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SECOND LANGUAGE ACQUISITION 3

Series Editor: David Singleton, Trinity College, Dublin, Ireland

Effects of the Second Language on the First

Edited by
Vivian Cook

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Chapter 11

Economy of Interpretation: Patterns of Pronoun Selection in Transitional Bilinguals

TERESA SATTERFIELD

A productive area of syntactic research in generative grammar and second language acquisition (SLA) research for 20 years has been the pro-drop parameter (White, 1985, 1989; Phinney, 1987; Licerias, 1988, among others). The basic syntactic description is that non-pro-drop languages such as English require a surface subject to appear in a tensed clause. Thus, we have to say *He loves* and not just \emptyset *loves*. Pro-drop languages (the vast majority of the world's languages), however, do not require a surface subject; so in Spanish *El ama* is possible, as well as \emptyset *ama*. In other words Spanish can have null subjects, symbolised in underlying structure by *pro* (e.g. *pro ama*) but not corresponding to phonetic information in the surface sentence. One aspect of the null subject discussion that receives little treatment concerns the surface distribution of overt and empty pronominal elements within bilingual speech patterns; that is to say whether or not bilingual speakers maintain a pro-drop setting in their L1 when it differs from their L2. This chapter formulates an analysis of a class of pronominal phenomena, represented by bilingual speakers whose English competence has come to dominate their near-native proficiency in Spanish. It works within the Minimalist Program – the current version of Chomsky's theory (Chomsky, 1995, 1998, 2000), which attempts to reduce language to a few powerful principles such as Economy.

Introduction

The current work offers a syntactic-semantic characterisation of pronouns, drawing largely from Lipski (1996) and a multi-phase investigation of a specific population of Spanish/English bilinguals. Based on findings from Lipski's pilot study, one can tentatively conclude that there are two predictable differences between monolingual Spanish speakers and those

individuals who exhibit greater competence in English, yet who are not L2 learners of Spanish, as they acquired the language natively.

- The bilinguals do not maintain the same distribution of non-overt and lexical subjects in their speech.
- They do not exhibit the same rigid focus/contrastive distinctions with regard to pronominal interpretation as do the Spanish monolinguals.

Consider the examples in (1):

(1)(a) Ella; hablaba el inglés que *ella; / *pro*; sabía.

She speak (3 sg/imprf) the English that *she/Ø know (3 sg/imprf)
'She spoke the English that she knew.'
(monolingual Spanish)

(b) Ella; hablaba el inglés que ella; sabía.

She speak (3 sg/imprf) the English that *she/Ø know (3 sg/imprf)
'She spoke the English that she knew.'
(bilingual Spanish) (Lipski 1996)

When the null subject *pro* and *ella* are equally acceptable within the subordinate clause in syntactic terms, monolingual Spanish speakers intuit the occurrence of the overt pronominal as signaling a contrastive, or disjoint, reference between the antecedent subject in the matrix clause and the embedded pronoun. As shown in (1a), *pro* is uniformly perceived by these speakers as the neutral or unmarked reading that must co-refer with the overt subject. The datum in (1b) suggests that unlike the 'standard' Null Subject Language (NSL) distribution of pronominals, these bilingual speakers permit the overt pronoun to appear in areas typically reserved for *pro*, where it takes on the null subject's unmarked and non-contrastive interpretation as well.

The investigation of bilingualism is important, since the standard L2 acquisition explanation cannot be called upon to capture all the grammatical facts. The data do not indicate that these bilingual speakers merely experience interference or transfer effects from a dominant English to a recessive Spanish. Nor does it appear to be a case of Spanish attrition, as the speakers do not seem to completely adopt non-NSL tendencies into their Spanish grammar. Instead, we argue that a unique status for lexical pronouns seems to be emerging in the bilingual grammar, one that reflects an optimal interplay between universal properties of language and syntactic operations. Moreover, the existence of this new class of subject may not be confined solely to contexts of bilingualism or language contact,

as stabilised patterns in monolingual Brazilian Portuguese (Kempchinsky, 1984; Negrão & Müller, 1996; Tarallo, 1983) and Italian dialects such as Neapolitan (Ledgeway, 2000) can be shown to parallel certain features of Lipski's bilingual corpus.

To the extent that the syntactic and referential lines designating overt subjects and their null counterparts are erased for particular groups of speakers, the occurrence of such intralinguistic variation represents fertile grounds for rigorously testing claims put forth in current linguistic theory. One particularly intriguing question concerns assumptions of general principles of Economy (Chomsky, 1991, 1995, 1998, 2000), and how to reconcile types of redundant or optional linguistic rules with the notion of costliness of derivation. The main purpose of this work is to offer a principled explanation, framed largely within Minimalism, for the pronominal distributions uncovered. Within a wider scope, we wish to account for why convergence based on multiple solutions (*modulo* syntactic-semantic structures) within the same grammar may actually be the most optimal choice for speakers. The claims advanced here serve to demonstrate how the need to preserve grammatical resources may drive speakers to minimise even those operations considered central to the computational system, such as Merge or Agree, whenever possible. We attempt to go beyond the conventional wisdom that null subjects are preferable, since they are inherently less costly to the system than overt elements. Instead, we argue that the conditions of economy are not absolute: they allow for a range of behaviours that encompasses both zero and lexical pronouns, adapting to conditions present in the grammar in order to attain the most referentiality for the least computational effort.

