Homonymic Ambiguity, Pronominal Systems and The Clitic-lem in Modular Linguistics
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HOMONYMIC AMBIGUITY, PRONOMINAL SYSTEMS AND THE CLITIC-LEM IN MODULAR LINGUISTICS*

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0 Introduction

0.1 My purpose in this paper will be to contest the notion of 'Surface Structure Constraints' as to its necessity for the solution of the clitic problem; a problem brought to our attention by the work of Perlmutter (1971), (ftn.1).

0.2 I shall not attempt, however, to prove that surface structure constraints are not necessary within the context of a transformational theory of grammar premising the ordered rule hypothesis. As a matter of fact I tend to agree with Perlmutter's conclusion that within the context of such a theory surface structure constraints are indeed necessary. His lucid and logical argumentative treatment of the clitic problem in Walbiri, French and Spanish bears ample proof to such a conclusion. I happen though to dissent from accepting the notion of a system of grammar such as Perlmutter premises in his work.

I shall therefore not attempt to prove my thesis by pointing out contradictions in Perlmutter's logical approach; for contradictions are to be considered as such only within the system in which they develop, and when the premises of that very system are a-priori refuted, as is the case here, the argumentation dialogue is necessarily somewhat blocked.

Nor shall I attempt to prove my thesis by pointing out inconsistencies in Perlmutter's data; for I tend to believe that his data are quite reliable, although in a few instances our consideration of their semantic evaluation differs basically.

0.3 This leaves me with one last option: to develop that portion of a new system of grammar, which I shall tentatively call here 'Modular Linguistics', in which all of Perlmutter's clitic data, together with other clitic data as well, are satisfactorily explained.

Modular Linguistics as a self-contained theory of language will not be presented here. I do not expect this, however, to affect in any negative way the conclusions of this study or the comprehension of its new approach .

The languages which were researched for this study are: English, Arabic, French, Spanish, Walbiri, Albanian, Italian, German, Russian, Persian, Czech, Japanese, Indonesian and Thai, of which the latter three do not exhibit clitics of the kind under consideration in this paper.

I shall prove that a specific clitic surface-feature, which I term 'Homonymic Ambiguity' and symbolize as C_i^k , is primarily the only feature controlling the final surface clitic order in the above-mentioned languages. The data for English, Arabic, Walbiri, French and Spanish will be presented in detail. Due to space considerations, the remaining languages will only be sparingly commented upon.

In order to prove my thesis I shall proceed to:

1. define C_i^k ,
2. develop the new notion of a 'Clitic Linguistic Module', henceforth C-lem and define the mechanism of its functioning

in terms of C_i^k , and indicate its position in the derivation process of the surface clitic order ,

3. finally embark on the consideration of clitic data in different languages and the solution to our problem.
4. I shall then close with some considerations of a general nature.

1 C_i^k-definitions

1.1 The 'Pronominal and Clitic Systems' of English, Arabic, French and Spanish, henceforth the PCS of the specific language, as well as their respective C-lems are given in the Appendix at the end of this paper.

Depicted as PCS-rows are the NPG clitic subsets, where in general,

N= Number= (Singular,Dual,Plural).....= (S,D,P)
P= Person= (First,Second,Third).....= (1,2,3)
G= Gender= (Masculine,Feminine,Neutral,Impersonal)= (M,F,N,I)

and where R stands for 'Reflexive'.

For instance, in French, P3M is the Plural 3rd person Masculine pronoun and clitic subset.

Depicted as PCS-columns are the semantic constituent subsets O^k where (k= 0,1,2,3), and which, in order to keep with current terminology, are rendered throughout this paper respectively as

O^k= (O^0,O^1,O^2,O^3)
= (Agent,Patient^1,Patient^2,Patient^3)
= (Nominative,Accusative,Dative^2,Dative^3)
= (Subject,Direct Object,Indirect Object,Beneficial Object)
= (Sbj,DO,IO,BO)

i.e. the superscipt (k= 0,1,2,3) respectively denotes the semantic contituents ultimately giving rise to (Sbj,DO,IO,BO).

Each O^k-column heads two subcolums: the pronoun set Pro^k and the corresponding clitic set C_i^k .

The Agent/Subject and Patient/Object identification in the above will be dwelled upon under 2.1 .

The subscript 'i' in C_i^k indicates the 'Homonymic Ambiguity Value' of the clitic under consideration; a value presently to be defined under 1.2 .

We can see from the PCS that for French P3M we have: for (k= 0,1,2,3), Pro^k= (ils,eux,eux,eux) and
C_i^k = (ils_0,les_0,$leur_1$,$leur_1$)

1.2 The following C_i^k-clitic-subset definitions rest on the consideration of clitic homonymity within each single NPG-row:

C_0^0 is the subset of Sbj clitics not homonymous with any of BO, IO or DO clitics, e.g. spanish S2 'tu'and french P3M 'ils'.

C_0^1 is the subset of DO clitics not homonymous with any of BO, IO or Sbj clitics, e.g. spanish S3F 'la'.

C_0^2 is the subset of IO clitics not homonymous with any of BO, DO or Sbj clitics.

C_0^3 is the subset of BO clitics not homonymous with any of IO, DO or Sbj clitics.

C_1 is the subset of homonymous BO and IO clitics not homonymous with any of DO or Sbj clitics, e.g. french S3M 'lui' and P3M 'leur'.

C_2 is the subset of homonymous BO and DO clitics not homonymous with any of IO or Sbj clitics.

C_3 is the subset of homonymous IO and DO clitics not homonymous with any of BO or Sbj clitics.

C_4 is the subset of homonymous BO, IO and DO clitics not homonymous with Sbj clitics, e.g. spanish P1 'nos', spanish dialect II (DII) S2 'te', french S1 'me' and all of the english and arabic clitics.

C_5 is the subset of homonymous BO, IO, DO and Sbj clitics, e.g. spanish S3I 'se' and spanish dialect I (DI) S2 'te'.

In the above definitions I have not considered any other logically possible C_i^k's, for such did not occur in any of the languages researched for this paper and I suspect that they do not occur at all in any other natural language.

2 The C-lem

2.1 The cliticization process characterized by the C-lem accepts for input pronominalized (ftn.2) declarative (ftn.3) active grammatical (ftn.4) structures such as (i):

(i) (Sbj) (V) (DO) to (IO) for (BO).
(ii) (DO) (beVen) by (Sbj) to (IO) for (BO).
(IO) (beVen) (DO) by (Sbj) for (BO).

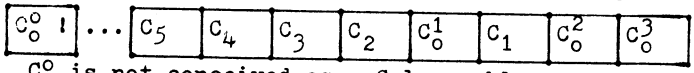
The order of the constituent Pro^K's in the above structures is not functional in Modular Linguistics. What is of importance here is whether the verb in the structure is (V) or (beVen); for as observation of language data tends to indicate, passivized structures such as (ii) do not qualify as C-lem input and thus cannot undergo cliticization. Given this observation and to keep with current terminology, I have identified above under 1.1, as one and the same the semantic notion of Agent and the syntactic one of Subject; for in a declarative active structure both Agent and Subject refer to the same semantic entity. The same is also true of the general identification Patient/Object. In Modular Linguistics, however, O^K's will denote semantic, while (Sbj,DO,IO,BO) will denote syntactic notions.

2.2 The C-lem proper is formed for each specific language according to the characteristics of the C_i^k-set of that language. These characteristics are different for different languages (cf.PCS-tables in Appendix); it follows then that the C-lems are different for different languages. However, though different, they are so only in degree, not in substance; for they all can be shown to derive from a universal C-lem which is defined in terms both of its own operation and mechanism, and of its sublem architecture.

2.3 The universal C-lem requires the following assumptions of the language to which it belongs:

(a) that it be that of an adult speaker of the language (ftn.5).
(b) that it allow for the cliticization of all of BO, IO and DO pronouns in at least one and the same sentence. For the purposes of this paper 'Cliticization' is not to be confounded with 'Pronominalization'. 'Cliticization' involves here the movement of pronominalized objects i.e. of pronouns, and their transformation thus into clitics.
(c) that it optionally allow for subject pronoun deletion and that it contain a C_1-clitic, e.g. Spanish, Albanian and Italian. Such languages will undergo what will be referred to as the operation of C_1-displacement (cf.KATHY below under 2.6 and in the Appendix).

2.4 The universal C-lem is a module whose building blocks are submodules C_o^3, C_o^2, C_1, C_o^1, C_2, C_3, C_4 and C_5 as defined above under 1.2 and arranged as in the following figure:



C_o^o is not conceived as a C-lem sublem, and the symbol (!) denotes a Pointer or Scanner whose movement within the C-lem is well-defined (cf.footnotes to SALWA and KATHY in the Appendix).

2.5 The universal C-lem simplifies to the language specific C-lem because not all of the C_i^k's which form the universal C-lem are usually found to exist in the specific language under consideration. The language specific C-lems for English, Arabic, French and Spanish are shown in the Appendix, that for Walbiri is identical to that for English and Arabic. Notice the C-lem position relative the V-lem. The C-lem is inserted into that position after 'Pronominalization' but prior to 'Cliticization'.

2.6 The universal C-lem is depicted in blockdiagram in the Appendix. TURING is the program that describes the C-lem operation. It consists of an input block INTENT and of two subprogram blocks SALWA and KATHY. Due to space limitations I cannot undertake here the detailed description of the inner operations of these subprograms; the step by step derivations which are included in the Appendix will help the reader to meticulously follow these operations.

INTENT primarily registers which pronouns are to be cliticized and which are not. SALWA describes the cliticization operation proper and KATHY describes C_1-displacement.

