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**The Tripartition of Pronouns and its Acquisition:  
Principle B Puzzles are Ambiguity Problems\***

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1. The grammar of the pronominal system is the linguist's dream. It offers massive and cross-linguistically consistent evidence about a purely arbitrary asymmetry. The very arbitrariness of the distinction between distinct classes of pronouns (or rather personal pronouns, our sole concern here) indicates the purely grammatical, non-functional, nature of the primitive underlying these asymmetries. The massiveness of this arbitrary asymmetries (there hardly is an area of grammar where the types of pronouns do not differ) points to a profound underlying property of human grammar. Combined with the apparent universality of the distinctions, this provides us with a prime candidate for the underlying common core of human linguistic capacities. With the pronominal system we thus seem to have a direct and powerful access to the mysteries of mental grammar. To top the cake with cream, this massive but subtle asymmetry is absolutely respected by children, from the very start of their linguistic performance: children never (seem to) violate any adult requirement on distinct types of pronouns. As soon as they pronounce them, they do so correctly. Yet this neat and very special distinction has (to our knowledge) never been addressed, let alone explained in formal syntax.

Our goal here, however, is not to see what pronominal systems imply for mental grammar per se, but to show how an adequate description of those systems provides a

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\* This work was born thanks to the TECS - Comparative Acquisition Studies (Sissa-Trieste, 1993) and the Acquisition of Cliticisation (Bern, 1994) workshops. For the purposes of our respective academies, A. Cardinaletti takes the responsibility of sections 1-5 and Starke of sections 5.1-7.

new understanding of a famous puzzle: that of the acquisition of the coreferentiality conditions, a problem often referred to as “principle B acquisition”.<sup>1</sup>

2. The following French examples illustrate the basis of the asymmetry. The sentences (1a-b) may be equivalent. Yet they contain different pronouns, and must do so.

- (1) a. Il            a peur    de    **toi**.  
       b. Il    **te**        craint.  
           he    you    fears    of    you

In the imperative, a third type of pronoun appears:

- (2) (ne)    **me**    parles    \*me    pas    \**me*  
       (ne)    \**moi*    parles    **moi**    pas    \**moi*  
       (ne)    \*à *moi*    parles    \*à *moi*    pas    **à moi**  
       not    to.me    speak    to.me    not    to.me  
       “don’t speak to me”

Again, the three types of pronouns do not systematically have distinct informational content. There is no clear motivation for the existence of such distinctions among different pronouns. In the absence of a semantic purpose, the distinctions seem to owe their existence only to the arbitrary nature of the human mental grammar.

2.1. The difference between the three types of pronouns is massive in that it spreads through all parts of grammar. The very same pairs of forms (for instance the set of forms that have the distribution of dative *moi* in (2b) on the one hand, and the set of forms that have the distribution of *à moi* in (2c) on the other hand) contrast in all of morphology, syntax, semantics, and phonology. To capture this covariation, i.e. the fact that the very same sets of elements are opposed in all subparts of grammar, there is only one solution: one unique underlying trigger must be responsible for asymmetries in all these components of language.

Postulating one difference in syntax, another in phonology and a third in semantics would be an anti-theory: it would obscure a simple generalisation. Given the model of grammar we presuppose, the “T-model” of the Principle & Parameters framework, it follows that this unique underlying primitive must be syntactic: were it semantic or phonological, it could not trigger all the desired contrasts.

We thus have a fairly striking result: there must be one primitive in syntax, such that this primitive not only triggers the difference between the syntactic properties of the pronouns in (2b-c), but such that it also has clear and subtle effects on both phonology and semantics. (This implies a much closer relation between syntactic primitives and phonological/semantic primitives than is often currently assumed.)