The organisation for the rest of the chapter is as follows: the next section briefly sketches the structural and interpretive functions of NSL pronouns, with emphasis on the behaviour of focus subjects. We then profile bilingual patterns, relying primarily on data from the Lipski (1996) corpus. Next, we propose an economy-based analysis that accommodates a large pool of speakers and may provide new insights into the conceptual underpinnings of Economy, as well as supplying a more articulated characterisation of Spanish/English bilingual speakers. The final section offers some additional implications and ends with concluding remarks.

Background

As is well known, a sentence such as (2a) below is inadmissible in English or French, while its counterpart (2b) is the norm in standard NSLs, such as Spanish:

- (2)(a) *Were injured (some men).
 (b) Fueron heridos (unos hombres).

In terms of learnability, Rizzi (1982, 1986) and Jaeggli and Safir (1989) provide seminal explanations for this state by invoking the Null Subject Parameter. Within the [+null subject] option, it would initially appear that the sentence pairs in (3) present themselves as freely interchangeable:

- (3)(a) *Pro* hablan español e inglés.
 (b) Ellos hablan español e inglés.
 '(They) speak Spanish and English.'

Despite the L2 pedagogical claim that lexical subject pronouns are always 'optional' in Spanish, the fact is that in particular environments, the null subject must generally be present instead of an overt form of the subject, such as in impersonal and quasi-argument constructions, as well as for expletives (i.e. 'dummy subject' pronouns such as English *it* and *there*). See Silva-Villar (1997) for an analysis of expletives attested in a small group of historically null subject languages.

- (4)(a) *Ello/ *El/*Pro_{imp}* me han vendido un libro viejo en ese negocio.

It/he/Ø to me + have-pres(3pl) + sold a book old in that store

- (b) They_{impersonal} have sold an old book to me in that store.

- (5)(a) Antes *él/*ello/*pro* hacía más calor.

Before he/it /Ø make-past (3-sg) more hot

- (b) 'It was hotter before.'

- (6)(a) *El/*Ello/ *Pro* é cierto que (él/ella/*pro*) baila bien.

He/It/Ø be-pres(3-sg) certain that he/she/Ø dance-pres(3-sg) well

- (b) 'It is true that s/he dances well.'

Because of numerous conditions imposed by binding relationships and structural restrictions, there are also cases that require the presence of an overt subject; for example, when the head of the relative clause subject is [+animate]:

- (7) La mujer_i que él/**pro* ama (*pro*_j) odia a Juan.

The woman that he/Ø love-pres(3-sg) Ø hate-pres(3-sg) part + Juan
 'The woman that he loves hates Juan.'

as stabilised patterns in monolingual Brazilian Portuguese (Kempchinsky, 1984; Negrão & Müller, 1996; Tarallo, 1983) and Italian dialects such as Neapolitan (Ledgeway, 2000) can be shown to parallel certain features of Lipski's bilingual corpus.

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He/It/Ø be-pres(3-sg) certain that he/she/Ø dance-pres (3-sg) well

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- (7) La mujer_i que él/ **pro* ama (*pro*_j) odia a Juan.

The woman that he/Ø love-pres (3-sg) Ø hate-pres(3-sg) part + Juan
 'The woman that he loves hates Juan.'

In addition to the above syntactic contexts that are distinguished with respect to null versus non-null arguments, the property most germane for what follows is the case of seemingly unrestricted alternation between a null and an overt subject. Below, when *pro* and *él* are equally acceptable in syntactic terms, native speaker intuitions suggest a disjoint reference between the full DP subject *Juan* and the overt pronoun, such that *él* is understood as a focused element, instead of binding with *Juan*:

- (8)(a) Cuando *pro*_i / **él*_i trabaja, Juan_i no bebe.
 when Ø/he work-pres (3-sg) Juan neg drink pres(3-sg)
 'When (he) works, Juan does not drink.'
 (b) Cuando Juan_i trabaja, *pro*_i / **él*_i no bebe.
 'When Juan works, Ø/he doesn't drink.'

Moreover, (8b) illustrates that, regardless of their relative placement in either the main or the embedded clause, the unbound reading obtains between the lexical subject and the overt pronoun. Similarly, in sentences such as the Spanish equivalent to 'When Juan_i is working, (él)/HE_i doesn't get anxious, though HIS_i WIFE does,' the presence of lexical *he* (*él*) would still trigger a non-coreferential reading with *Juan*_i, even when contrastive with another referent, such as *his wife*. Native speaker intuitions suggest that, in the default interpretation, both *pro* and *HIS* are bound to the antecedent *Juan* for reference, whereas an intermediate *él* signals a disjoint reading with *Juan*, while establishing coreference with the following pronoun *his*.