Whereas SALWA is language universal, KATHY is, in terms of changes it effects on the form of C_1-clitics (cf.footnotes to KATHY in the Appendix) during and because of C_1-displacement, language specific. In terms of the operations underlying C_1-displacement proper, but not of the C_1-clitic surface form change occuring, KATHY is also language universal.

2.7 The language that best demonstrates the operation of the universal C-lem is Spanish. It meets assumptions (a), (b) and (c) noted above under 2.3 and it contains a C_5-clitic, namely 'se'. French does not meet assumption (c) and would make the demonstration easier. English, Arabic and Walbiri are in reference to their respective C-lems identical and three of the simpler languages. Walbiri differs though from English and Arabic in that it contains C_o^k-clitics while English and Arabic do not.

In the next section I shall discuss some derivations in English, Arabic, Walbiri, French and Spanish and I shall only advance a few comments on the remaining languages listed above under 0.3 .

3 Derivations

3.1 General

3.1.1 In this section my main concern will be to acquaint the reader with the kind of derivations the modular C-lem approach provides us with.

The C-lem whose function is meticulously described by TURING is the only 'rule' controlling the cliticization process in all of the different languages considered here. It is thus a 'Universal of Language'. It is conceived of as being an

'obligatory rule' i.e. it must be gone through in any and all sentence derivations. The optionality of cliticizing one or more pronouns or none at all is a built-in TURING function provided for in INTENT.

3.1.2 I speak of an INTENT-input to denote the input sentence which is to undergo cliticization; of an INTENT-output feeding into a SALWA-input to denote the original sentence deemed by INTENT grammatical and candidate for cliticization, together with information as to which pronouns in it are to be cliticized; and of a TURING-output to denote the result of the overall cliticization process. The original sentence to undergo cliticization is thus deemed by TURING to be either cliticizable i.e. grammatical, in which case an output sentence O/GR is generated and printed out, or uncliticizable i.e. ungrammatical in which case the cliticization process has blocked somewhere and the information O/UNG is printed out.

3.1.3 The SALWA-input for each derivation is given as a parenthesized clitic quadruple $(C_i^0, C_i^1, C_i^2, C_i^3)$ in which a symbol '#' substituting for a 'C' will denote a disregard instruction DRG.

Thus a SALWA-input candidate in French is (#,le,lui,me). Its TURING-output is the ordered quadruple 'me le lui' in which the symbol '#' has been disregarded. To indicate this input-output quadruple pair I shall write: (#,le,lui,me)/me le lui .

3.1.4 The french and spanish derivation lists of all of Perlmutter's clitic sentences, only partially included in the Appendix to this paper, use the above notation. The tables entitled 'Clitic Order Matrix', C_i^kOM and COM, in the Appendix , list quadruple pair information, complete for English, Arabic, French and Spanish. Due to space limitations, tables of the remaining languages have not been included. For the assiduous scrutinizer, some actual step by step derivations have been provided. These show in complete detail the actual inner workings of the C-lem. Whereas the C_i^kOM's and COM's only list the ordered quadruple pair (SALWA-input)/TURING-output, these step by step derivations show in detail what happens inside the C-lem from the moment SALWA accepts input to the moment TURING delivers output. The code numbers listed under 'DERIVATION STEPS' in these step by step derivations refer successively to the 'program step addresses' gone through in the derivation process. Such 'addresses' are marked next to each program step in the flowcharts of INTENT, SALWA and KATHY to be found in the Appendix. An example of one such derivation step is (S 18-19-20-25-GO TO KATHY-K 1-2.). It indicates that the program has successively gone through SALWA steps 18-19-20-25, then switched over to KATHY and then continued through KATHY steps 1-2, where it momentarily stopped to perform a change in the C-lem content. The C-lem content change resulting from the derivation step is listed under 'SENTENCE' to the right of the derivation step line.

3.1.5 Throughout the remainder of this paper, each sentence will have its own identifying code number. An example of such a code number is (...)Fr(1)P(49/91) where:

(...)= Sentence identifying code in the present paper,
Fr = Language of the sentence under consideration, here French,
(1) = Sentence identifying number in the unpublished version of this paper.
P = (Perlmutter, 1971); name of work where sentence originally appeared.

(49/ = P's page number, and
91) = P's sentence number.

All the text and tables reduced in print in the Appendix to this paper are duplicate copies taken as is from the unpublished version of this paper, and therefore do not show the first (...) number of the code.

And now.....ON WITH THE SHOW.

3.2 English and Arabic

3.2.1 English is an obligatory-subject language and Arabic, though an optional-subject language, does not contain any C_1-clitics. Both languages, therefore, do not undergo C_1-displacement and KATHY is always bypassed.

With respect to their C-lems, both languages are identical and two of the simpler ones. Because all of their clitics are without exception C_4's, their C-lems simplify as shown in the Appendix. As a result, where neither 'emphasis' nor 'contrast' are intended, both languages do not permit,in one and the same sentence, cliticization of more than one pronoun, namely either Pro^1 or Pro^2 but never both together.

3.2.2 In the following examples of derivations '(1)' will denote the underlying structure US, '(2)' the pronominalized sentence, and '(3)' the cliticized sentence.

3.2.3

(E1 -1) I gave the book to Jane.
(E1 -2a) I gave it_p to Jane.
(b) I gave the book to her_p.
(c) I gave it_p to her_p.
(E1 -3a) (#,it,#,#)/it..... I gave it_c to Jane.
(b) (#,#,her,#)/her..... I gave her_c the book.
(c) (#,it,her,#)/*.....*I gave it_c her_c.
(c') same.....*I gave her_c it_c.

Notice that when emphasis or contrast are intended, Pro^1 which otherwise must cliticize, does not; and, given the right intonation, sentences paralleling (E1-3c') in their surface structure are acceptable. Notice however that in sentences such as these the DO though pronominalized is not and cannot be cliticized. Thus we have

(E1 -3c'') (#,#,her,#)/her..... I gave her_c IT_p (for emphasis).
(E1'-3) (#,#,him,#)/him..... I give him_c you_p in marriage, not her_p (for contrast).

3.2.4

(E2 -1a) He brings the book in.
(a') ?He brings in the book.
(2a) He brings it_p in.
(a') He brings in it_p.
(3aa') (#,it,#,#)/it..... He brings it_c in.
(3aa'*) same.....*He brings in it_c.

The derivation of (E2-3aa'*) is impossible simply because the english C-lem is positioned directly to the right of the english V-lem, thus allowing no element whatsoever, e.g. 'in', to interfere inbetween the both of them. Sentence (E2-2a') is ungrammatical as a final surface structure because DO, once pronominalized to Pro^1, must necessarily cliticize.

3.2.5

(A1 -1) (ʔanaː) ʔaθaytu ʔal kitaːba li Jane.
I gave the book to Jane.

Substitution of arabic '?iyya:hu' for english Pro^1 'it', of 'hu' for C^1 'it' and of 'ha:' for Pro^2/C^2 'her' yields:

(A1 -3a)	(#,hu,#,#)/hu.....	?a9ṭaytu-hu_C li Jane.
(b)	(#,#,ha:,#)/ha:.....	?a9ṭaytu-ha:$_C$?al kita:ba.
(c)	(#,hu,ha:,#)/*.....*?a9ṭaytu-hu_C-ha:$_C$.	
(c')	same.....*?a9ṭaytu-ha:$_C$-hu_C.	
(c'')	(#,#,ha:,#)/ha:.....	?a9ṭaytu-ha:$_C$?iyya:hu_P
(E1'-3)	(#,#,hu,#)/hu,hi....	?u9ṭi:-hi_C ?iyya:ki_Pka zawjat, wa laysa ?iyya:$ha:_P$.
		I give him you as wife
		and not her .

3.2.6 In the above examples I have considered only the verb 'to give/?a9ṭa:'. Other verbs could have served as well; except that not all verbs that allow Pro^2-cliticization like 'to give/?a9ṭa:' match in English and Arabic. Thus while 'to write' in English allows Pro^2-cliticization, its counterpart 'kataba' in Arabic does not. I cannot, however, consider here the reasons for this behaviour.

3.3 Walbiri

3.3.1 Given Perlmutter's data, Walbiri seems to be an obligatory-subject language that however always simultaneously cliticizes its sentence subject. It therefore does not undergo C_1-displacement. I have noted above under 2.7 that the walbiri C-lem is identical to that of English and Arabic. Strictly speaking this is not completely true, although given the nature of the walbiri C-set that Perlmutter provides us with, the walbiri C-lem can simplify to the equivalent of the english and arabic one. The walbiri C-lem is theotetically identical to the french C-lem and like it, it is positioned before the V-lem. But consider now the walbiri C^1's and C^2's. Unlike French which contains in C^1 and C^2 clitics whose i= (0,1,4), Walbiri contains only clitics whose i= (1,4); here I am discarding clitics whose surface form is 'Ø' and whose 'i', by necessity, equals 'o'. If I now set the only C_1-clitic 'la_1' to equal 'la_o' instead, the walbiri C-lem will logically simplify to that of English and Arabic and at the same time remain in its function logically equivalent to the french C-lem when applied to the walbiri C-set. In both the simplified and the unsimplified versions of the C-lem, Pro^3 does not cliticize (cf. 3.3.4 below).

3.3.2 In the following, the change 'la_1' to 'la_o' has been noted and the resulting Perlmutter's (S1, S2, S3, P39) walbiri clitics are respectively: C^o= (na_o,npa_o,$Ø_o$,?), C^1= (tyu_4,nku_4, $Ø_o$,($Ø_o$,$tyana_4$)) and C^2= (tyu_4,nku_4,la_o,$tyana_4$).

