

Tom has a wife      Tomás tiene esposa  
 Tom's wife      la esposa de Tomás  
 his wife      su esposa

Vstate      + B + O  
 /hum rel/      /pos/

The chair has four legs      La silla tiene cuatro patas  
 the legs of the chair      las patas de la silla  
 its legs      Ø

Vstate      + B + O  
 /part of/      /pos/

I bought Henry's car      Compré el carro de Enrique

Fig. 1.3-5

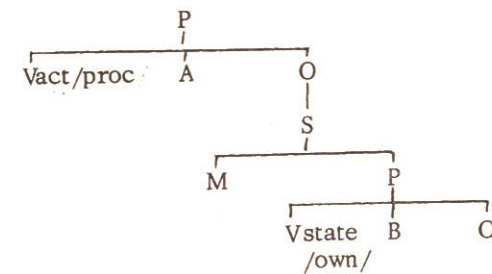


Fig. 1.3-5: Analysis of a proposition with embedded possessive.

Exercises

- 1- The murderer killed Mr. Smith's son.  
El asesino mató al hijo del Sr. Smith.
- 2- Mother washed Mary's dresses.  
Mamá lavó los vestidos de María.
- 3- Mary washed her hair.  
María lavó sus(s) cabello(s).
- 4- Peter kissed John's girl friend.  
Pedro besó la novia de Juan

- 5- The mechanic fixed my car.  
El mecánico reparó mi carro.
- 6- The doctor took care of the soldiers' wounds.  
El doctor se ocupó de las heridas de los soldados.
- 7- She understood his problems.  
Ella comprendió sus problemas (de él).
- 8- My children are sick.  
Mis hijos están enfermos.
- 9- The boy loves his uncle's dog (2 embeddings)  
El muchacho quiere al perro de su tío.
- 10- The secretary admires her boss.  
La secretaria admira a su jefe.

Another case that requires closer discussion is the locative pattern. 'be' is excluded from the deep structure. Fillmore suggests a Q (zero) verboid (p.45) and places the 'be' within the modality as a "tense absorber" (p.76). Chafe proposes to make the preposition of spatial orientation the verboid. The present approach will follow Chafe<sup>1</sup>. In the following, a few of his examples are presented in a modified form.

<sup>1</sup>pp.158-163

Fig. 1.3-6

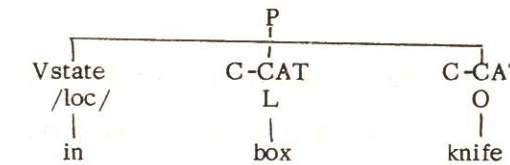


Fig. 1.3-7

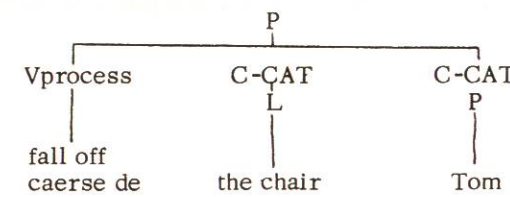
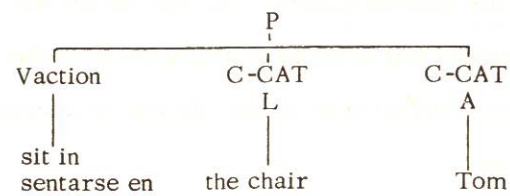


Fig. 1.3-8



Figs. 1.3-6,7,8: Analyses of propositions with obligatory locative. according to Chafe (modified).

The model is also valid for the sentences:  
 Tom crawled under the table - Tomás gateó hacía abajo de la mesa

For the 'expletive there', Fillmore suggests a reduplication of L in the surface structure. The sentences

There is a spider on your sleeve  
 Hay una araña en tu/su manga

derive from the following structure:

Fig. 1.3-9

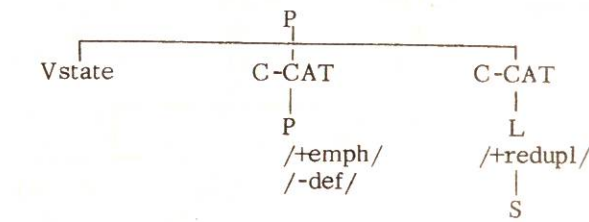


Fig. 1.3-9: Proposition analysis of the 'expletive there'.

L requires, then, the reduplication notation /+redupl/ which co-occurs with an emphasis marker /+emph/, added to the P (or O if an inanimate object is talked about). Another feature is the /-def/, attached to the emphasized case category. 'Expletive there' as well as "hay" do not normally occur together with a definite noun.