In these instances, Chomsky (1981) presumes the operation of a simple pragmatic metric known as the Avoid (Lexical) Pronoun Principle (APP), which confines the choice to the topic null-subject preference rather than to the focus overt pronoun, in the context where both classes of pronominals may potentially appear. Since this contrastive distinction does not derive from intonationally-based cueing in NSLs, it would be possible to use the overt pronoun co-referentially in a hyper-emphatic manner, given phonological stress.

It must also be noted that overt Spanish pronouns do not possess implicit contrastive status, nor are they uniformly stressed, independent of their syntactic context. When the lexical subject is part of a conjunct or when the pronominal appears as the object of a preposition, the null option is not available. The realised pronouns are then perceived as non-contrastive or non-emphatic, with their anaphoric possibilities converging to neutral forms rather than to stressed ones:

- (9)(a) Cuando **pro*_i / *él*_i y su mujer trabajan, Juan_i no bebe.
 When Ø/he and his woman work-pres (3pl) Juan neg drink-pres (3sg)
 'When he and his wife work, Juan does not drink.'
 (b) Cuando *pro* hablan de **pro*_i / *él*_i Juan_i se irrita.
 When Ø speak-pres (3pl) about Ø/him Juan SE + irritate-pres (3sg)
 'When they talk about him, Juan gets upset.'

In the relevant cases however, the semantic effect of the syntactic selection is such that the occurrence of a non-stressed lexical pronoun provides contrast, whereas only *pro* is judged as bound when present with the overt subject DP, hence, the early appeal of the APP.

The APP proves to be a heavy-handed reflex, in the light of noteworthy data that further distinguish the distribution of overt lexical pronouns and zero elements in terms of their distinct interpretive behaviours. Insights behind the Spanish overt-null alternation facts are found early on in accounts by Zubizarreta (1982), Luján (1986), Soriano (1989), and subsequently Larson and Luján (1992). Larson and Luján, by essentially positing a quantification analysis of focus, provide a principled explanation for the perception of overt pronouns as focused in contexts where both null and lexical pronouns can occur. By analogy with focus phrases with *only* (*sólo* in Spanish) in (10a) below, Larson and Luján (1992) suggest that an expanded quantifier phrasal construction houses the non-null subject in (10b), such that the lexical pronoun behaves like the focused element in (10a). The exception is in the latter example, where the head of QP is equivalent to a phonologically unrealised quantifier expression. (10c) illustrates that, while the surface configuration of the overt pronominal and *pro* appear to coincide, the two classes of pronouns actually occupy different phrasal positions in the syntactic structure, and also require distinct licensing and identification mechanisms in order to be licit in the syntax. To wit, the contrastive reading implies a sort of syntactic complementary distribution according to Larson and Luján (Note that capitals denote emphatic, contrastive):

- (10)(a) [_{QP} Only HE_i] [_{NP} El_i] [_t believes] [_t is completely happy]]
 (b) ...[_{QP} { Ø } [_{NP} El_i] trabaja
 he work-pres(3-sg)
 'HE works.'
 (c) ...[_{NP} *Pro*] trabaja
 '(He) works.'

Furthermore, the specialised focal structure available for lexicalised pronouns lends itself to the inherent differences between null and overt pronouns given licensing and identification requirements imposed on null subjects (à la Rizzi, 1986).

Notably, Montalbetti (1984) attributes another environment for avoidance of lexical pronouns in Romance languages to the Overt Pronoun Constraint (OPC).¹ The OPC is constructed in terms of Linking Theory. (See Higginbotham (1983) for a detailed account.) This series of structural restrictions is imposed on phonetically-overt pronouns, making it illegal for them to be linked to the formal variable (i.e. empty category in an A-position) of a raised quantifier or moved interrogative expression when the overt empty alternation holds, as shown in (11a) and (11b), respectively:

(11)(a) [Todos los estudiantes]_i [_i t_j] piensan que [_{pro}_i] / *ellos_i] son inteligentes.

'All students_i think that (*they_i) are intelligent.'

(b) ¿[Quién]_i [_i t_j] piensa que [_{pro}_i] / *él_i] es inteligente?

'Who_i thinks that (*he_i) is intelligent'

(c) [Muchos estudiantes]_i dijeron que [_{pro}]_i piensan que [ellos]_i son inteligentes.

'Many students_i said that Ø_i think that they_i are intelligent.'

The claim is that only *pro* can receive both the free and the bound variable interpretation with a c-commanding *wh*-phrase or quantifier as its antecedent, since the null subject contains no phonological content. However, in (11c) the overt pronoun *ellos* in the final embedded clause may licitly link to the intermediate *pro*, which is construed as a bound variable, and imparts a bound reading on the lexical pronoun in the lower clause.