3.3.3 The following walbiri C_1KOM's predict the surface clitic order in all of Perlmutter's walbiri sentences P(89.,93/10..31): (C^o,Ø,C^2,#)/C^oC^2, (C^o,C^1,#,#)/C^oC^1, (C^o,C^1,C^2_o,#)/$C^oC^1C^2_o$ and all others (C^o,C^1,C^2,#)/*.

3.3.4 Kenneth Hale (1973) provides more complete data to allow for an in-depth study of the walbiri cliticization process. A first reading of Hale's paper tends to indicate that his data are C-lem predictable.

3.4 French

3.4.1 French is an obligatory-subject language and therefore does not undergo C_1-displacement. Its C-lem is positioned directly before its V-lem. In a sense, it is a straightforward case for the demonstration of the C-lem action. It is neither as simple as English or Arabic nor nearly as complex as Spanish. In the following examples of derivations I have deleted the pronominalization step '2'.

3.4.2
(F1-1) Tu donnes le livre aux étudiants.
You give the book to the students.
(3a) (#,le$_0$,#,#)/le Tu le donnes aux étudiants.
Tu le donnes à eux .
(b) (#,#,leur$_1$,#)/leur Tu leur donnes le livre.
(c) (#,le,leur,#)/le leur Tu le leur donnes.

3.4.3
(F2-1) Tu donnes les livres à moi.
You give the books to me.
(3a) (#,les$_0$,#,#)/les Tu les donnes à moi.
(b) (#,#,me$_4$,#)/me Tu me donnes les livres.
(c) (#,les,me,#)/me les Tu me les donnes.

3.4.4
(F3-1) Je donnes toi à lui en marriage.
I give you to him in marriage.
(3a) (#,te$_4$,#,#)/te Je te donnes à lui en marriage.
(b) (#,#,lui$_1$,#)/* *Je lui donnes toi en marriage.
/lui; with emphasis or contrast intended.
Je lui donnes TOI en marriage.
.....,et non pas Jane.
(c) (#,te,lui,#)/* *Je te lui donnes en marriage.

3.4.5
(F4-1) Je dirai cela à John pour toi.
I will say this to John for you.
(3a) (#,le,lui,te)/te le lui Je te le lui dirai.
(b) (#,#,lui,te)/te lui; with 'cela' not pronominalized,
Je te lui dirai cela.

3.4.6 Comparison of (F3-3c) and (F4-3b) indicates that the clitic sequence 'te lui' is in and by itself neither grammatical nor ungrammatical.

3.4.7 Notice that if DO 'cela' is deleted in (F4-1) the sentence will be deemed ungrammatical by INTENT first constraint (√or#,NE,√,√)/*. Thus
(F4-3c) (#,NE,lui,te)/* *Je te lui dirai.

Notice however that in this case the original US sentence is ungrammatical prior to C-lem entry. This is why I have noted in INTENT that the 'first constraints' might very well be superfluous.

3.4.8 The derivations of eight of Perlmutter's french sentences are given in the Appendix. Also, as indicated in the Appendix, notice that the set of clitics (me;te;nous;vous;se) which appears as a constituent in Perlmutter's surface structure constraint on french clitics P(57/121) exactly matches the french C_4-set according to the C-lem approach.

3.4.9 I have not considered here sentences in which the french clitics 'y' and 'en' appear P(59/124..130), nor sentences whose verb is a compound of two or more verbs, e.g. 'laisser voir/ to let see' P(55/111..114), but it can be shown that these can be easily incorporated in the C-lem theory. All others of Perlmutter's french sentences are found to be C-lem predictable.

3.5 Spanish

3.5.1 Spanish is an optional-subject language and it contains a C_1-clitic. It therefore undergoes C_1-displacement i.e. KATHY comes into action here.

C_1-displacement achieves in Spanish what Perlmutter's 'spurious se rule' P(22/10) was set up to accomplish. Like the 'spurious se rule' C_1-displacement requires a C_1-clitic surface

form change. In Spanish it is the following: all C_1-clitics will change into 'se_5'.

3.5.2 C_1-displacement is, however, not to be equated with the 'spurious se rule'. For KATHY, which describes the function of C_1-displacement, is a universal process that applies not only in Spanish but also as well in Albanian and Italian, and in all other optional-subject languages containing a C_1-clitic, while the 'spurious se rule' does not make such a universal claim.

3.5.3 Unlike English, Arabic, Walbiri and French, Spanish raises the possibility that in one and the same sentence all of the four clitics in the SALWA-input quadruple might be marked by INTENT for cliticization. But as we can observe in spanish C_1^kOM-13,$(C_5^0C^1C^2C^3)$/*, this cliticization is always ruled out as ungrammatical. This conclusion can be easily proven to follow logically from the TURING operation itsef. Given my observations to this date, I can safely predict that in any and all languages the maximum number of clitics, of the kind that we are dealing with in this paper, that can appear together in one and the same sentence is 'THREE', and that this fact is a Universal of Language.

3.5.4 Observation of spanish data P(51/94-95-96) reported in the Appendix, leads to the necessary conclusion that the spanish two dialects reported by Perlmutter differ only in that in one dialect DI the clitic 'te' is C_5, while in the other DII it is C_4. In DI but not in DII 'te' is conceived of also as Sbj-clitic.

3.5.5 A derivation list of all of Perlmutter's spanish sentences is available; it cannot,however, be included here. Relying upon this list, I can safely state that all of Perlmutter's spanish sentences are C-lem predictable.

3.5.6 To state only a few observations: we now have an explanation for:

(a) the ambiguity of P(62/141) 'Te me recommendaron/(i) they recommended me to you, and (ii) they recommended you to me'. P(62/141) can derive from both (#,me,#,te) and (#,te,#,me).

(b) the ungrammaticality of sentences such as P(70/161b) '*Ramon me le complico la vida a mi hija, pero a mi hijo no se me la complico'. It is not ungrammatical due to clitic order considerations but due to what I have termed 'Semantic Clash', a notion not defined in this paper.

(c) the ungrammaticality of sentences such as P(76/174ab) '*Me lo queria seguir gritandomelo, and *Me lo queria seguirmelo gritandomelo'. They are both ungrammatical due to the occurence of the grammatical clitic sequence 'me lo' more than once in the sentence, with no apparent justification.

3.5.7 In the Appendix I have included derivations of and comments upon Perlmutter's sentences P(51/94-95-96). These, together with others not reported on here, prove beyond any doubt my contention that in spanish DI 'te' is a C_5-subject clitic.

Here, a note is in order on the verb 'echar' which appears in P(51/95): In his 'Dictionary of the Spanish and English Languages', Velazquez (1967:257-258) reports that 'the verb 'echar' is well described by a spanish lexicographer as a verb of general utility; (and that) it serves frequently to assist the meaning of another verb, (and that) it enters into many phrases'; whereupon he lists over a hundred different meanings for 'echar' as it appears in different phrases. Some of these meanings translate into english reflexives, some do not. Given that P(51/95) 'Te me le echaste encima' translates into French as 'Tu me lui as sauté dessus' using the non-reflexive verb 'sauter/to jump', I translate

it into English as 'You jumped him over (on me)'. Notice that thus we have the lexical equivalence 'encima/dessus/over', and the syntactic quasi-equivalence of the sentence in the three languages. The spanish sentence and its french translation are only semantically, but not syntactically, equivalent to Perlmutter's english translation 'You threw yourself on him on me'. Thus, I differ basically with Perlmutter in my interpretation of this sentence.

3.5.8 I have also included in the Appendix one of Emonds spanish sentences as reported by Rivero (1973:698/1) 'El hombre que quiere lavarse se fue/The man who wants to wash himself left'. It is apparent that its derivation is a straightforward case of cliticization dealing not with one but with two C-lems. (In Appendix text please correct 'to elope' so as to read 'to flee').

3.5.9 Due to space limitations, it is quite impossible to give the clitic problem in Spanish its due consideration here. Much has necessarily been left out, and the many predictions, explanations and foundations of ungrammaticality that it affords us with will have to wait for another forum.

3.6 Comments on the remaining languages

Albanian and Italian, like Spanish, are languages that undergo C_1-displacement. their respective C_1-clitic surface form changes are indicated in the footnotes to KATHY in the Appendix. The albanian clitic order is completely C-lem predictable. That of Italian is C-lem predictable except for one category of instances involving the clitic 'si'. This category of seemingly unpredictable instances can however be explained by incorporating an otherwise well-motivated principle into our theory of Language. Roughly, this principle states that

> 'the linguistic system of a specific language is, like Man himself, an adaptive system; and that it therefore tends to reach its optimal state of development by successively striking a middle ground between its own hardware/software structure and an optimal state of understanding and comprehension of its output messages by other like-systems in its own family'.

This principle, which I metaphorically term 'L-SURVIVAL', motivates us to incorporate a new rule specific to Italian and based on an extended notion of 'Homonymic Ambiguity', in order to completely explain and predict the italian surface clitic order. In German, L-SURVIVAL has the effect that the C-lem allows only for Pro^1-cliticization, never for Pro^2; the result is that in German we are always dealing with a surface clitic order which is C^1Pro^2 and which happens to be homonymic with Pro^1Pro^2, i.e. in German, due to specific reasons not stated here, L-SURVIVAL opts for the simplification of the C-lem action. In French and Spanish, it is also L-SURVIVAL (if not pre-C-lem semantic constraints) that rules out all, except for one, identical i.e. homonymic surface sequences of clitics generated by the C-lem. In Russian, the C-lem can optionally be positioned either before or after the V-lem, and the surface clitic order is completely C-lem predictable. Work is in progress on Persian and Czech; and Japanese, Indonesian and Thai do not exhibit clitics of the kind we have been discussing here.

