28) where object extraction across ki is attempted; data from Deprez (1994)).¹⁸

- (27) a. Kimoun ou kwè Mariz te wè a?
 Who 2sg think Mariz saw?
 'Who do you think Mariz saw?'
 - b. Kimoun ou kwè (ki) pati¹
 Who 2sg think that left
 'Who do you think left?'
- (28) *Kimoun Jan kwè ki Mari te we?
 'Who does John believe that Mary saw?'

I take the data in (28) to indicate that Haitian Creole is sensitive to that-t effects the same way French is. Ki in Haitian Creole is an agreeing-complementizer much like French qui, as witnessed by the ungrammaticality of (28), and serves as a device allowing to circumvent the effects of the ECP/Subject Criterion.

The pattern is different in Mauritian Creole. In this language the complementizer ki has lost its status as an agreeing-complementizer and has essentially evolved into a non-agreeing-complementizer, much like English that, as shown by the grammatical status of both subject (29-a) and object (29-b) extraction across ki (data from Syea (1993: 99)).

- (29) a. Kinsela, to pase [ki [t, ti fer sa]]? Who you think that TNS do this 'Who do you think did this?'
 - b. Ki_i to $p\tilde{a}se$ [ki [Pyer ti fer t_i]] What you thing that Peter TNS do 'What do you think that Peter did?'

Mauritian Creole has clearly adopted the 'pro-drop' subject extraction strategy: (29-a) is grammatical because the subject is extracted from the vP-internal position and the preverbal subject position is filled by a null expletive.

5 Conclusion

Recent criticism to Parametric Theory (e.g. Newmeyer (2005)) has correctly pointed out some empirical inadequacies of the idea that certain correlations between the positive setting of the NSP and other apparently unrelated grammatical properties hold. However, the criticism appears too harsh and the proposed solution, essentially the demise of the Parametric Model in favour of a not very well-spelled-out alternative, is pessimistic.

In this paper I have shown that the absolute nature of the $pro_{+ref} \longrightarrow pro_{expl}$ correlation appears to still hold, despite some opposing claims in the literature. The only possible claim is that there are languages where overt and null expletives coexist (e.g. Finnish, Galician). However, no convincing case of a language entirely lacking null expletives while allowing null subjects has been described.

Furthermore, I have shown that certain empirical inadequacies of Rizzi's (1982) proposed correlations should not immediately be taken as showing that the Parametric Model lacks

any explanatory power. In this paper, I have tried to show that the enlargement of the empirical base of inquiry coupled with certain theoretical modifications of Rizzi's model, which directly follow from changes in syntactic theory over the last 25 years, can account for the lack of crosslinguistic support for certain correlations (e.g. the one between Free Inversion and the lack of *that-t* effects) and could provide theoretical support for some unexpected correlations (e.g the one involving null expletives and the lack of *that-t* effects).

The analysis of a total of eight Creole languages suggests that the availability of null expletives is a sufficient condition for the lack of *that-t* effects. The lack of Free Inversion in these languages also suggests that Rizzi's original correlation between Free Inversion and the lack of *that-t* effects cannot be maintained.

Newmeyer (2005) noted that 'in three of the four correlations [for which crosslinguistic support is found] null non thematic subjects are entailed'. If the proposal offered in this paper is on the right track, one more such correlation should be added to the list. Newmeyer claims that correlations in which non-thematic null subjects are entailed are essentially always true, 'given the virtual nonexistence of languages that manifest overt non-thematic subjects'. This claim seems to me questionable. Mainland Scandinavian languages and English all seem to lack null expletives. Some cases of root sentences in which the non-thematic subject appears to be null may exist, but it is well-known that these case are better analyzed as not involving a null expletive but rather a different null category (see Rizzi (1994)). In embedded contexts, these languages entirely lack any kind of null subject.

The lack of empirical support for certain correlations does not immediately show that the underlying theoretical model should be dispensed with. Rather, it shows that things are more complex than initially assumed—a very standard course in scientific research. More specifically, while the proposed pro_{expl} —No that-t effects is weaker than Rizzi's proposal in the 80s, it appears to be more empirically adequate than its predecessor. Moreover, the core of the argument has remained unchanged: it is a way to satisfy the ECP (or the subject criterion), but clearly not the only one. More research within the Parametric Model is needed to understand precisely what the strategies of subject extraction are in different languages (see Rizzi and Shlonsky (2005) for a very promising approach) and why one language 'chooses' one strategy over the other.

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Notes

¹In random order: two anonymous reviewers, Adriana Belletti, Valetina Bianchi and everyone at CISCL, Ian Roberts, Anders Holmberg, Theresa Biberauer, Yves Roberge, Diane Massam, Alana Johns, Marlyse Baptista, Sandhya Chari, Chiara Frigeni, Chianti Classico, Charlotte Reinholtz, Mireille Tramblay, Monique Dufresne, Yitay Yükseker – thank you! Luigi Rizzi – special thank you! Usual disclaimers apply.