Locative, however, can occur independently from the verboid, as for example, in the following sentence pair:

He did his homework in the library  
Hizo su tarea en la biblioteca

The surface prepositions of the locative will not appear under the verboid slot in the deep structure, but they will derive during the realization process under the locative slot. Fig. 1.3-10 shows the deep structure of the two sentences:

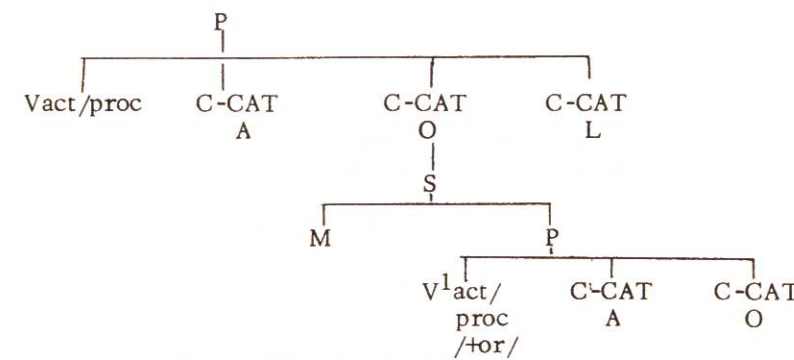


Fig. 1.3-10: Proposition analysis with optional locative.

The sentences are semantically satisfied without the locative, which only gives some additional information, while the former sentences

<sup>1</sup>The possessive here derives from 'origin'. It is proposed to add the feature notation /+or/ to the verboid.

require the locative to be complete.

Together with the possessive, demonstratives should be mentioned, too. They can accompany definite nouns whose spatial distance is known from either discourse or extralinguistic information. The definite noun must then carry the unspecified distance feature. The narrow specifications (/+/ for 'that', 'those', "aquel...", /-<sup>+</sup>/ for "eso ...", and /-/ for 'this', 'these', "esto ...") must be added to the language-specific terminal strings, because the criteria applied are different in both languages.

There is one more feature that is relevant for the realization of surface sentences. It depends on the discourse as a whole. It is the notation of 'known' or 'new' information that plays an important role in the use of proforms and determiners. Chafe dedicates a whole chapter to this question (Chapter 15). For the present approach, the feature /+known/ will be added to a case category that is occupied by a pronoun (or some other proform), during the intermediate projection processes.

Another problem, not discussed yet, is the adverb of manner. Fillmore and DiPietro do not give concrete suggestions as to how to treat it. Chafe<sup>1</sup> offers two options: the first, which he prefers, is to consider it a second verboid in the sentence's deep structure. The sentence pair

Bob spoke slowly - Roberto habló/hablaba lentamente  
derives from the following structure:

Fig. 1.3-11

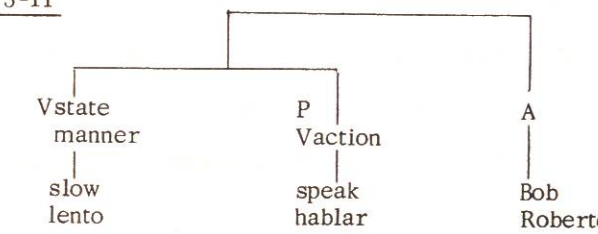


Fig. 1.3-11: Sentence analysis with the adverb of manner as second verboid, according to Chafe

He analyses adverbs of time and place in the same way. The other option he offers, but he is not happy with this idea, is to consider the adverbs a third semantic category other than verb and noun. He definite-

<sup>1</sup>pp. 300-308

ly rejects the idea of nominalization, i.e., deriving from an embedded sentence as "... speaking was slow". Neither one of these proposals seems adequate for the present purpose. Similar to the way time, place, and reason are classified, the manner element will be a case category, labeled as C-CAT Mr. The necessary adaptations to the different surface forms will be made during the projection.

Conjoint elements might be explained in two different ways, depending on which element of the deep structure refers to two or more representatives. If the conjoint takes place in the agent, C (committive) is proposed, as shown in the following:

John left with his wife for a vacation  
Juan se fue con su esposa de vacaciones

Fig. 1.3-12

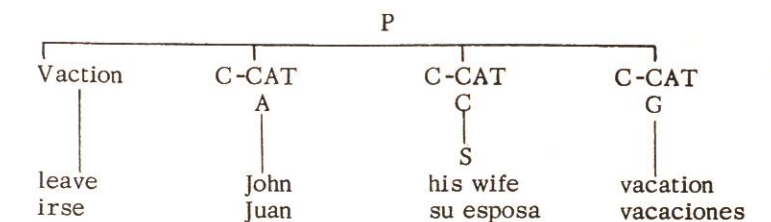


Fig. 1.3-12: Proposition analysis with a committive case category

We invited Paul and Bill - Invitamos a Pablo y Guillermo, on the other hand, is ambiguous, i.e., it can derive from two different deep structures. The decision depends on the discourse context. Either Paul and Bill are people who are thought of as a unit, then both appear under an embedded conjoint attached to the corresponding C-CAT (see Fig. 1.3.-13) or they are invited individually. In the latter case, two deep structures are assumed that have to be realized and later projected on the surface through the application of conjoining and deletion processes.