4 Concluding remarks

My involvement with the clitic problem stemmed mainly from a deep-seated dislike of mine of the notion of 'Surface Structure Constraints'. At the very moment I became aware of the existence in Linguistics of such a notion, I found that it not only disturbed my sense of scientific symmetry but also that it ran as well counter my sense of scientific logicity. For what are 'surface structure constraints' if not an easy backstage comeback to a quasi-tagmemicist view of how language phenomena are to be handled? The argument that, in Perlmutter's approach, surface structures have been'generated' should not escape our scrutiny. Theoretically, the generation by any means of an infinity of surface structures of which the ungrammatical ones are to be ruled out by surface structure constraints, is simply equivalent to no more than just a description of the remaining grammatical surface structures of the language. No matter what the generation means are, if but one surface structure constraint of the kind Perlmutter proposes is allowed into linguistics , the fact will necessarily remain that such a linguistics will basically always be of the descriptive kind. I wholeheartedly agree with Suñer (1974:149-150) in her evaluation of surface structure constraints:

> '...it is pertinent to ask about the explanatory power of a device such as SSC. It has none. A SSC does not explain anything. It is merely an expression of despair, like throwing one's arms up in the air and confessing that in spite of all the powerful machinery we have at our disposal, we are not able to filter out ill-formed sentences, so we give up and add an extra piece of machinery at the end of the production line in order to discard the 'bad sentences'.'

In order to solve the clitic problem, I have developed in this paper, rudiments of a novel approach to research, namely that of a new modular linguistics methodology. I have also introduced a number of new notions, namely those of the 'clitic linguistic module, C-lem', of the L-SURVIVAL principle and of the surface feature of 'homonymic ambiguity' which I have shown to play the central role in the syntactic derivation of the surface clitic order in many languages. I have presented complete solutions to the clitic problem in English, Arabic, Walbiri, French and Spanish; and I have indicated that the problem is solved in Albanian, Italian, German and Russian. Much, however, had to be left out.

The preponderance of evidence presented here in favor of the new theory cannot be denied. But the strength of the argument for Modular Linguistics and the C-lem mechanism lies not in that they explain clitic data, but in that they explain it not only across different languages, but also across different families of Language; and also in that the C-lem is a principled mechanism, only one in number, and not an ad-hoc pragmatic multitude of mechanisms. The strength of the argument points to a 'Universal of Language', and its challenge for the incorporation of this Universal, if at all possible, into the structure of current linguistic theories.

Generally, theories are always in a state of flux. At a certain point in time, a theory is perceived to be less than adequate if the unexplained data that it contains, the contradictions that it generates and the ad-hoc constraints that it requires greatly outweigh the explanations that it provides. Such is today the state of linguistic theory.

It is only when a new theory is introduced, that has the power to overwhelmingly explain the data, ease out the contradictions and do away with the ad-hoc constraints, that the old theory is proven wrong to the satisfaction of a new generation of researchers and in time dicarded by them in favor of the newcomer. Such a new theory was at the basis of this presentation.

.....CURTAIN.

Acknowledgments

I am deeply indebted to Michael B. Kac who first introduced me to surface structure constraints, and to Gerald A. Sanders whose insightful approach to teaching made it worthwhile and enjoyable for me to learn about linguistics. To the many faculty members at the Defense Language Institute who were kind enough to provide me with language data, I would like to express my sincere thanks. To Adalbert Fekeci, chairman of the Albanian Department at the DLI, who gave me freely of his time, I would like to express both thanks and apology; thanks for his patience and courtesy, and apology for my not being able to include, in this paper, the solution to the albanian clitic problem. Last but not least, I would like to mention my colleagues, friends and students, especially class E4C-1974, in the Arabic Department at the DLI, whose inquiries, questions and afternoon discussions about Arabic , indirectly added deeper insight to my knowledge and understanding of Modular Linguistics. The views expressed in this paper are understandably mine alone and alone I take full responsability for them.

Notes

* This paper heavily relies on data appearing in (Perlmutter.1971). The reader is well-advised to consult Perlmutter's book in conjunction with this paper.

** 'The views of the author do not purport to reflect the position of the Department of the Army or the Department of Defense.'

(1) Dinnsen (1972) subsequently added to the notion of 'surface structure contraints' in Spanish, and to my knowledge Lakoff (1968) used it in at least one of his papers.

(2) Modular Linguistics will eventually allow cliticization to take place without pronominalization having first taken place. Some spanish and some french sentences give good indication that the above might very well be the case.

(3) Although not covered here, imperative structures such as french 'Donne le lui/Give it to him' and 'Donne le moi/Give it to me' are easily explained within the C-lem approach.

(4) Although in the final analysis the C-lem input will have to be grammatical - in the sense that structures whose underlying structure is itself ungrammatical prior to C-lem entry will not be generated and thus will not possibly become candidates for cliticization -, in this paper, I have built into the C-lem INTENT-block (cf.2.6 below) such mechanism as to rule out ungrammatical structures in the sense noted above. Such mechanism can however be completely omitted

from INTENT without in the least affecting the C-lem overall function and output. The inclusion of such a mechanism here is due to the fact that the tables given in the Appendix to this paper, are duplicate copies of tables appearing in the unpublished preliminary version of this paper and that they could not be rewritten at this time. The same is also the reason why the 'current terminology' (Sbj,DO, IO,BO) and not the modular O^k-terminology is used throughout. Such mechanism as noted above can be viewed as a double check on the grammaticality of C-lem input-structures without however carrying in the least any theoretical weight or meaning.

(5) The realm of a study interested in the possible evolution of the C-lem from child to aduld speaker of the language is that of psycholinguistics and might prove to be very enlightening.

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The Appendix follows.....

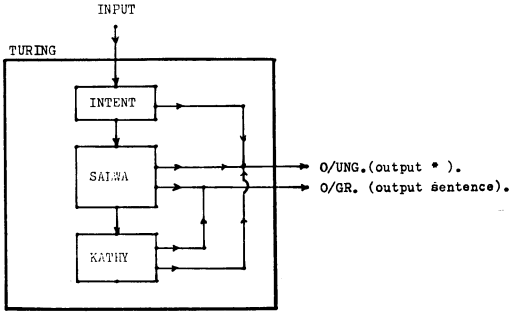
HOMONYMIC AMBIGUITY, PRONOMINAL SYSTEMS AND THE CLITIC-LEM IN MODULAR LINGUISTICS

Post-meeting notes

1. A question was raised during the meeting concerning the notational semantic/syntactic identification Agent/Subject and Patient/Object discussed under 1.1 , 2.1 and in ftn.4 . So as to dispel any possible misunderstanding, the reader is kindly requested to read throughout (0^o,0^1,0^2,0^3) for (Sbj,DO,IO,BO) respectively, keeping in mind that we are dealing here exclusively with semantic not syntactic categories, i.e. in all of the following three structures:
   (a) John gave the book to Jane (for Jack).
   (b) The book was given by John to Jane (for Jack).
   (c) Jane was given the book by John (for Jack).
   0^o is the semantic category relation that holds between 'John' and the verb 'to give'.
   0^1 is the semantic category relation that holds between 'book' and the verb 'to give'.
   0^2 is the semantic category relation that holds between 'Jane' and the verb 'to give'.
   0^3 is the semantic category relation that holds between 'Jack' and the verb 'to give'.

2. Contrary to what is stated under 2.1 some french passive structures can undergo cliticization, e.g. 'Le livre lui a été donné/The book was given to him'. This paper deals however exclusively with active declarative structures and with this in mind its conclusions stand as stated.

3. The walbiri case discussed under 3.3 is not rigorously defined. Its description follows a permissible logical simplification that is however not explicitly stated. Its conclusions stand as stated.



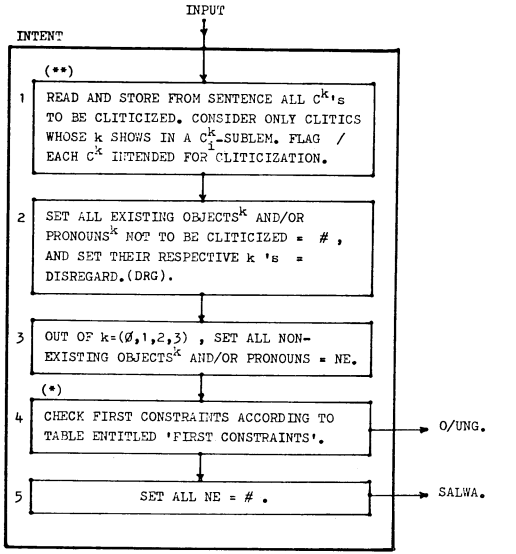
FIRST CONSTRAINTS

IF	Sbj/C^0	DO/C^1	IO/C^2	BO/C^3	THEN GOTO
	✓	✓	✓	✓	SALWA
	#	✓	✓	✓	SALWA
	✓or#	✓	✓	NE	SALWA
	✓or#	✓	NE	✓	O/UNG!
	✓or#	NE	✓	✓	O/UNG!!
	✓or#	✓	NE	NE	SALWA
	✓or#	NE	✓	NE	O/UNG!!
	✓or#	NE	NE	✓	O/UNG
	✓or#	NE	NE	NE	SALWA
	NE	NE	NE	NE	NO SENTENCE

(!)Unless BO can in some way be considered IO in the language, in which case GOTO SALWA.
(!!)Unless the verb in the sentence is intransitive, in which case GOTO SALWA.