²'that-t' in the table is a shortcut for lack of that-t effects

³The actual formulation of any given parameter is far from a trivial task and changes in syntactic theory make frequent refinements necessary. It seems, however, plausible to associate parameter setting with properties of functional heads, as first proposed by Chomsky (1993); see also Roberts and Holmberg (2005) for a refinement of the idea

⁴I would to thank two anonymous reviewer for their elucidating comments on this issue

⁵This traditional view might be too simplistic. The possibility of formally licencing *pro* seems correlated in many languages with the availability V-to-T movement, which is itself dependent upon the morphological richness of the inflectional paradigm of that language. See Roberts (1993) and Nicolis (2005) for an idea along these lines. This point is inessential for the ideas defended in the main text.

⁶A long standing issue is the status of East Asian languages in this respect, which appear to allow for referential *pro* even in absence of any inflectional morphology. However, even a cursive look at the properties of 'pro-drop' in these languages reveals a situation remarkably different from what is observed in connection with the NSP. (For example, while null subject languages essentially just allow for null subjects and some instances of impersonal null objects, East Asian languages allow for a much higher degree of null objects, null PPs etc.). While several different solutions have been proposed to account for the phenomenon in these languages, there currently appears to be a widespread agreement in the literature in treating this phenomenon as very different from the NSP (see for example Tomioka (2003), Neeleman and Szendröi and this volume, for the idea that certain properties of the nominal and pronominal system clearly distinguish Null Subject Languages like Italian from 'radical pro-drop' languages like East Asian languages). Two different parameters are, therefore, active in the two classes of languages

⁷Finnish third-person subjects can only be dropped under rather unclear discourse conditions – see Holmberg (2005)

⁸FP in Holmberg and Nikkane (2002) is the highest projection of the IP field

⁹see Hinzelin and Kaiser (2006) for a numerical breakdown of the various constructions in which this expletive pronoun is used. Interestingly 'ello' can also surface in unaccusative contexts (30), even if 'very rarely', an observation attributed to a 1993 paper by Toribio

(30) Ello llegó Juan There left Juan

¹⁰The '?' in the table indicate cases for which clear data were not fully available; in the cases of Mauritian Creole and Saramaccan, I have taken the lack of any discussion of Free Inversion in all my sources to a sign of the lack of this feature in the language.

 11 Notice that the Saramaccan facts cast some doubt on the often assumed referential nature of the null expletive in extraposition contexts, given the general lack of referential pro in the language

¹²I would like to speculate that doubling configurations only occur in structures where a focal interpretation forces movement of an XP to a Focus projection, such as in Free Inversion and in the Strong Prononun Doubling structure studied by Belletti. Therefore if the subject stays in situ (as in presentational contexts) the doubling configuration cannot occur. If I am right in claiming that the features of referential pro in these cases are copied from the doubler, then it follows that when no movement to a Focus projection is licit, only pro_{expl} can occur in the structure.

¹³This point does not, of course, imply that free-inverted subjects in NSLs occupy their base generation position. Several recent works (see Belletti (2005), Belletti (2002), Belletti (2001)) have shown that free-inverted subjects carry a new, information-focus interpretation, a property that can be structurally expressed if they occupy a VP-external, right-peripheral FocP position, whose existence has been independently argued for, see Cecchetto (2000), Cecchetto (1999))

 14 In English, this strategy seems to be confined to structures in which the verb *to be* is used; if any other verb is used (including other Unaccusatives, as in (31-b)), the result is ungrammatical.

- (31) a. Who do you think that there is t in the box?
 - b. *Who do you think that there came t?

¹⁵Rizzi (2006) and Rizzi and Shlonsky (2005) subsume classical ECP-related subject-object asymmetries under two distinct principles, Criterial Freezing, which states that a phrase satisfying a criterion is frozen in place, and the Subject Criterion, which stipulates the criterial nature of the preverbal subject position. I refer the reader to Rizzi and Shlonsky (2005) for the implementation of the idea. Nothing in this paper hinges directly on this specific proposal. The point shown by the Hebrew sentences in the main text can be made in an ECP framework also.

¹⁶See Rizzi and Shlonsky (2005) for thorough discussion of these cases

¹⁷An anonymous reviewer points out that French might make use a null expletive in Stylistic Inversion structures. Still, even if that is the case, the distribution of null expletives in

the language is far more restricted than in bona fide NSLs or in Creole languages.

¹⁸There appears to be some disagreement in the literature over the extraction data. A certain degree of variability is expected in Creole languages, where the coexistence of several varieties in the Creole continuum raises all sorts of interesting sociolinguistic questions. The data reported are certainly reliable in the variety studied by Deprez (1994).