2.2. On close inspection, the relation between the three classes is rather transparent. One class, strong pronouns, illustrated in (2c), has, by and large, the phonological and syntactic behaviour of a lexical noun phrase. Weak pronouns, (2b), differ from strong pronouns by a set of properties partially illustrated below. Finally clitic pronouns, (2a), differ from strong pronouns *in the same way as weak pronouns do*, but they have additional differences. To emphasize: every difference between a weak pronoun and a

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<sup>1</sup>The generalisations about pronominal systems (§2.1-§2.4) as well as their underlying grammar (§4) are dealt with more thoroughly in Cardinaletti & Starke (1994). Facts about acquisition of the system are discussed in Cardinaletti & Starke (1995).

strong pronoun is also a difference between clitic pronouns and strong pronouns, but clitic pronouns have further diverging properties.

In other words the relation between the three forms is of the type: strong > weak > clitic. To illustrate briefly, Italian weak but not strong pronouns undergo gemination known as *raddoppiamento sintattico* in the appropriate contexts (e.g. *da'[[l]loro questo libro* (give them this book) but not *?\*mandò [[l]lui solo* (I sent him only). This property is shared by clitics (which also trigger *raddoppiamento sintattico*, e.g. *dallo a Gianni* (give it to John)), but clitics distinguish themselves by the further property of not having word-stress. As a result clitics distinguish themselves in two ways, and weak pronouns only in one. The same could be illustrated with their syntax or semantics.

The *strong > weak > clitic* relationship is found not only w.r.t. the number of properties which distinguish the pronominal classes from usual noun-phrases (above), but in two further respects:

- (i) the morphology of the different series of pronouns is often distinct; whenever it is so, a clear generalisation obtains: *strong > weak > clitic*. That is, a strong pronoun is morphologically heavier than a weak pronoun (if different), which is in turn morphologically heavier than a clitic.
- (ii) given a simple sentence which in principle admits of several types of pronouns, eg. (1b), there is a strong preference to use one over the other. The preference is ... *strong > weak > clitic*. Whenever a clitic is possible, it is preferred over the weak element, and whenever the choice is between weak and strong, the weak is preferred. To illustrate, the counterpart of (1b) with the strong pronoun is *?\*Il craint toi* (such a sentence is only natural if the clitic and the weak pronouns are not a possible choice, as in *Il craint seulement toi* (he fears only you), due to the adverbial modification impossible with the clitic and weak pronouns).

The above reasoning (§2.1) now implies that there are two and no more than two underlying primitives for the three classes of pronouns: the one that is responsible for the difference between weak and strong pronouns across modules of grammar, and the one that is responsible for the difference between weak and clitic pronouns across modules of grammar. Furthermore, clitic pronouns must be submitted to the effect of both primitives, thus explaining the  $x > y > z$  relationship between the three classes.

**2.3.** But the generalisation is even neater. Not only are the three classes systematically organised in a *strong > weak > clitic* relationship, but the differences between the classes always go in the same direction: in every respect in which a weak pronoun is different from a strong pronoun, the weak is **deficient** w.r.t. the strong. Semantically, syntactically, phonologically and morphologically weak pronouns are systematically deficient w.r.t. the strong ones.

Syntactically, strong pronouns have the distributional liberty of any noun-phrase (modulo the choice principle above), while weak pronouns are limited to one and only one position in their clause. Semantically, strong pronouns have the same referential capacities as any noun-phrase, while weak pronouns are incapable of introducing a new referent in the discourse. Phonologically, strong pronouns bear sentential (nuclear) stress as any noun-phrase, while deficient pronouns typically trigger stress-shifts (cf. nuclear stress retraction, §5.2).

Similarly, whatever properties distinguish clitic pronouns from weak pronouns, they are not mere differences: clitic pronouns are systematically deficient w.r.t. weak

pronouns. The *strong* > *weak* > *clitic* relation is thus not just any ordering: it is a gradual increase in deficiency.