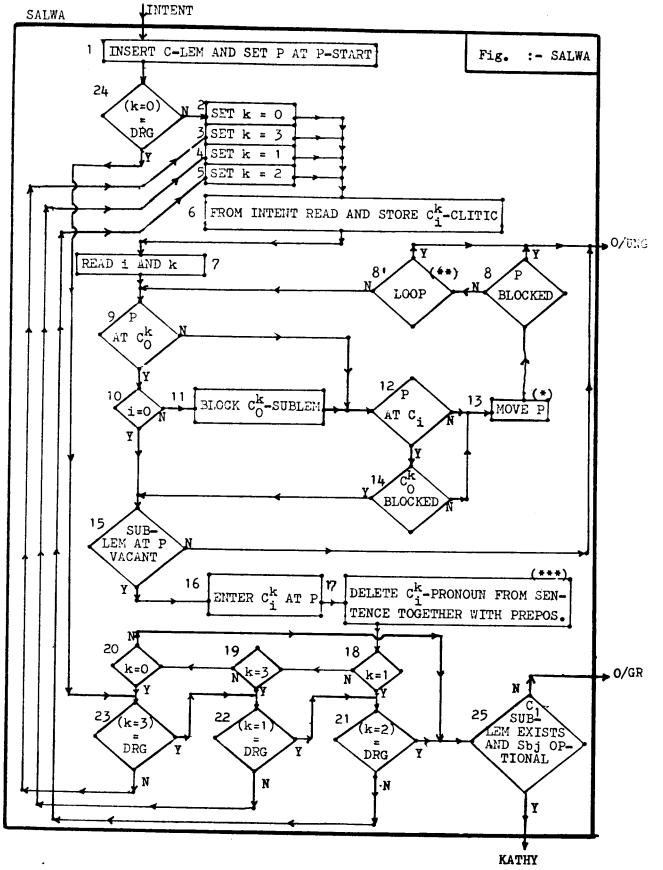
GENERALLY:

(a) DO-pronoun always cliticizes except when emphasis is intended.
(b) IO-pronoun cliticizes if and only if DO-pronoun cliticizes, or DO appears in the sentence.
(c) BO-pronoun cliticizes if and only if either IO or DO is pronominalized and (d) holds true.
(d) BO-pronoun cliticizes if and only if either IO-pronoun and/or DO-pronoun cliticizes.



(*) These first constraints may turn out to be universals and logically derivable from the C-lem operation or otherwise they may turn out to be pre-C-lem entry constraints. Also, as table indicates the underlying subject Sbj is assumed always to exist.

(**) Given the C-set for a specific language, it can logically be predicted whether BO-pronoun can or cannot cliticize into C^3 in that language. As is the case in Arabic and English, this prediction allows for simplification in the construction of the C-lem proper, where, as we shall see later, the C^3-sublem completely drops out. In order to prove this is truly the case, one must assume the existence of C^3-clitics in the language under consideration and prove that they cannot possibly cliticize; for otherwise, without the stated assumption, one would just be begging the question. Thus one finds that while in French, Spanish and Albanian BO-pronouns do cliticize, they cannot possibly do so in Arabic or English. (Note that for all languages considered except for Czech the C^3-set is identical to the C^2-set of clitics.)



(*) **Movement of Scanner P (!) :-**

1- P-start is at C_0^0 .(Logical simplification yields P-start at C_0^0) (in Spanish, C_0^3 in French and C_0^2 in both) (English and Arabic.)

2- From C_0^0 P moves Right into the leftmost C-lem sublem.

3- P changes its direction of movement whenever it reaches a C-lem border sublem from within the C-lem itself.

4- P moves Left whenever a 'block-sublem',(x), is introduced at P within the C-lem itself.

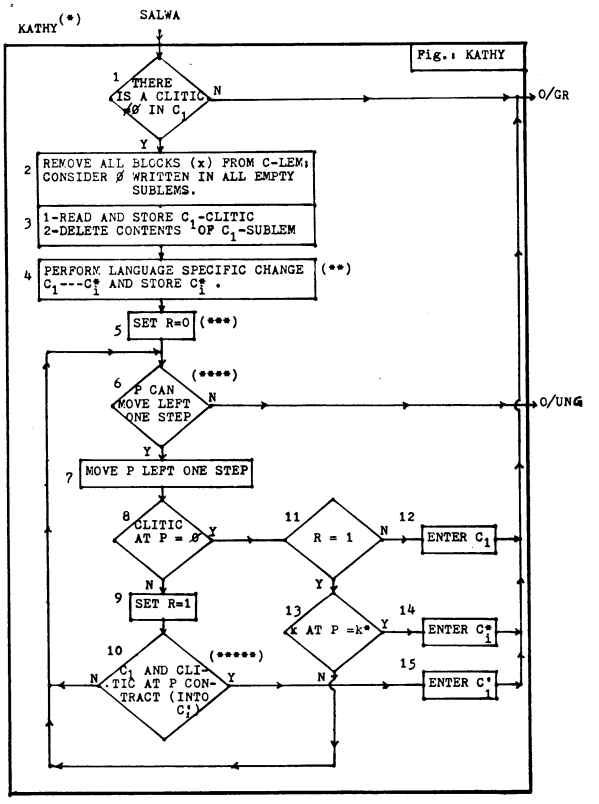
5- P cannot cross over a blocked sublem.

(**) Loop:- (This step might turn out to be superfluous.)
If P performs a loop , i.e. if P returns to one and the same sublem after having changed its direction of movement without an 'insert-clitic' operation having taken place in the meanwhile, then SALWA will output O/UNG.

(***) Step 17 is optional in some languages, e.g. Spanish and French. More specifically, when the pronoun is cliticized, it is the original object itself that usually appears in the sentence rather than the pronoun.

PS: For purely logical considerations step 8 should precede rather than follow step 13. This , however, does in no way affect the linguistic derivations presented in this paper.

( ) The diagram [ ] denotes an operation to be performed, thus [read i] instructs the system to read i in C_i^k e.g. if $C_i^k = C_3^1$, i = 3. The diagram ◇ denotes a decision to be made by the system, with two and only two possible outputs 'yes' or 'no'; thus ◇k=1 asks whether k = 1; if k = 1 then the output is'yes', if k ≠ 1 then the output is 'no'.



(*) Language specific due to KATHY-steps K4 and K10.

(**) Language specific changes:

always	C_1 ----	C_1^*
	Ø	Ø
in Spanish	C_1	se = C_5
in Italian	--i	--e= C_4
in Albanian	C_1	same but can undergo contraction

(***) R=0 means that P has not previously crossed over a non-vacant sublem.
R=1 means that P has previously crossed over a non-vacant sublem.

(****) When P is at the leftmost sublem of the C-lem, e.g. C_5 in Spanish and C_4 in Italian, then P cannot move left anymore and the output is 'NO'.

(*****) At this point some clitics in Albanian will undergo contraction.

ENGLISH: PCS: Pronominal and Clitic Systems.

	NPG	Sbj		DO		IO		BO	
		Pro^0	C_1^0	Pro^1	C_1^1	Pro^2	C_1^2	Pro^3	C_1^3
	S1	I	none	me	me_4	same		same	
	S2	you		you	you_4	as DO		as DO	
	S3M	he		him	him_4				
	S3F	she		her	her_4				
	S3I	it		it	it_4				
	P1	we		us	us_4				
	P2	you		you	you_4				
	P3	they		them	$them_4$				

V-lem	C_4	C_0^1	C_0^2 !

PS: C_0^3-sublem drops out because of logical considerations, (See text page).

COM: Clitic Order Matrix: Because all clitics are C_4, one and only one pronoun, namely either Pro^1 or Pro^2 but never both, can cliticize in one and the same sentence.

ARABIC: PCS: Pronominal and Clitic Systems.

	NPG	Sbj		DO		IO		BO	
		Pro^0	C_1^0	Pro^1	C_1^1	Pro^2	C_1^2	Pro_1^3	C_1^3
I	S1	?ana:	none	?iyya:ya	$ni:_4$	ya	same	same	
you	S2M	?anta		?iyya:ka	ka_4	ka	as C_1^1	as IO	
	S2F	?anti		?iyya:ki	ki_4	ki			
he	S3M	huwa		?iyya:hu	hu_4	hu			
she	S3F	hiya		?iyya:ha:	$ha:_4$	ha:			
you	D2	?antuma:		?iyya:kuma:	$kuma:_4$	kuma:			
they	D3	huma:		?iyya:huma:	$huma:_4$	huma:			
we	P1	naHnu		?iyya:na:	$na:_4$	na:			
you	P2M	?antum		?iyya:kum	kum_4	kum			
	P2F	?antunna		?iyya:kunna	$kunna_4$	kunna			
they	P3M	hum		?iyya:hum	hum_4	hum			
	P3F	hunna		?iyya:hunna	$hunna_4$	hunna			

V-lem	C_4	C_0^1	C_0^2 !

PS: C_0^3-sublem drops out because of logical considerations, (See text page).

COM: Clitic Order Matrix: Because all clitics are C_4, one and only one pronoun, namely either Pro^1 or Pro^2 but never both, can cliticize in one and the same sentence.

(EngDer.1):- Fred gave it_c to Jane.

DERIVATION STEPS — SENTENCE

US — Fred gave the book to Jane.

Pronominalization — Fred gave it_p to Jane.