Both aspects of pronominal distribution (i.e. focus contexts and OPC effects) have related manifestations with respect to non-NSL pronouns. In English, the phonologically-emphatic subject corresponds to the Spanish contrasting overt pronoun, whereas the English neutral or unstressed pronoun parallels *pro*. As concerns bound variable contexts, Luján (1986) claims that English and Spanish share the same restrictions, given the stressed-unstressed characterisation of subject elements cross-linguistically. More recently, Pérez-Leroux and Glass (1997) have argued that, unlike Spanish, this interpretive component does not constrain English to any great extent. Interestingly, the apparent lack of OPC-like restrictions in English does not affect L2 structures. Their study of L2 Spanish learners

whose L1 was English concludes that advanced students attained native-like Spanish OPC effects with little effort.

While these previous analyses make sound empirical predictions for the non-occurrence of overt pronouns in null subject grammars such as standard monolingual Spanish, they do not make predictions in a unified manner for all so-called NSLs. (We note that Montalbetti (1984) addresses this shortcoming by postulating a second version of the OPC, which applies to Japanese, BP, and Catalan.) This distinction relies on the notion that antecedence involves a transitive relation, whereas linking (OPC1) incorporates non-transitive relations. Given the contradictory data discussed as well as the data to be examined in the next section, it is difficult to make a purely structural claim for the contrast in subject elements in the case of bilingual Spanish/English speech. Moreover, if the OPC holds across grammars, it appears to be necessary to go beyond a distinction based on phonological content in order to capture the subtle linking alternations between lexical and null pronouns. We do not take up these issues here, but the reader is directed to the references listed at the end of the chapter for detailed theoretical and technical argumentation.

The Nature of the Bilingual Problem

Lipski (1996) represents a notable minority in the attempt to situate bilingual data empirically and theoretically within current treatments of formal syntax. In order to examine bilingual patterns for the distribution of pronominal subjects, a pilot study was carried out, targeting groups of Spanish-speakers from Mexican, Puerto Rican and Cuban ethnic backgrounds living in the United States. The participants were later classified under three experimental categories: monolingual controls, 'balanced' bilinguals and transitional bilinguals. The third group (henceforth 'transitionals') comprised individuals identified as English-dominant speakers of Spanish, given their backgrounds and high near-native competence in Spanish. The control subjects were mainly Cubans who were recent arrivals to the United States, learning L2 English.

While the transitionals' data are the main area of enquiry for the current work, preliminary results with regard to grammaticality judgement tasks and spontaneous production data across all experimental groups suggest that the status of overt pronouns in the community is in a genuine state of flux. This said, Lipski (1996: 179) cautions that the pilot study's conclusions are tentative at best owing to the high level of linguistic variability among individual speakers and the dialectal uses of pronominals in Spanish. Spanish/English bilinguals, especially the transitionals, have loosened the

boundaries between overt and null pronoun usage in their Spanish grammar, treating phonetically realised pronominals consistently as non-contrastive elements, equivalent in interpretation to *pro*. The transitionals' preference for non-focused lexical subjects, especially in the subordinate clause, deviates from the monolingual election of co-referential *pro*, as noted in the previous section. Consider examples taken from transitionals in the Lipski data:

(12)(a) Yo decidí ser maestra porque yo estuve trabajando con niños y yo pensé que yo podía hacer lo mismo. (Transitional bilingual utterance)
 'I decided to be a teacher because I was working with children and I thought that I could do the same thing.'

(b) Cuando ellos, vienen aquí, ellos, lo pierden. (Transitional bilingual utterance)

'When they come here, they lose it [their language].'

In contradiction to the monolingual counterparts, the transitional corpus *likewise indicates a tendency* for non-contrastive overt subjects to be linked to formal variables, at odds with versions of the OPC:

(13)(a) [Todos los cubanos]_i [t]_i piensan que [ellos]_i van a volver para Cuba.

'All Cubans_i think that they_i are going to return to Cuba.' (Transitional bilingual utterance)

(b) ¿[Quién]_i [t]_i piensa que [él]_i sabe más que los demás?

'Who_i thinks that he_i knows more than the others?' (Transitional bilingual utterance)

Possible Explanations and Solutions Language transfer and change

How can these data be accounted for? At first inspection, it would seem that the contradictions illustrated might be most simply attributed to historical patterns stemming from language contact or transfer, or other such L2-learning scenarios which can bring about changes in L1 verb paradigms and verbal morphology. In cases where verbal inflections have become modified, reduced or in some manner less 'transparent' to the speakers, the grammars subsequently reflect potential inconsistencies that can eventually lead to a loss of null subjects. This process may possibly have occurred on a large scale with Old French as it evolved from a [+ null] to a [- null] subject language (Adams, 1987), where instances of *pro* were

converted first to non-emphatic lexical subjects, and ultimately to the subject clitics found today in Modern French. Speculations of similar non-NSL leanings in the transitionals' speech patterns are fueled by tokens of morphological instabilities as shown in (14):

(14)(a) *Pro*, no pude creer que yo, ha hecho esos errores.

Ø neg can-pret (1sg) believe(inf) that I have-pres-indic (3sg) + make (past partic.) those mistakes.

'(I) couldn't believe that I had made those mistakes.'

(b) Cuando *ello*, hablo, *ello*, comprenden.