Fig. 1.3-13

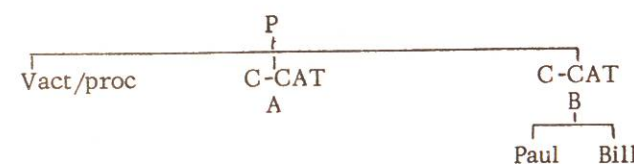


Fig. 1.3-13: Proposition analysis with a compound beneficiary

(40)

In order to finish the discussion of the deep structure model, a few more expansions at lower level<sup>1</sup> have to be introduced. Fillmore proposes the case category as consisting of K (kasus) and N (noun). In this paper, DiPietro's terms are used: CM (CASE MARKER) instead of K, and N (NAME) for noun. The reasons for using 'name' instead of 'noun' are the same as exposed in relation with V, i.e., VERBOID for 'verb'. The term 'noun' has a strong connotation of surface category that might interfere with the still shapeless concept of the C-CAT.

In opposition to Fillmore's and DiPietro's approaches, CM will not be further specified in the here proposed deep structure model. Its realization will be placed absolutely within language-specific realization steps.

Now a formal modification has to be established. On the last pages, several feature markers have been attached, under certain circumstances, to case categories; for instance: /<sup>±</sup>def/, /<sup>±</sup>emph/, /<sup>±</sup>known/.

<sup>1</sup>'Lower level' refers to a level that in the given figure appears closer to the bottom, and not to the actual height or depth between deep and surface structure.

/pos/, /<sup>±</sup>or/, /<sup>±</sup>dist/, etc. Those notations do not appear beneath the C-CAT in the final model, but below the N.

It might be appropriate now to summarize the rules for establishing the deep structure; they can be formulized as rewriting rules:

$$S \rightarrow M + P$$

$$M \rightarrow \text{time, aspect, Q, negative, voice, ...}$$

$$P \rightarrow V + \text{C-CAT}_{(x)}$$

$$\text{C-CAT} \rightarrow \begin{cases} \text{CM} + \text{N} \\ \text{CM} + \text{S} \end{cases}$$

The final model then shows:

Fig. 1.3-14

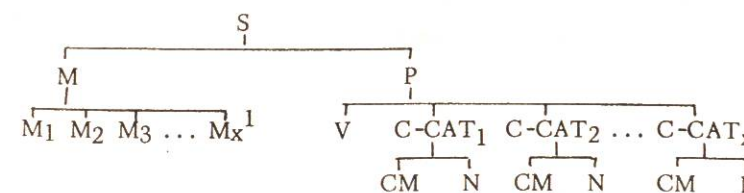


Fig. 1.3-14: Model for a complete sentence analysis

‡see list of modality items on pp. 20/21.

(41)

Obligatory marks, attached to the V are the labels for its nature (state, process, action, action/process) and a few casual additions, as /<sup>±</sup>inherent/ for state, /<sup>±</sup>own/ for possessive, /loc/ for spatial prepositions that are needed for the semantic satisfaction of the sentence, and, probably, others.

The C-CAT's must be provided with the /<sup>±</sup>def/, /plural/ if present, /emph/ if necessary, /<sup>±</sup>redupl/ for the 'expletive there', and, possibly, others. The latter labels are registered below N. Under the C-CAT nodes, only the types of the case categories, (e.g., A, P, O, etc.) are marked.

## 1.4 REALIZATION RULES

It is recommended to copy the terminal string of the deep structure before starting the following procedure. This string is one of the components of the base whose second component consists of lexical entries<sup>1</sup> in their uninflected forms. These lexemes must carry language-specific information, for instance, the gender of nouns in Spanish that will be marked as /<sup>±</sup>masc/ for masculine and feminine and /+neut/ for the neuter, or a difference in number, as existing in words like 'people' /+pl/, but "gente" /-pl/<sup>2</sup>, the irregularity of a verb or a plural form as /irr/, etc. All ambivalent features from the deep structure must also be specified, but now in a definite form in the language-specific base. Voice, for instance, can be marked as /<sup>±</sup>/ in the common base, but, conditioned by language usage, might require /-active/ for an English sentence, but /+active/ for the Spanish equivalent. A very common case of feature difference will be found in the aspect. The English preterite /+past/ has one form. In opposition to Jakobson, it will be marked with /<sup>±</sup>perfv/ because the Spanish past

<sup>1</sup>The analysis of the lexicon will be discussed in Chapter 2. So the analytical stage is skipped for the moment and the result, the lexemes (i.e., words and idioms as well as morphemes) of both languages are attached to the terminal string.