This means that not only there are two and not more than two triggers underlying the *strong* > *weak* > *clitic* relation, but these two triggers are surprisingly similar: they both trigger systematic deficiency (as opposed to mere difference), they both trigger the choice preference for the most deficient, they both trigger morphological reduction. We are thus led to a very strong and surprising conclusion: there exists some abstract property of syntax, call it  $\gamma$ , such that (a) it interacts closely with both phonology and semantics, while still producing strong syntactic asymmetries; (b) this property is instantiated two different times ( $\gamma$ ,  $\gamma'$ ) to yield the *strong* > *weak* and the *weak* > *clitic* distinctions; (c) weak pronouns are submitted to only one trigger of deficiency, while clitic pronouns are submitted to both.

**2.4.** To add to the neatness of the generalisation, the *strong* > *weak* > *clitic* deficiency system around which pronominal systems are organised seems to be a universal, in the strong sense. Not only does it seem to be the case that (personal) pronominal systems always fall into such a tripartite pattern of gradual deficiency, but the very properties which distinguish the different classes seem to be uniform across languages.

Since weak and clitic pronouns cannot, for instance, resist coordination, it is always the case that when a language has two or more forms of a personal pronoun, only one can be coordinated, i.e. the deficient ones can never be. Just as the above French clitic cannot be coordinated (\**Jean le et la craint*: John him and her fears), the English weak pronoun *it* does not coordinate (\**I bought it and it*) and neither can the Slovak *ho* (\**Ja som ho a ju teraz videl*, I have him and her now seen).

This is not to say that every language necessarily has all three types of pronouns. The lexicon may (arbitrarily) contain one or the other type, but it IS to say that whatever pronouns there are in the language will necessarily fall into one of the three distinct patterns corresponding to clitic, weak and strong behaviour.

It thus seems that  $\gamma$  is one of the few, or the only, universals which triggers widespread asymmetries both across grammar, across languages, and in a relatively transparent way on the surface string.

**2.5.** The cherry on the cake is that all the available data indicate that the *strong* > *weak* > *clitic* deficiency system along with all its properties in their fine-grained details is fully mastered as soon as a child starts to speak. French subjects are a simple but non-trivial example of this.

French children use both preverbal and post-verbal subjects as the sole subjects of root clauses, contrary to adults who cannot use postverbal subjects in those contexts. In languages which have both preverbal and post-verbal subjects, deficient pronouns are possible only preverbally, as with the Italian *egli* (he), for instance. Now French children exactly abide by this general constraint on pronominal systems, which is all the more extraordinary since no evidence is apparently available to them to this effect. Furthermore, French children have a stage in which they use infinitives with overt subjects, a phenomenon recently much investigated. Again, adult French does not allow this construction, but languages which do allow it disallow deficient pronouns as overt subjects of infinitives. Again French children exactly follow this rule: in French child corpora, deficient pronouns are not to be found either as postverbal subjects or as subjects of infinitives. (The only differences between adults and children seem to be lexical

differences, e.g. Italian children seem to use the surface form *si* with the syntax and semantics of the adult *ci*, cf. Cardinaletti & Starke (1995).

3. Summarising, what needs to be addressed, or better explained, about the grammar of classes of pronouns is the following generalisation:

- (3) pronominal systems contain three distinct “classes” of pronouns, organised in a *clitic < weak < strong* relationship, where each class is gradually more deficient than the other *throughout the components of grammar* (morphology, phonology, syntax, semantics), and this *uniformly across languages*.

We will refrain here from entering into the details of the different properties separating the distinct pronouns (or of their analysis, for that matter), cf. fn1. Our goal is rather to show that simply sticking to such a description of the pronominal systems considerably changes the angle for a famous problem of acquisition: that of principle B.

4. It has been observed for a number of years that English children have a non-adult behaviour w.r.t. their coreferential possibilities for pronouns. The typical experimental result is that 50% to 70% of children around 3-4 years accept local coreference of a pronoun, such as a coreference between <John; him> in *John painted him*, using a truth-value judgment task.<sup>2</sup>

Through the years, a number of refinements have been added to this basic pattern: it has been discovered that universal quantifiers and question words cannot function as antecedents in such constructions, that anaphors are not treated in a non-adult way w.r.t. locality, etc. (eg. Wexler & Chien (1985), Chien & Wexler (1990)).