When they speak-pres (1sg), they understand-pres (3pl).

'When they_i speak, they_i understand.'

It is argued that there is no strict correspondence between the availability of nominative Case and subject-verb agreement (Vincent, 1998; Ledgeway, 2000). On the strength of empirical evidence, we also assume that the subject in these instances is nominative in spite of agreement failure. Such examples chiefly demonstrate the syntactic effects that produce a mixture of compatible and incompatible verb forms accompanying the transitionals' pronominal subjects. In (14a), the transitional bilingual speaker shows an awareness of the 'standard' configurations and employs the null subject with the corresponding 1st-person singular form of the verb (e.g. *can/able*: *pude* = root: *pud* + first-person singular, past-tense inflection: *-e*) in the matrix clause. In the subordinate clause however, *s/he* selects the non-contrastive lexical pronoun in 1st-person (e.g. *yo*), and deploys a 3rd-person singular verb inflection in the present tense (e.g. *ha*), instead of the expected 1st-person past subjunctive form (e.g. *hubiera*). Sentence (14b) shows a related occurrence with the 3rd-person plural overt subject in the main clause (e.g. *ello(s)*) that does not agree with the 1st-person singular verb inflection implemented (e.g. speak: *hablar* = root: *habl*+ first person singular inflection *-o*, instead of third person plural inflection *-an*).

The primary difficulty in embracing this particular account of language change is that it is rather heavy-handed, and does not offer fine-grained explanations for the evolving *transitional* grammars. There are many reasons to suspect that the transitionals' samples cannot be exclusively attributed to the effects of convergence or parameter-shift in Spanish-recursive speakers. First, it is clear that the bilingual participants do not categorically comply with non-NSL subject patterns. If this were strictly a case of language change, we would expect to find *transitional* speakers randomly violating the more restricted environments of *pro*. However, findings indicate that the bilinguals show a preference that does not

deviate from monolingual Spanish speakers in contexts where null subjects are considered obligatory, as in the examples with expletives in (4)–(6) above. This said, it is important to recall that the monolingual and bilingual distinctions primarily fall out of environments where the null-overt alternation is syntactically, yet not semantically, licit. Thus, there appears to be the possibility of truly exercising free variation of non-contrastive elements with no distinction on interpretive grounds in the transitionals' elicited shown below, whereas this type of optionality is not attested in typical Spanish monolingual patterns:

(15)(a) Siempre cuando *pro*_i estaba en Cuba *él*_i dijo que si *él*_i va para atrás a Cuba que no *pro*_i va poder salir más.

'Always when (he) was in Cuba he said that if he goes back to Cuba that (he) will not be able to leave again.'

(b) *Ellos*_i tienden a ir a tiendas donde *ellos*_i saben que *pro*_i se van a entender con los empleados que la mayoría son latinos.

'They tend to go to stores where they know that they are going to deal with employees the majority of whom are Latins.'

As well as illustrating the similar status of non-stressed lexical pronouns and *pro* for transitional bilingualism, this type of evidence also calls into question the claim that the bilinguals are experiencing unilateral transfer from the dominant grammar. The critical observation is that there is a gradual transition towards a wider usage of lexical pronominals, but only in specific contexts. The current study departs from previous hypotheses by claiming that, regardless of morphological transparency or its absence, transitional speakers have actually broadened Spanish binding constraints on overt subjects in ways beneficial to the syntax. What remains to be explained is why speakers would amass an interchangeable class of pronouns that can be considered syntactically and semantically equivalent, but also derivationally redundant. Logically, such a state should lead to extreme instability in the grammar. In the light of these questions, we explore how the transitional facts might actually inform us about economy-driven operations internal to the computational system.

A working hypothesis of economy-driven subjects

Working within a Minimalist framework, we propose that the crucial difference between transitional bilingual Spanish and its Romance NSL counterparts, as well as bilingual Spanish and English, emerges at a level in the computational system (C_{HL} i.e. Computational system for Human Language) where 'universal' syntactic operations are performed, rather

than at the micro-level of instantiating parameterised values and strong/weak categorical features. Very few theoretical linguists have contemplated the nature of these inner-workings with any real scrutiny, thus we take the position that central to C_{HL} are transformational components such as Merge, Agree and Move. For instance, the agree operation establishes a matching relation, agreement or Case-checking, between a lexical item and a feature in some restricted space or domain. Matching can also be said to underlie the mechanisms of licensing and identification; the former to 'certify' in Lasnik's terms (Lasnik, 2000: 182), given elements in the derivations and the latter to ensure retrieval of information for expression and reference. It is often presumed that properties of C_{HL} function invariantly. However, we argue that the economy conditions stipulated in syntactic theory (e.g. Procrastinate and Minimal Link Condition), much like constraints on processes in many biological systems, are in place solely to preserve and protect the limited capacities of the system. It is reasonable, then, that principles of economy carry out this role of 'regulator' based on the grammatical resources available or given direct evidence in the language. In response, particular C_{HL} mechanisms can come to have more of an effect in one grammar than another. Stated another way, optimal representations emerge in grammars that are not due to a uniform functioning of all the syntactic components, so much as to a specialised balancing of operations adapting the necessary mechanisms (i.e. Merge or Move) to recover information in the most efficient way for the language at hand. Chomsky (2000) supposes this to be the case in the computation of PF, such that features are implemented in the course of computation in different ways for different languages. The question is whether the narrow syntax (LF interface) should exhibit this adaptive characteristic to any degree. Given the bilingual evidence, we claim that it may indeed be possible.