I 1-2-3-4-5. GO TO SALWA. i)

	Sbj	DO	IO	BO
Object	#	book	Jane	#
Pronoun	#	it	#	#
Clitic	C^0=#	C_4^1= it	C^2=#	C^3=#
Flag	#	✓	#	#

S 1.	ii)	Fred gave	$/C_4$	$/C_0^1$	$/C_0^2$!/	it_p	to Jane.
S 24-23-22-4-6-7-9-12-13.	iii)	"	/	/	!/	/	" .
S 8-8'-10-11.	iv)	"	/	/	x!/	/	" .
S 12-13.	v)	"	/	!/	x /	/	" .
S 8-8'-9-12-14-15-16.	vi)	"	/it	!/	x /	/	" .
S 17.	vii)	"	/it	!/	x /	/	Ø to Jane.
S 18-21-25---0/GR.	viii)	Fred gave it_c to Jane.					

PS: Pronominalization but not cliticization of IO 'Jane' in (EngDer.1) will result in the sentence output: 'Fred gave it_c to her_p.' . Notice that in the latter sentence we do not have two pronouns but instead one pronoun and one clitic.

(EngDer.2):- Fred gave her_c the book.

DERIVATION STEPS — SENTENCE

US — Fred gave the book to Jane.

Pronominalization — Fred gave the book to her_p.

I 1-2-3-4-5. GO TO SALWA. i)

	Sbj	DO	IO	BO
Object	#	book	Jane	#
Pronoun	#	#	her	#
Clitic	C^0=#	C^1=#	C_4^2=her	C^3=#
Flag	#	#	✓	#

S 1	ii)	Fred gave	$/C_4$	$/C_0^1$	$/C_0^2$!/	the book to her_p.	
S 24-23-22-21-5-6-7-9-10-11.	iii)	"	/	/	/ x!/	"	.
S 12-13.	iv)	"	/	/	!/ x /	"	.
S 8-8'-9-12-13.	v)	"	/	!/	/ x /	"	.
S 8-8'-9-12-14-15-16.	vi)	"	/her	!/	/ x /	"	.
S 17.	vii)	"	/her	!/	/ x /	the book	Ø .
S 18-19-20-25---0/GR.	viii)	Fred gave her_c the book.					

(EngDer.3):- *Fred gave it$_c$ her$_c$.

DERIVATION STEPS	SENTENCE
US	Fred gave the book to Jane.
Pronominalization	Fred gave it$_p$ to her$_p$.

I 1-2-3-4-5. GO TO SALWA. i)

	Sbj	DO	IO	BO
Object	#	book	Jane	#
Pronoun	#	it	her	#
Clitic	C^0=#	C^1_4= it	C^2_4= her	#
Flag	#	✓	✓	#

S 1. ii) Fred gave /c_4 /c^1_0 /c^2_0 !/ it$_p$ to her$_p$.

(iii) to (vii) same as (EngDer.1) vii) " /it !/ x / / ø to her$_p$.

S 18-21-5-6-7-9-12-14-13-8---O/UNG.viii) * .

PS: The ungrammatical sentence ' * Fred gave her$_c$ it$_c$. ' has the same blocked derivation as (EngDer.3)
The grammatical sentence ' Fred gave her$_c$ it$_p$. ' has the same derivation as (EngDer.2) with pronominalization but not cliticization of DO for reasons of emphasis as noted in the text. To indicate emphasis we could write the sentence as ' Fred gave her$_c$ IT$_p$.'. Notice that emphasis of DO-pronoun here is achieved by de-emphasizing IO-pronoun through cliticization.

FRENCH: PCS: Pronominal and Clitic Systems.

	NPG	Sbj		DO		IO		BO	
		Pro^0	C^0_1	Pro^1	C^1_1	Pro^2	C^2_1	Pro^3	C^3_1
I	S1	je	none	moi	me_4	same as	me_4	same	
you	S2	tu		toi	te_4	Pro^1	te_4	as IO	
he	S3M	il		lui	le_0		lui_1		
she	S3F	elle		elle	la_0		lui_1		
we	P1	nous		nous	$nous_4$		$nous_4$		
you	P2	vous		vous	$vous_4$		$vous_4$		
they	P3M	ils		eux	les_0		$leur_1$		
	P3F	elles		elles	les_0		$leur_1$		
	S3I	on		soi-meme	se_4		se_4		
	-3R			Pro^1-meme	se_4		se_4		

C_4	C^1_0	C_1	C^2_0	C^3_0 !	V-lem

(EngDer.4):- He brings it$_c$ in.

DERIVATION STEPS	SENTENCE
US	He brings (the paper in). (in the paper)
Pronominalization	He brings (it$_p$ in). (in^p it$_p$)

I 1-2-3-4-5. GO TO SALWA. i)

	Sbj	DO	IO	BO
Object	#	paper	#	#
Pronoun	#	it	#	#
Clitic	C^0=#	C^1_4= it	C^2=#	C^3=#
Flag	#	✓	#	#

S 1 ii) He brings /c_4 /c^1_0 /c^2_0 !/ (it$_p$ in). (in^p it$_p$)

Derivation same as (EngDer.1) with IO deleted.

PS: The derivation of the ungrammatical sentence ' * He brings in it$_c$.' is impossible simply because the C-lem in English is positioned directly after the verb thus allowing no element to interfere inbetween the both of them.
The sentence ' He brings in it$_p$.' or ' He brings in IT$_p$.' is grammatical as the output of Pronominalization only if emphasis of DO-pronoun is intended, (See PS of (EngDer.3)

FRENCH: C^k_1-COKs

1- (C^1C^2#)

	C^2_1	C^2_4
C^1_0	$C^1_0C^2_1$	$C^2_4C^1_0$
C^1_4	*	*

2- (C^1# C^3)

	C^3_1	C^3_4
C^1_0	$C^1_0C^3_1$	$C^3_4C^1_0$
C^1_4	$C^1_4C^3_1$ @	*

3- (# C^2C^3)

	C^3_1	C^3_4
C^2_1	*	$C^3_4C^2_1$ @ ✓
C^2_4	$C^2_4C^3_1$ @	*

4- ($C^1C^2C^3_1$)

	C^2_1	C^2_4
C^1_0	*	$C^2_4C^1_0C^3_1$$
C^1_4	*	*

5- ($C^1C^2C^3_4$)

	C^2_1	C^2_4
C^1_0	$C^3_4C^1_0C^2_1$$✓	*
C^1_4	*	*

PS: Identical on the surface are elements marked '@' and elements marked '$' .

FRENCH: COM: 1- (C^1C^2#)

C^k

1 \ 2	lui_1	$leur_1$	me_4	te_4	$nous_4$	$vous_4$	se_4
le_0	le lui	le leur	me le	te le	nous le	vous le	se le
la_0	la lui	la leur	me la	te la	nous la	vous la	se la
les_0	les lui	les leur	me les	te les	nous les	vous les	se les
me_4	*	*	*	*	*	*	*
te_4	*	*	*	*	*	*	*
$nous_4$	*	*	*	*	*	*	*
$vous_4$	*	*	*	*	*	*	*
se_4	*	*	*	*	*	*	*

(FrDer.4):- ($C_0^1C_1^2C_4^3$)

Je te_c le_c lui_c dirai .
I you it him will say.
I will say it to him for you.
SENTENCE

DERIVATION STEPS

US

Je dirai cela a John pour toi_p.
I will say this to John for you.
Je dirai le_p a lui_p pour toi_p.
I will say it to him for you.

	Sbj	DO	IO	BO
Object	#	cela	John	toi
Pronoun	#	le	lui	toi
Clitic	C^0=#	C_0^1= le	C_1^2= lui	C_4^3= te
Flag	#	✓	✓	✓

Pronominalization

I 1-2-3-4-5. GO TO SALWA. i) Je /C_4 /C_0^1 /C_1 /C_0^2 /C_0^3 !/ dirai le_p a lui_p pour toi_p.

S 1.	ii)	Je	/	/	/	/	x!/	"	.
S 24-23-3-6-7-9-10-11.	iii)	Je	/	/	/	/	x /	"	.
S 12-13.	iv)	Je	/	/	/	/	x /	"	.
Three times S 8-8'-9-12-13.	vii)	Je	/	!/	/	/	x /	"	.
S 8-8'-9-12-14-15-16.	viii)	Je	/te	!/	/	/	x /	"	.
S 17.	ix)	Je	/te	!/	/	/	x /	"	.
S 18-19-22-4-6-7-9-12-13.	x)	Je	/te	/	!/	/	x /	dirai le_p a lui_p.	
S 8-8'-9-10-15-16.	xi)	Je	/te	/le	!/	/	x /	"	.
S 17.	xii)	Je	/te	/le	!/	/	x /	"	.
S 18-21-5-6-7-9-12-13.	xiii)	Je	/te	/le	/	!/	x /	dirai a lui_p.	
S 8-8'-9-12-14-13.	xiv)	Je	/te	/le	/	/	!/ x /	"	.
S 8-8'-9-10-11.	xv)	Je	/te	/le	/	/	x!/ x /	"	.

(FrDer.4 cont.):-

S 12-13.	xv)	Je /te	/le	/	/	x!/ x / dirai a lui_p.
S 8-8'-9-12-14-15-16.	xvi)	Je /te	/le	/	!/	x / x / " .
S 17.	xvii)	Je /te	/le	/lui	!/	x / x / " .
S 18-19-20-25---O/GR.	xviii)	Je /te	/le	/lui	!/	x / x / dirai.
	xix)	Je te_c le_c lui_c dirai.				