The one discovery we will focus on however, has gone rather unnoticed, or relegated to footnotes: while the basic pattern is robust and has been reproduced a number of times in English, this is not so of all languages.

More precisely, languages seem to divide into two neat sets w.r.t. the local coreference of pronouns in simple transitive sentences: on the one hand, languages the learners of which behave like the above-described learners of English, and on the other hand, languages the learners of which show no trace of any non-adult behaviour.<sup>3</sup>

The former set includes English (eg. Wexler & Chien (1985)) and Russian (Avrutin & Wexler (1992)). The latter group includes Italian (McKee (1992)), and Spanish (Padilla (1990)). The following are for instance C. McKee’s results on a comparative English-Italian experiment on coreference simple clauses of the type *Smurfette washed her* (1992: her condition B-1IC in table 3 and 6)

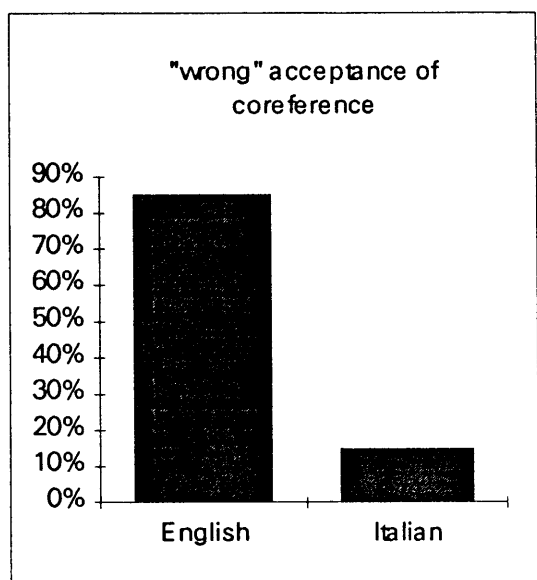
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<sup>2</sup> Although we gloss over numerous differences across experiments here, the above is a rather uncontroversial general characterisation of facts. In fact, even the most vehement opponents to such descriptions concede its correctness.

<sup>3</sup> Actually, Korean does not seem to enter into either of these sets, judging from Lee (1987?). Rather, Lee finds such puzzling results that he even entertains the hypothesis that adults themselves do not know the pronominal system of Korean (only to reject it, though), and abandons the use of pronouns with children “because the young children had trouble with understanding the pronoun sentences” (p. 12). In fact, it is true of the many East-Asian languages that their pronominal system is somewhat puzzling: many a linguist has sustained that pronouns are not really a productive part of the language, and speakers have a hard time with judgments. This is, of course, not to say that these systems should be set aside, but only to underline that something very different seems to occur.

Finally, Danish and possibly Dutch could be added to the English-like languages. No essential difference stems from this, though.

(4)



As several footnotes have noted, the two sets of languages clearly differ in the nature of their pronominal systems: the non-problematic languages have clitics, whereas the problem-languages don't seem to have any.

Why the presence of clitics should make a difference has always remained a mystery.

5. An attentive look at the pronominal systems of the problem-languages, here restricted to English and Russian, reveals a slightly more organised state of affairs.

Starting with English, it has been repeatedly noted that some aspects of the English pronominal system recall the behaviour of clitics in other languages. This led, among others, Selkirk (1972) to postulate that English has clitic-like pronouns. On the other hand, it has also been abundantly clear that English pronouns have little or none of the syntax of clitics, as found in Romance, Slavic, or many other type of languages. As a result, the clitic-like aspects of the English pronominal system HAVE remained in the dark.