Consequently, in the transitional Spanish grammar it is equally 'costly' in terms of syntactic operations to express reference via the null or overt subject. We will assume that referential subjects are licensed through morphological or abstract Case-marking at the level of syntax. (See also Satterfield (1999) for arguments related to the costliness of nominative Case-checking and null subjects.) Nevertheless, we reject Rizzi's (1997) claims that the null subject element, as an endowment of Universal Grammar, is invariant across languages (i.e. *pro* Catalan equals *pro* Italian equals *pro*). In further contradiction to Rizzi, we also do not accept that *pro* patently 'comes for free' as compared to overt subjects. Instead, we argue that there are compelling reasons to support the view that the morphological 'richness' previously associated with AGR in NSL grammars is not

relevant for the syntactic presence of *pro*. However, in opposition to Chomsky (1995), we show that the AgrS projection is still necessary in NSLs for the *interpretation* of the subject argument selected. Rizzi (1997) offers examples of two null subject environments in Italian: only in the first does the verb display overt agreement and permit a [+referential reading]. In the subsequent two examples the non-referential interpretation stands:

- (16)(a) Gianni ritiene [che ___ sia simpatica]
 'Gianni believes that ___ is nice (fem./sg)'
 (17)(a) Gianni ritiene [che ___ sia probabile que...]
 'Gianni believes that ___ is likely that...'
 (b) Gianni ritiene [esser ___ probabile che...]
 'Gianni believes ___ to be likely that....'

On the basis of the same theory-driven constraints, the point can further be argued that only *pro* in non-referential contexts actually economises the derivation to any extent. When *pro* is used within a [+referential] context, the null element consequently must undergo movement operations that formally identify and recover the referential features that are specified through Agreement with respect to *phi*-features, as in (18):

- (18)(a) *Pro*/Ella va a regresar a la oficina.
 Ø / She go (1 sg-pres prog) to + return to the office
 'She is going to return to the office.'

Along the lines of Picallo (1994) and Larson and Luján (1992), we posit that overt subjects inherently possess minimal referential (*phi*-) features in the lexicon and need not completely rely on identification and recovery mechanisms to regain this information, while [+referential] *pro* must recover these features entirely in the syntax. It thus seems logical that, while a null subject with referential material may be more efficient at the interface level of PF, a non-focused overt subject may actually be less costly in terms of the number of computational operations that it requires to be fully visible in the syntax. Point-by-point, the benefits of null versus overt subjects can be determined as equivalent in overall derivational cost.

The most economic choice may very well be when no specific reference in terms of *phi*-features is expressed in the subject position of the sentence. Here, [+null subject] languages might then be said to gain an edge with the occurrence of [-referential] *pro*, which need not be identified and analysed for the referential content to be fully licit in the grammar, but instead can be

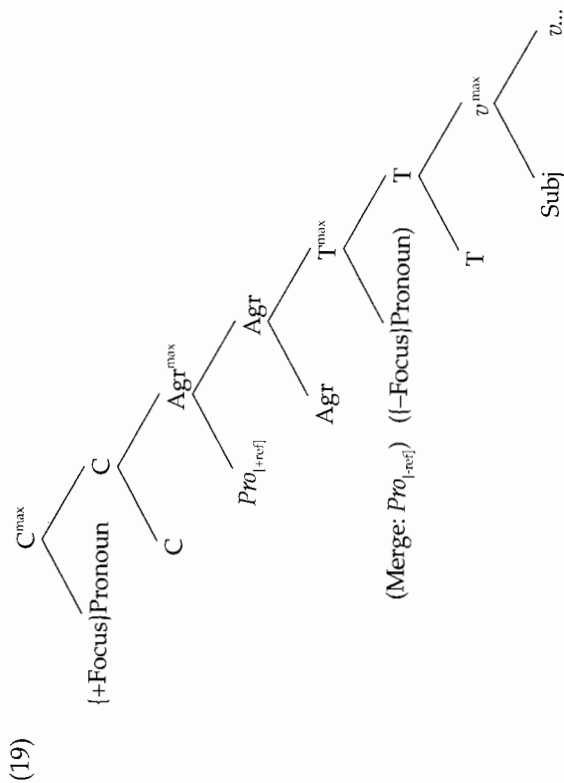
purely merged into the derivation. (See Alexiadou & Anagnostopoulou (1998) for similar conclusions derived from an independent analysis.) Perhaps expletive *pro* enjoys such wide usage across languages precisely because it is more efficient than invoking an overt pleonastic counterpart. It is independently clear that in Icelandic, German or Yiddish (Prince, 1998), where [+referential *pro*] is not permitted, these V-2 grammars implement [-referential *pro*] in impersonal contexts and certain *wh*-constructions.