(FrDer.4'):-

Je te_c lui_c dirai cela.
I you him will say this.
I will say this to him for you.
SENTENCE

DERIVATION STEPS

Same as (FrDer.4) but without pronominalization of DO 'cela', See (FrDer.1''').
Note that the sequence 'te lui' is not ungrammatical here, while it is ungrammatical in (FrDer.4'')

Je te_c lui_c dirai cela.

(FrDer.4''):-

*Je te_c lui_c dirai .
I you him will say.
I will say to him for you.
SENTENCE

DERIVATION STEPS

US, Pronominalization and I 1-2-3-4 , same as (FrDer.4), but with the exception that here from the beginning DO is set the value NE'. At I4 INTENT outputs O/UNG according to the condition:- i.e. the sequence 'te lui' is ungrammatical here.(See text).

IF C^0=/or#, C^1=NE, C^2= ✓, C^3= ✓ THEN GOTO U/UNG.
*Je te_c lui_c dirai .

REFERENCE #	'SALWA'-INPUT C^0	C^1	C^2	C^3	'TURING'-OUTPUT	PERLMUTTER'S FRENCH SENTENCES
F(1)P(49/91)	#	le	vous#		vous le	Gertrude vous le donnera.
F(2)P(49/92)	#	le	lui	#	le lui	Gertrude le lui donnera.
F(3)P(53/102)	#	le	#	#	le	Roger l'avait recommende a toi, pas a Jean.
F(4)P(53/103)	#	le	te	#	te le	Roger te l'avait recommende.
F(5)P(53/104)	#	nous#		#	nous	Roger nous avait recommende a toi.
F(6)P(54/105ab)	#	(nouste) (te ns)		#	*	*Roger (nous t') avait recommendes. (te nous)
F(7)P(54/108)	#	me	#	#	me	Roger m'avait recommende a vous.
F(8)P(54/109ab)	#	(vousme) (me vs)		#	*	*Roger (vous m') recommende. (me vous)

COMMENT ON:
F( )P(57/121)

Perlmutter's SSC on french clitics:-

' Nom	ne	(me) (te) (nous) (vous) (se)	III Acc	III Dat	y	en '

Notice that in the above SSC the component (me,te,nous,vous,se) is exactly the french C_4-set according to the C-lem theory.(See text)

SPANISH: **PCS**: Pronominal and Clitic Systems.

	NPG	Sbj		DO		IO		BO		
		Pro^0	c_1^0	Pro^1	c_1^1	Pro^2	c_1^2	Pro^3	c_1^3	
I	S1			mi	me_4	same as Pro^1	me_4	same as IO		DII
you	S2	tu	tu_0	ti	te_4		te_5			DI
	S2	te	te_5	ti	te_5					
he	S3M			el	lo_0		le_1			
she	S3F			ella	la_0		le_1			
we	P1			nosotros	nos_4		nos_4			
you	P2			vosotros	vos_4		vos_4			
they	P3M			ellos	los_0		les_1			
	P3F			ellas	las_0		les_1			
	S3I	se	se_5		se_5		se_5			
	-3R				se_5		se_5			

c_0^0 !	c_5	c_4	c_0^1	c_1	c_0^2	c_0^3	V-lem

SPANISH: c_1^k-COMs. (for c_0^0)

1- (# c^1c^2 #)

	c_1^2	c_4^2	c_5^2
c_0^1	$se c_0^1$	$c_4^2c_0^1$	$c_5^2c_0^1$
c_4^1	*	*	*
c_5^1	*	*	*

2- (# c^1 # c^3)

	c_1^3	c_4^3	c_5^3
c_0^1	$se c_0^1$	$c_4^3c_0^1$	$c_5^3c_0^1$
c_4^1	$c_4^1c_1^3$	*	$c_5^3c_4^1$
c_5^1	$c_5^1c_1^3$	$c_5^1c_4^3$	*

3- (# # c^2c^3)

	c_1^3	c_4^3	c_5^3
c_1^2	*	$c_4^3c_1^2$	$c_5^3c_1^2$
c_4^2	$c_4^2c_1^3$	*	$c_5^3c_4^2$
c_5^2	$c_5^2c_1^3$	$c_5^2c_4^3$	*

4- (# $c^1c^2c^3$)

	c_1^2	c_4^2	c_5^2
c_0^1	*	$se c_4^2c_0^1$	*
c_4^1	*	*	*
c_5^1	*	*	*

5- (# $c^1c^2c_4^3$)

	c_1^2	c_4^2	c_5^2
c_0^1	$se c_4^3c_0^1$	*	$c_5^2c_4^3c_0^1$
c_4^1	*	*	*
c_5^1	*	*	*

6- (# $c^1c^2c_5^3$)

	c_1^2	c_4^2	c_5^2
c_0^1	*	$c_5^3c_4^2c_0^1$	*
c_4^1	*	*	*
c_5^1	*	*	*

SPANISH: c_1^k-COMs. (for c_5^0)

7- ($c_5^0c^1$# #)

	c_0^1	c_4^1	c_5^1
c_5^0	$c_5^0c_0^1$	$c_5^0c_4^1$	*

8- (c_5^0# c^2#)

	c_1^2	c_4^2	c_5^2
c_5^0	$c_5^0c_1^2$	$c_5^0c_4^2$	*

9- (c_5^0# # c^3)

	c_1^3	c_4^3	c_5^3
c_5^0	$c_5^0c_1^3$	$c_5^0c_4^3$	*

10- ($c_5^0c^1c^2$#)

	c_1^2	c_4^2	c_5^2
c_0^1	*	$c_5^0c_4^2c_0^1$	*
c_4^1	*	*	*
c_5^1	*	*	*

11- ($c_5^0c^1$# c^3)

	c_1^3	c_4^3	c_5^3
c_0^1	*	$c_5^0c_4^3c_0^1$	*
c_4^1	$c_5^0c_4^1c_1^3$	*	*
c_5^1	*	*	*

12- (c_5^0# c^2c^3)

	c_1^3	c_4^3	c_5^3
c_1^2	*	$c_5^0c_4^3c_1^2$	*
c_4^2	$c_5^0c_4^2c_1^3$	*	*
c_5^2	*	*	*

13- ($c_5^0c^1c^2c^3$)

	c_1^2	c_4^2	c_5^2
c_0^1	*	*	*
c_4^1	*	*	*
c_5^1	*	*	*

SPANISH: **COM**: 1- (# c^1c^2#)

c^k 1 \ 2	le_1	les_1	me_4	te_4	nos_4	vos_4	se_5	te_5
lo_0	se lo	se lo	me lo	te lo	nos lo	vos lo	se lo	te lo
le_0	se la	se la	me la	te la	nos la	vos la	se la	te la
los_0	se los	se los	me los	te los	nos los	vos los	se los	te los
las_0	se las	se las	me las	te las	nos las	vos las	se las	te las
me_4	*	*	*	*	*	*	*	*
te_4	*	*	*	*	*	*	*	*%
nos_4	*	*	*	*	*	*	*	*
vos_4	*	*	*	*	*	*	*	*
se_5	*	*	*	*	*	*	*	*
te_5	*	*	*	*%	*	*	*	*

PS: '*%' means ungrammatical because 'te_4' and 'te_5' belong to different dialects and can never co-occur in the same sentence.

(SpDer.2A):- (c^0_5# c^2_1#)
S(32A)P(33/46abA)

DERIVATION STEPS

US

Pronominalization

PS:-Duplication of DO and DO-pronoun, and of IO and IO-pronoun is possible in Spanish,(as well as in French).

I 1-2-3-4-5. GO TO SALWA. i)

A los generales se_c les_c da los honores,....(S(32B))
To the generals 'Pro' them gives the honors,....
(To)the generals,'Pro' gives the honors to them,....
(Fr:-Aux generaux, on leur donne les honneurs,....)
SENTENCE

A los $generales\ se_p$ da los honores,....
To the generals 'Pro' gives the honors,....
A los generales, se_p da a $ellos_p$ los honores,....
(To the generals),'Pro' gives to them the honors,....

	Sbj	DO	IO	BO
Object	se	#	generales	#
Pronoun	se	#	ellos	#
Clitic	c^0_5= se	c^1=#	c^2_1= les	c^3=#
Flag	✓	#	✓	#

../...

(SpDer.2A cont.):-

S 1 ii) A los generales se_p--/--da a ellos los honores,....
--/c^0_0 !/../c_5 /c_4 /c^1_0 /c_1 /c^2_0 /c^3_0 /--

S 24-2-6-7-9-10-11. iii) --/ x!/../ / / / / / /--
S 12-13. iv) --/ x /../ !/ / / / / /--
S 8-8'-9-12-14-15-16. v) --/ x /../se !/ / / / / /--
S 17. vi) A los generales--/--da a ellos los honores,....
--/ x /../se !/ / / / / /--

S 18-19-20-23-22-21-5-6-7-9-12-13. vii) --/ x /../se / !/ / / / /--
S 8-8'-9-12-13. (Three times). x) --/ x /../se / / / / !/ /--
S 8-8'-9-10-11. xi) --/ x /../se / / / / x!/ /--
S 12-13. xii) --/ x /../se / / / !/ x / /--
S 8-8'-9-12-14-15-16. xiii) --/ x /../se / / /les !/ x / /--
S 17. xiv) A los generales--/--da los honores,....
--/ x /../se / / /les !/ x / /--

S 18-19-20-25-GO TO KATHY-K 1-2. xv) --/ /../se / / /les !/ / /--
K 3(les). xvi) --/ /../se / / / !/ / /--
K 4(se)-5(R=0)-6-7. xvii) --/ /../se / / !/ / / /--
K 8-11-12. xviii) --/ /../se / /les !/ / / /--
K ---O/GR. xix) A los generales se_c les_c da los honores,....