This is precisely where the discovery that pronominal systems fall into three, not two, classes is most helpful: pronouns such as the dative *moi* in (2b), and other weak pronouns such as the Italian a-prepositional dative *loro* (Cardinaletti (1991)), the German *es*, Slovak *ono*, etc. have exactly the English-like characteristics: they behave like clitics in significant ways, but by far not in all respects (cf. §2.2). In other words, English has pronouns which, as Selkirk postulated, are ambiguous between two classes: that of weak pronouns, and that of strong pronouns. In fact, the English "clitic-like" behaviour of pronouns parallels the clitic-like behaviour of weak pronouns in other languages. A number of paradigms support this ambiguity:

**5.1 Contraction.** One of the properties distinguishing strong from deficient (i.e. clitic and weak) pronouns is that strong pronouns do not undergo phonological contraction or elision. A minimal pair is the following French example:

- |     |    |             |            |            |            |                 |
|-----|----|-------------|------------|------------|------------|-----------------|
| (5) | a. | aujourd'hui | ✓toi / *tu | evidemment | *toi / ✓tu | es à l'heure.   |
|     | b. | aujourd'hui | *t'        | evidemment | t'         | es à l'heure    |
| (6) | a. | aujourd'hui | elle       | evidemment | elle       | est à l'heure.  |
|     | b. | aujourd'hui | *l'        | evidemment | l'         | est à l'heure.  |
|     |    | today       | you, she   | obviously  | you, she   | are/is on time. |

In (5a), the topicalised (not focalised!) pronoun must be strong, while the preverbal pronoun must be a deficient pronoun, and only the deficient version can contract: (5b). Furthermore, this cannot be a property of the distinct phonological shapes of the two forms, since the third singular feminine has the same shape for the strong and the deficient form, (6a), but still, only the deficient can contract, (6b).<sup>4</sup> Many other similar paradigms across languages result in a simple and strong generalisation: only deficient pronouns are subject to phonological contraction.

Now English pronouns do contract. Along with *I saw you*, there is the possibility of *I saw 'ya*. Of course, it could be maintained that English is to be set apart from all other known languages, and hold that English strong pronouns do contract. If such a temptation arises consider the following additional facts.

It is a general syntactic property of deficient pronouns not to be able to occur in coordination, modification, and, with some provisos, contrastive focus. That is, a language which has deficient and strong pronouns uses the deficient form in the “unmarked” case, but resorts to the strong form in exactly those three contexts: coordination, modification, focalisation. E.g.:

- |     |    |    |     |         |                                                         |
|-----|----|----|-----|---------|---------------------------------------------------------|
| (7) | a. | Il | ✓te | craint. | <b>*toi</b>                                             |
|     | b. | Il |     | craint  | seulement <b>toi</b>                                    |
|     | c. | Il |     | craint  | toi et ton frère                                        |
|     | d. | Il |     | craint  | <b>TOI</b> , pas ton frère.                             |
|     |    | he | you | fears   | only you / you and your brother / you, not your brother |

Surprisingly, the generalisation about English is that its pronouns contract, *except when they occur in coordination, modification, focalisation* (cf fn.4). In other words English pronouns when they occur in syntactic contexts allowing deficient pronouns, behave exactly like deficient pronouns of other languages (ie. they can contract). On the other hand, when English pronouns occur in syntactic contexts forcing strong pronouns, they behave exactly like strong pronouns of other languages (ie. they do not contract). Perhaps this is a bit too much of a coincidence.

- |     |    |   |      |     |               |
|-----|----|---|------|-----|---------------|
| (8) | a. | ✓ | John | saw | 'm            |
|     | b. | * | John | saw | only'm        |
|     | c. | * | John | saw | 'm and Mary.  |
|     | d. | * | John | saw | 'M, not Mary. |

<sup>4</sup> This result doesn't seem to be reducible to an artifact stemming from the prosody of topicalisation, putatively incompatible with contraction (which would render the strong/deficient distinction irrelevant here). This may very well be true of some cases, but in a large number of cases contraction is impossible although no apparent prosodic boundary occurs. Here it does not seem to apply, though, since it is possible to utter two topicalised elements in a single prosodic phrase.