The crux of these examples is that speakers do not appear to merely 'avoid (lexical) pronouns', as many have previously claimed.² Instead, we propose that speakers ultimately seek to avoid costliness (in this case, the cost of identification and recovery operations in the syntax) to whatever degree possible. To the extent that such a reflex is on the right track, it is important to note that in language, as in many biological spheres, avoidance of one operation is often merely an exercise in displacement, and not one of overall simplification or reduction. For reasons of survival, valuable traits are jealously retained by the organism. Likewise for a grammar, what is of optimal use cannot be phased out, but must surface elsewhere in the derivation, even at the risk of compromising, or settling for less economical adaptations at secondary or minor junctures in the structure.

In the light of our working hypothesis, if both lexical pronouns and [+referential] *pro* within the same interpretive context incur about the same cost, then why is the overt option not characteristic for other NSLs besides transitional Spanish?³ One reason may be that the 'savings' gained with low-cost non-contrastive lexical subjects cannot be reconciled with the necessary expression of focus features in typical NSLs. From the previous monolingual examples, recall that an overt pronoun attains contrastive interpretation based on the nature of its antecedent and its subject status in the syntax. The same possibility does not hold for phonetically unrealised *pro*, which cannot acquire a focused reading. Suppose that, in order to recover their full subject status beyond agreement features and thematic content, all pronominal subjects must be *identified* as well as licensed. Identification of overt pronouns would not entail matching *phi*-features, but instead identifying a [focus] feature on the DP that must be matched for [+focus] in [Spec, T].

It is widely held that bilingual speakers must organise and manipulate multiple syntactic systems, on some level(s) of the language module. Then in the interest of reducing computational complexity, it stands to reason that the bilingual would seek to minimise the cognitive burden in ways that the unilingual counterpart may not need to resort to. Thus, suppose that what has occurred for the transitional Spanish is an increased avoidance of syntactic identification operations. This circumstance could account for the

attested lower incidence of [+referential] *pro*. Moreover, less reliance on identification mechanisms could also explain the presence of unfocused lexical pronouns. By relaxing identification, the overt subject pronoun, by default, now becomes unspecified for focus, and it will not automatically obtain a [+focus] contrastive reading, as will become apparent from its more compact syntactic configuration. Representationally, we envisage a subject architecture as shown in (19) below:



Given this simplified diagram, we claim that subject elements come to be situated in specialised areas in the specifiers of C, Agr, and T as determined on the basis of cost. Owing to the flexibility of the economy principles to regulate a given grammar, the minimum amount of structure is utilised for the derivation in question. Unlike similar analyses offered by Cardinaletti and Starke (1994), Cardinaletti (1997) and Alexiadou and Anagnostopoulou (1998), this representation is distinguished, not according to a strong-weak typology of pronouns, but rather by the accumulation of operations that supply the appropriate quantity of referentiality. The subjects found lower in the tree are by default less costly because they do not require as much identification of agreement features to be visible in the syntax. Hence, the most economical structure is [-referential] *pro*, since it can be merged and must only undergo licensing (minimally, this would entail pure merge for EPP-features in T and maximally, the checking of D-features and Nominative Case.), and would not require PF operations. The next economical choice is also found in [Spec, T]. Unlike the non-referential element

however, the non-contrastive lexical pronoun is endowed with its referential material intact and certified in the lexicon, and must undergo a costlier move operation by raising to [Spec, T]. In essence, Agr contains the identification component that would be found in NSLs, and is structurally more costly, but has no PF cost. [Spec, Agr] is for [+referential] *pro*, where the null subject must undergo its series of checking operations by raising to its target in Agr where identification takes place. Finally, an overt pronoun destined to be the subject does not identify agreement features in Agr, but must be identified for [focus] to recover its full subject reference. Following Chomsky (2000), we posit that no additional information can be supplied in the derivation; that is to say, the [focus] feature would come as part of the set of lexical information, according to the Inclusiveness Principle. Furthermore, it seems logical to adhere to Chomsky (2000: 113) in terms of the notion that outside of TP are systems deemed peripheral to the 'narrow syntax,' but which provide richer systems. In the context of this particular analysis, we find that *pro* undergoes λ' -movement, as one would predict for richer systems targeting the edge of the phrase. Likewise, if this subject must recover more emphatic content such as to express intonationally-marked focus, then the structure would extend to accommodate the further raising of the overt pronominal to a higher C projection, thus exacting even greater derivational cost. In the light of the possible options, Table 11.1 summarises the costs expended across the range of observed transitional bilingual Spanish pronominals:

Table 11.1 Feature Checking operations and 'Economy of Derivation' in transitional Spanish

Contrastive Pronoun	Pro [+referential]	Overt Pronoun	Pro [-referential]
D-feature	D-feature	D-feature	D-feature
Nom. Case	Nom. Case	Nom. Case	(Nom. Case)
X	Agreement	X	X
+Focus	X	X	X
PF	X	PF	X
++++	+++	+++	+(+)