(SpDer.2B):- *($c^0_5c^1_0c^2_1$#)
S(32B)P(33/46abB)

* (..S(32A))...,*pero a los conscriptos no(se les los) da.
(se se los)$_c$
...,but to the conscripts not 'Pro' them them gives.
...,but to the conscripts 'Pro' does not give them to them
(Fr:-...,mais aux conscripts on ne les leur donne pas.(Gramm))
SENTENCE

DERIVATION STEPS

US

Pronominalization

...,pero a los conscriptos no se_p da los honores a $ellos_p$.
...,but to the conscripts not'Pro'gives the honors to them
...,but to the conscripts'Pro'does not give " .
...,pero a los conscriptos no se_p da $ellos_p$ a $ellos_p$.
...,but to the conscripts not'Pro'gives them to them .
...,but to the conscripts'Pro'does not give them to them.

I 1-2-3-4-5. GO TO SALWA. i)

	Sbj	DO	IO	BO
Object	se	honores	conscript.#	
Pronoun	se	ellos	ellos	#
Clitic	c^0_5= se	c^1_0= los	c^2_1= les	#
Flag	✓	✓	✓	#

../...

(SpDer.2B cont.):-

S 1. ii)..,pero a los conscriptos no se_p--/--da $ellos_c$ a $ellos_p$.
--/c^0_0 !/../c_5 /c_4 /c^1_0 /c_1 /c^2_0 /c^3_0 /--

(iii) to (vi) same as (SpDer.2A). vi)..,pero a los conscriptos no--/--da $ellos_p$ a $ellos_p$.
--/ x /../se !/ / / / / /--

S 18-19-20-23-22-4-6-7-9-12-13. vii) --/ x /../se / !/ / / / /--
S 8-8'-9-12-13. viii) --/ x /../se / / !/ / / /--
S 8-8'-9-10-15-16. ix) --/ x /../se / /los !/ / / /--
S 17. x)..,pero a los conscriptos no--/--da a $ellos_p$.
--/ x /../se / /los !/ / / /--

S 18-21-5-6-7-9-12-13. xi) --/ x /../se / /los / !/ / /--
S 8-8'-9-12-13. xii) --/ x /../se / /los / / !/ /--
S 8-8'-9-10-11. xiii) --/ x /../se / /los / / x!/ /--
S 12-13. xiv) --/ x /../se / /los / !/ x / /--
S 8-8'-9-12-14-15-16. xv) --/ x /../se / /los /les !/ x / /--
S 17. xvi)..,pero a los conscriptos no--/--da .
--/ x /../se / /los /les !/ x / /--

S 18-19-20-25-GO TO KATHY-K 1-2 xv) --/ /../se / /los /les !/ / /--
K 3(les). xvi) --/ /../se / /los / !/ / /--
K 4(se)-5(R=0)-6-7. xvii) --/ /../se / /los !/ / / /--
K 8-9(R=1)-10-6-7. xviii) --/ /../se / !/los / / / /--
K 8-11-13-6---O/UNG. xix)..,*

PS:- Perlmutter's spanish sentence S(32)P(33/46ab) is ungrammatical because it involves two modular derivations,namely (SpDer.2A) and*(SpDer.2B), of which one,*(SpDer.2B), is ungrammatical.

R.FERENCE #	'SALWA'-INPUT C^0 C^1 C^2 C^3	'TURING'-OUTPUT	PERLMUTTER'S SPANISH SENTENCES
(58)P(51/94)	te la (nos # (# nos))	te nos la	Nuestra hija, te nos la robaste. (Perlmutter's english translation reads:'Our (daughter, you stole her from us for yourself'. (This is a semantic translation. The literal (translation is:'Our daughter, you stole her (from us.' , i.e. it does not contain the adden- (dum'for yourself', thus making 'te' in this (sentence a non-reflexive clitic that cannot (possibly be other than Sbj-clitic meaning'you'.) (Fr.: Notre fille, tu nous l'a volee.
(58')P'(51/94)	# la nos te_{45}	*	(In my opinion, this US reflects Perlmutter's (understanding of the sentence. But the (TURING-OUTPUT of this US is always '*', no (matter whether we consider 'te' to be 'te_4' or ('te_5', i.e. Perlmutter's understanding of the (sedtence cannot possibly be right, given that (the present C-lem theory is correct.
(59)P(51/95)	te # le me	te me le	Te me le echaste encima. (Perlmutter's english translation reads: 'You (threw yourself on him on me'.This is only a (semantic translation that syntactically does (not at all parallel the spanish sentence under (consideration. First, the verb under consideration (is 'to jump' not 'to throw'. Second , it cannot (possibly be thought of as 'reflexive'. This brings (us to the literal translation:'You jumped on (him (IO) over (encima) on me (DO), thus leaving ('te' as the undisputed Sbj of the sentence. (Fr.: Tu me lui as saute dessus. In French 'to (throw oneself' is 'se jeter', and as expected (the french sentonce''Tu te me lui as jete dessus' (is ungrammatical.
(59')P'(51/95)	# te_{45} le me	*	(This US reflects Perlmutter's understanding of (the sentence. See (58').

REFERENCE #	'SALWA'-INPUT C^0 C^1 C^2 C^3	'TURING'-OUTPUT	PERLMUTTER'S SPANISH SENTENCES
(60)P(51/96)	te # (# le) (le #) te lo (# me) (me #)	te le te me lo	Te le comiste el pan a Miguel ... ...pero a mi no te me lo comas. (Perlmutter's english translation of the second (part of the sentence reads: ...but don't you (eat up mine on me. The literal translation is: (...but to me, you will not eat it up. (The verb in this sentence 'to eat' cannot (possibly be thought of as a reflexive verb, (neither in Spanish nor in English nor in French, (a syntactic fact that brings us to the unavoidable (conclusion that 'te' here , necessarily has to be (Sbj-clitic and nothing else. (Fr.: ...mais a moi, tu ne me le mangeras pas.
(60')P'(51/96)			(There is no US that can possibly reflect any (understanding of the second part of this sentence) (without first premising a Sbj-clitic 'te'. (Perlmutter's understanding of it is not at all (understandable to me.
COMMENT ON (58), (59) and (60).			!!!These sentences provide the proof for the existence of a Sbj-clitic 'te'. It follows from the C-lem theory that Sbj-clitic 'te' must necessarily be 'te_5' I see in this the differentiation between three and not only two dialects of Spanish:- DI: recognizes 'te' as Sbj-clitic and marks it 'te_5'. DII:does not recognize 'te' as Sbj-clitic and marks it 'te_4'. DIII:a transition dialect which accepts 'te' as either 'te_5' or 'te_4' according to the sentence in which it occurs. Examples of DI are sentences (58),(59) and (60). Examples of DII are sentences(5c) and (5). Examples of DIII are sentences(1b) and (9a). Note that at this stage there is no way to properly identify DIII, given that Perlmutter's sentences are not identified systematically as to dialect and that our examples for DIII can be easily accepted as belonging to either DI or DII.

REFERENCE #	'SALWA'-INPUT C^0 C^1 C^2 C^3	'TURING'-OUTPUT	PERLMUTTER'S SPANISH SENTENCES
(75)P(71/162a)	# se # nos	se nos	Se nos escapo. (See sentence (9) .)
b)	te # # me	te me	Te me escapaste.
c)	# me # les	me les	Me les escape.
(76)P(71/163ab)	# (me)# (noe)	te *	*(Me) te (escape) . (Noe) (escapamoe)
(77)P(73/ftn.47)	same		There is no way to say sentence (76) with both DO and BO cliticized simply because the TURING-OUTPUT of its US is always O/UNG .
(78)P(75/173abc)	# lo (me #) (# me)	me lo	a)Queria seguir gritandomelo . b)Queria seguirmelo gritando . c)Me lo queria seguir gritando. (The C-lem is positioned always preceding the) (single verb in Spanish. But here we have a) (verb of the kind of 'to want to continue to) (shout', i.e. not a single verb and it appears) (that in such instances the C-lem will freely) (be positioned always preceding any one of) (the component verbs of 'to V to V to V' .)
(79)P(76/174ab)	same		* Me lo queria seguir gritandomelo. (a) * Me lo queria seguirmelo gritando. (b) (Notice that these two sentences are not un- (grammatical due to clitic-order considerations (but due to the occurence of the clitic sequence ('melo' twice in the sentence with no apparent (justification. The modular theory provides for (the cliticization of each of Sbj, DO, IO and (BO only once in the same sentence and in this (sentence we are dealing with only one C-lem.

REFERENCE #	'SALWA'-INPUT C^0 C^1 C^2 C^3	'TURING'-OUTPUT	EMONDS' SPANISH SENTENCE AS REPORTED IN RIVERO
(9a)R(698/1)	# se # # same	se	El hombre que quiere lavarse ... ... se fue . (This sentence is translated as: ('The man who wants to wash himself left' , (This , again , is not a literal translation ; (for the spanish verb from which 'se fue' (originate is not to be translated is English (as the verb 'to leave' which is obviously not (a reflexive verb . Its literal translation (corresponds to the french verb ' s'enfuir ' (which best translate in english as 'to elope'. (Both in Spanish and French this verb is (reflexive, in English it is not. (French:' L'homme qui veut se laver s'est enfuit'.) (Notice that the position of the first C-lem in (Spanish is after the verb 'to want to wash' (as in sentence (12b) , whereas in French it is (positioned between the two component verbs ('to want' and 'to wash'. This must be a language (structure specific feature not dealt with in (this paper and it does not affect the C-lem (theory advanced here in any negative way.