This is rather typical of the pronominal system: it is often tempting to reduce their properties to some prosodic unstressedness condition or to some semantic theme/rheme property. Such “explanations” systematically explain only a subset of cases, and turn out to be profitably seen as consequences of an arbitrary abstract distinction, the clitic-weak-strong distinction, rather than as primitives explaining that distinction.

On the other hand, everything falls into order, if English pronouns are ambiguous between strong and weak forms: in “unmarked” cases, such as *John saw you*, the choice generalisation (§2.2), forces the use of the deficient form, and contraction is not barred. But in coordination, modification, focalisation, strong pronouns are (cross-linguistically) forced, and contraction is thus (cross-linguistically) barred.

**5.2 Nuclear Stress.** Very much the same conclusion is hinted at by the distribution of the English nuclear stress. It is a famous generalisation among phonologists that in a simple transitive English sentence, the nuclear stress falls on the object noun (*John saw mArY*), but in a small class of contexts this is mysteriously not so: when the object happens to be a pronoun. In the latter case, the nuclear stress occurs on the verb (*John sAw her*), a phenomenon often referred to as nuclear stress retraction. Maybe it is superfluous to add that this is exactly the same as what happens with deficient pronouns in general, and that this is never attested with strong pronouns (in fact strong pronouns are sometimes (misleadingly) referred to as “tonic” or “focussed” pronouns).

Again it could be that English is special. But again, if it is special, why is it that exactly in the contexts in which other languages force strong pronouns, English does not have nuclear stress retraction anymore? Take a coordination of pronouns with a discourse situation such that the pronouns do not bear narrow focus (that is a situation comparable to the two examples above). Unsurprisingly by now, the nuclear stress occurs on the final pronoun, *not* on the verb (*John saw him and hEr*). Again, it is perhaps too much of a coincidence that English pronouns behave like deficient pronouns of other languages when in a “deficient context” but like strong pronouns of other languages when in a strong context (ie. coordination, modification). This is the expected state of affairs if English pronouns *are* in fact ambiguous between a deficient (weak) form and a strong form.

**5.3 Particle Verbs.** The French paradigm in (7) is prototypical of the syntax of strong/deficient pairs: the deficient pronoun goes to a special position in the clause (usually to the left in SVO languages). As a result, the distribution of the pronoun is: to the left in “unmarked” contexts, but to the right as soon as coordination, modification or focalisation occurs. The (descriptive) reason for this is clear: these contexts force strong pronouns, strong pronouns occur in the argument position (which is to the right). Is it a coincidence that English has the very same paradigm?

It has repeatedly been noted that there is a noun/pronoun asymmetry in particle constructions (eg. Johnson (1991) for a recent example). What has been less noted is that the resulting paradigm is formally identical to the Romance paradigms: compare (7) with the following:

- (9) a. John took ✓**him** in \*him  
 b. John took in only him / him and her / him, not her.

Again, this cross-linguistic and intra-linguistic facts fit in neatly if *him* is ambiguous between a weak and a strong form: in the unmarked case, the weak form must be used (choice generalisation, §2.2) and it is a general property of weak (deficient) elements that they cannot remain in situ and must move to some functional projection, (7a, 9a). Exactly where the strong form is forced, coordination – modification – focal stress, the lower in-situ position becomes available (7b-d, 9b).

**5.4 It.** In at least one case, English transparently has a deficient pronoun: the subject and object *it*. But let us make our case stronger by starting from a general semantic property of strong/deficient pronouns: the Port Royal grammar discusses the fact that “quoiqu’un

homme dise fort bien d'un autre *qu'il se repose sur lui de cette affaire*, ... on ne dira pas cela d'un lit ou d'un bâton" (Arnauld & Lancelot (1846:319) quoting Reignier, which roughly translates as: although a man easily says of another *that he rely on him for this affair* ... one would not say this of a bed or of a stick). In other words, the pronoun could only refer to human entities. This turns out to be a true, and most surprising, property of strong (personal) pronouns cross-linguistically: they can only refer to human entities. To take some examples, the following all necessarily refer to human entities: (all examples contain coordinated pronouns, to clearly enforce the presence of the strong form)