For transitional bilingual Spanish, the emphatic lexical pronoun comes at the absolute highest cost, based on the number of checking operations involved. Non-contrastive overt pronominals and null subjects generate lower costs in the final analysis, with expletive *pro* as the most efficient subject element. Including interface operations outside of the syntax, non-focus overt subjects require less computations than either [+referential] *pro* or a contrastive subject. In typical monolingual pro-drop languages by comparison, the overt subject inevitably emerges as much more costly than [+referential] *pro*, since in these grammars further identification of the phonologically realised subject is integral when both elements are equally acceptable in the syntax. Thus, lexical pronouns implicitly carry an identifiable [+focus] component to elicit the disjoint reference reading, whereas *pro* is implicitly unable to check for focus.

Concluding Remarks

In sum, Lipski (1996) succeeds in providing a theoretically relevant and documented account of bilingual null subject patterns. Given the tentative conclusions of his pilot study, a more in-depth analysis reveals that, in order to reduce their cognitive 'load,' transitional bilinguals have relaxed those operations in their Spanish grammar that drive identification and recovery of null subject information, and also those that signal syntactically-marked focus. The current analysis is advantageous, since standard 'L1-L2 effects' explanations cannot be called upon to capture all the pronominal subtleties or distributional facts illustrated by the transitional, and monolingual accounts are not unified cross-linguistically.

On the basis of our hypothesis, further issues can now be addressed with respect to subject distribution. We now see why facts in transitional Spanish appear on the surface to line up with the configurations of English, consequently attracting pronouncements of interference or transfer. The absence of *pro* in English causes an overt subject pronominal to be judged as non-stressed when it co-refers to its antecedent, while the phonologically stressed, emphatic pronoun is deemed contrastive:

- (20) When he_i/*HE_i works, John_i doesn't drink.
(Akmajian & Jackendoff, 1970)

The key difference is that English achieves these interpretations through costlier identification operations that are consistently avoided in transitional bilingual Spanish. Without access to the null subject, it seems logical that English-type languages displace the cost of licensing and identifying *pro* in Agr. Instead, contrastive subjects must undergo even greater identifi-

cation (i.e. raising to a higher projection) in order to obtain the fully stressed, intonationally-marked reading. Transitional Spanish, in keeping with the proposed analysis, may not necessarily exhibit this less economic English focus strategy:

- (21) *Ellos_i venden y ellos_j van.*
'They_i sell and they_j go.'

The datum in (21) contrast with (20) in that the transitional speaker produces no phonetically-based contrast between the overt non-coreferential pronouns, thus demonstrating the expected avoidance of identification for focus features. Predictions for transitionals' Spanish can perhaps now be confirmed empirically in future studies: when syntactically acceptable, non-emphatic lexical subjects and [-referential] *pro* should be most frequently selected as the optimal subject elements in transitional bilingual syntactic structures, allowing for the bilingual speaker to most efficiently utilise the computational system.

Lastly, while it is difficult to predict in its current state if transitional bilingual Spanish pronouns will follow the route of Old French, conditions for maintaining this expanded pronominal inventory at present appear relatively stable. Transitionals are not forsaking Romance language options offered by use of *pro*, nor are they adopting a complete non-NSL structure that may ultimately resemble English. Instead a unique status of non-contrastive lexical pronouns that reflect an optimal interplay between universal properties of syntax-semantics and morphology seems to be emerging, based on the bilingual grammatical resources of these particular speakers.

Notes

1. As Pérez-Leroux and Glass note:
Speakers' intuitions on OPC effects are subtle. Some speakers do not have clear intuitions, and the strength of the overt/null contrast may vary with different types of operators involved... Variation in judgements aside, the effects of the OPC are consistently present in [Spanish] grammar. (Pérez-Leroux and Glass, 1997: 153)
2. Along these lines, a reviewer suggests that speakers generally attempt to avoid *phonetics*; that is, they minimise phonetic content, such as dropping initial consonantal segments in (British) English: (h)e, (h)is, etc. To the extent that this notion is distinct from Procrastinate, a syntactic operation that seeks to limit the effects on PF, we find such a stipulation a bit extreme, in that its consequences seem difficult to generalise and may be more conducive to a 'one-fell-swoop' approach.

3. It is true that monolingual Italian also appears to possess this capacity with *pro* and *egli*, but in limited contexts:

Gianni, partirà quando *pro* / *lui / egli, avrà finito il lavoro (Cardinaletti & Starke, 1994).

'Gianni will leave when *pro* / *he / he will have finished the work.'

The distribution of overt and null pronouns in monolingual Brazilian Portuguese strikingly parallels that of transitional bilingual Spanish:

Alguns convidados, disseram que eles / *pro*, vão trazer uma garrafa de vinho.

Some invitees say-past(3-pl) that they / 0 go-pres(3-pl) bring(inf) a bottle of wine
'Some guests said that they are going to bring a bottle of wine' (Negrão, 1997).

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