(10)		<+human>	<- hum.>	
a.	vedo <b>lui</b> e l'altro. I.see him and the other	✓	*	(Italian)
b.	<b>Sie</b> und die daneben sind groß they and those besides are tall/big	✓	*	(German)
c.	Vidiel som <b>ich</b> a tých druhých seen I.am them and these others	✓	*	(Slovak)
d.	Láttam <b>öket</b> és a mellettiük levöket I.saw them and those besides	✓	*	(Hungarian)
e.	<b>Hi</b> ve-zot le-yad-a gvohot she and-that.one to-side-her tall/big	✓	*	(Hebrew)
f.	<b>Yélè</b> kpo yélè kpo yon wankpè she and she and know beauty	✓	*	(Gun)

But there is no such general ban on deficient pronouns: as a general class, deficient pronouns can take both values (while it may be the case that one or another individual instance of deficient pronoun is lexically restricted to human or non-human). Here is a minimal pair:

(11)	a.	<b>Il</b>	est beau	(deficient <i>il</i> : both human and non-human)
	b.	<b>Lui</b>	est beau	(strong <i>lui</i> : only human)
		he	is beautiful	

This entails that the personal pronoun *it*, which is lexically restricted to non-human entities, must be a deficient pronoun. It can therefore not be coordinated, modified, topicalised, etc.:

(12)	a.	*	I like <b>it</b> and {it, the other one, this, ...}	
	b.	*	I like only <b>it</b> .	
	c.	*	<b>IT</b> , I like	(cf. BEANS, I like)

Now observe the behaviour of this clearly deficient pronoun in the previous contexts: in particle constructions, this pronoun must occur between the particle and the verb (*I took it in*), it cannot follow the particle (*\*I took in it*). This was exactly the behaviour postulated for weak *him*. As an object of a transitive verb, it obligatorily triggers nuclear stress retraction, again the behaviour attributed to weak *him*, and finally *it* can contract, its vowel turning to a schwa (*I saw 't*).

In other words, *it* provides a clear English deficient pronoun, not ambiguous between deficient and strong (and this absence of ambiguity follows from the general fact that non-human pronouns are only deficient pronouns). This clear case then confirms the ambiguity of the ambiguous cases: *it* behaves exactly as the postulated weak part of the ambiguous cases.

**5.5. Prepositions.** Finally granted that English pronouns are ambiguous between a deficient and a strong form (and that *it* only has the deficient form), why should we consider them as weak rather than clitic? One simple test for this is prepositions: clitic pronouns never occur as objects of prepositions, while object weak pronouns do. Witness the following pair:

- (13) a. Ich wurde [ohne es] nicht ausgehen.  
 I would without it not go.out  
 b. \* Je sortirais pas [sans le].  
 I would.go.out not without it

Both pronouns are deficient, in that they cannot be coordinated, etc., but the German *es* can occur after a preposition, contrary to the French *le*. Now English pronouns behave like German, not like French. They are therefore weak pronouns, not clitic pronouns.

The most obvious case is *it*: since strings of the type *I will think about it* are grammatical, *it* must therefore be a weak deficient element, not a clitic deficient element. How are we to know if other pronouns are weak or strong after prepositions though? Stress retraction betrays them again: it has been noted time and again, that after prepositions, pronouns (but not nouns) can trigger an accent retraction, with the accent falling on the preposition instead of its object. If stress-retraction is only a property of deficient pronouns, these pronouns are both deficient and objects of prepositions, therefore weak.

**5.6. Russian.** Exactly the same conclusion holds of Russian: recall that strong pronouns have a strong bias toward being interpreted as human, but this is not true of deficient pronouns. The following paradigm then unambiguously shows that the Russian pronoun *ego* is ambiguous between a deficient and a strong pronoun:

- (14) a. Ja **ego** videl. (ego = person or table)  
 I him saw  
 b. Tolko **ego**, ja videl. (ego = person but cannot be a table)  
 Only him, I saw

**5.7. Romance.** Finally, it may be useful to recall that the Romance pronouns are unambiguous: not only is their morphology different (this is true for all the pronouns that have been tested in the relevant experiments, judging from the published material), but their location in the clause is also clearly distinct from that of strong pronouns.

**6.1. Ambiguity.** It thus appears that it is not so much the presence of clitics, or of deficient elements, that makes the difference between problem and non-problem languages. The problem languages also contain deficient pronouns. Rather the decisive part is the presence of ambiguity. The generalisation about children's grammar w.r.t. local coreference of pronouns is that:

- (15) Children accept local coreference of a pronoun,  
 iff this pronoun is not unambiguously deficient in the target language.

**6.2. Strong Pronouns.** Why should the ambiguity between strong and deficient matter? Padilla (1990) reports data that bridge the missing link: although Romance children do not show any sign of overacceptance of locally coreferent pronouns, they do so with strong pronouns. That is Padilla tested Romance children both with clitics and with strong pronouns, and found that in the latter case the results are comparable to those found in English.

This leads to a new and simple generalisation: first Padilla's result in conjunction with (15) may now be interpreted as:

- (16) Children exhibit "B-problems" only when they use strong pronouns.

From this, (15) may be upgraded to:

- (17) Unless the pronoun of the target language is unambiguously deficient, children only use it as a strong form.

Taken together, (16) and (17) correctly describe the facts: English and Russian children should exhibit the famous problem, and so should Romance kids when using unambiguous strong forms. To illustrate the source of the difference between children and adults in problem-languages, the following are the representations in adult and child English of a simple transitive sentence, according to (17):

- (18) adult: John saw him<sub>weak</sub>  
child: John saw him<sub>strong</sub>

The adult, having two forms of the pronoun, is forced to use the deficient one, for familiar reasons. The child, on the other hand, having only the strong form, always uses it. By hypothesis (16) this triggers the surface difference.

**6.3. Line of explanation.** This generalisation, (17), puts the "acquisition of principle B" in a rather different light: the questions that should be answered are not relative to binding domains, focus, or processing. Rather what should be explained is (i) why is it that children overuse strong pronouns when those are ambiguous, and (ii) why does the over-use of strong pronouns trigger the observed phenomenology?

The answer to the second question seems rather obvious, for lack of space here, we leave it to the reader to convince her-/him-self that in fact exactly the same holds of adult language. The answer to the first question is more delicate, but for the present purposes we can satisfy ourselves with the fact that it actually follows from a principle often postulated to hold of children's languages: namely a problem with ambiguity. Be it Clark's proposal (eg. 1987), Wexler's Uniqueness principle, or the numerous other comparable proposals, it has been claimed time and again that children have trouble with ambiguity.

If that is the case, then both questions are resolved: children generally have trouble with ambiguity, and confronted to English *him*, they only adopt one analysis: that the pronoun is strong. Once this step is made, it follows (in a grammar similar to that of the target language) that the observed locality conditions are distinct.

Not only would the explanation of (16) take us too far afield given the space allotted to us here, (in fact it leads into the full complexities of the internal structure of strong pronouns and the most plausible syntax of "accidental coreference") but further development of this line of explanation now depends upon confirmation of a simple but strong prediction these generalisations make: since English *it* is non-ambiguous, it should not create problems for principle B. English children confronted with sentences with local coreference of *it*, such as *the ugly snake painted it*, should react exactly as Romance children and reject the coreference. A strong contrast should thus be found between minimal pairs such as *the man painted him* versus *the spider painted it*.

Modulo results on this point (experiments are under way), it should be noted that this line of explanation is advantageous over other proposals: conceptually, it need not postulate a primitive which is either syntactically dubious (parametrisation of binding domains between Romance and English/Russian) or in the poorly understood realms of processing/pragmatics. Empirically, it also brings into the explanation what is often left to footnotes: the cross-linguistic asymmetry. But of course, this optimistic conclusion only holds once the solution to (16) is disclosed ...

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