<sup>2</sup>In such a case, the deep structure must be marked with /<sup>±</sup>pl/.

has both forms. ('He ate', theoretically, has two Spanish equivalents: "comió" and "comía". If the aspect is not context-determined, both forms should be taken into consideration.)

Another important feature will be the /-certainty/ notation that has to be attached to a certain set of Spanish words, as "creer", "dudar", "esperar", "tal vez", "ojalá", etc. It will co-occur with the feature /+subj/ (subjunctive) which has to be added to the corresponding verbal lexeme in an embedded (subordinate) sentence in order to trigger the projection of a subjunctive form in a given environment.

Realization rules follow universal principles. Fillmore defined them as 'mechanisms' for 'selection of overt case forms', for 'registration of particular elements in the verb' etc.<sup>1</sup>

In the following, those projections are suggested that have been proved to be the principal ones. The order of application should follow logical consideration. A later step should not annul a former one. There seem to be patterns of sequence, but many more performances

<sup>1</sup>see quotation on p.11

of realization are needed before a rule can be stated.

As first steps, the realization of the negative, the interrogative, the assertorial, and the imperative should be performed. (In English, the inserted 'do' has to follow M if there is an auxiliary needed.) Next comes the case marker realization for the proposition. There might be several different mechanisms: slot arrangement collocates the elements, that appear in the deep structure in arbitrary order, in the grammatical surface-structure order. The slots of the English sentences, and of the Spanish to a certain degree too, express the semantico-syntactic functions of the elements. The emphatic and the active features also, play an important role. Another mechanism is the addition of CM particles: in both languages, prepositions often state the function of a case category. Also the reduplication of elements by pro-forms has to be realized under this heading. Another step, still under case-marker realization, is called 'case adaptation', i.e., the substitution of overt case forms for notations. (E.g., object case, accusative, and dative' for pronouns, and the 'Saxon genitive' for English nouns.)

Still with the proposition realization, definitizing or, in a given case, determinizing steps have to be carried out. Thus, articles or determiners are added to the nouns, according to their markers. Under determinizing comes the process that converts an embedded

sentence into a possessive form. Modifier realization also fits in here, i.e., the derivation of an adjective from an embedded sentence. Number and gender concord have to be achieved by the end of those processes, under consideration of eventual irregularities.

The next step will be the fusion of modality and proposition by projecting the M features onto the verb. This is called 'verb inflection'. The consecutive steps will be 'passivization', if required, which consists of adding "be/ser" and "-en/-do" around the verb. (The shifts in slot position and the addition of the prepositions 'by' and "por" for the agents have been performed during the CM realization steps already.) Then follows the realization of the verbs, fusing time, aspect, potential, and root into a form that, at the same time, must concord with number and gender. Also the /irr/ and /+subj/ features, attached to the verb, will be realized then.

Embedding or conjoint sentences will require special realization rules for adding conjunctions, or deleting repeated forms. They must be applied when the situation requires it.

A tentative set of the proposed realization rules, in chronological order of application, is given in the following:

## I GENERAL SETTING

interrogative	}	in logical order
negative		
assertorial		
imperative		

## II CASE MARKER REALIZATION

- 1 slot arrangement  
under consideration of /-active/ and /+emph/ features
- 2 addition of CM particles  
prepositions  
reduplications
- 3 case adaptation

## III DEFINITIZING - DETERMINIZING - MODIFICATION

- 1 application of articles and/or determiners
  - 2 derivation of possessive forms
  - 3 noun modifier derivation
- all steps under consideration of number and gender notations

## IV VERB INFLECTION

- 1 passivization (if required)
- 2 fusion of verb roots with time, aspect, potential, and subjunctive features under consideration of person and number

COORDINATION AND/OR SUBORDINATION OF CLAUSES from different kernels (except those of III-2 and III-3) will be realized when logically necessary.

A few practical indications for the proceedings:

- 1- Copy the common deep structure string from the model<sup>1</sup>
- 2- From this, copy the language-specific deep structure strings, inserting already the lexical items with their particular notations<sup>2</sup>
- 3- Perform the realization steps in the required order and modify the resulting string each time
- 4- Describe each step clearly

The final and most important step for the analysis of the semantico-syntactic deep structure is the evaluative contrasting of the realization steps in both languages. Describe the differences in the same order as the steps performed. Present a clear picture of the differences, as they emerge during several intermediate steps from the depth to the surface.

It is obvious that many questions remain unsolved, and it is readily admitted that many proposals are arbitrary, inconsequent, and/or restricted in their application; in short: deficient. The reader should feel challenged to try the problems in different ways and to find better an-

<sup>1</sup>It is recommended to enclose embedded sentences between brackets

<sup>2</sup>In this chapter, the dominion of the lexicon is understood. The analysis of lexemes will be discussed in Chapter 2.

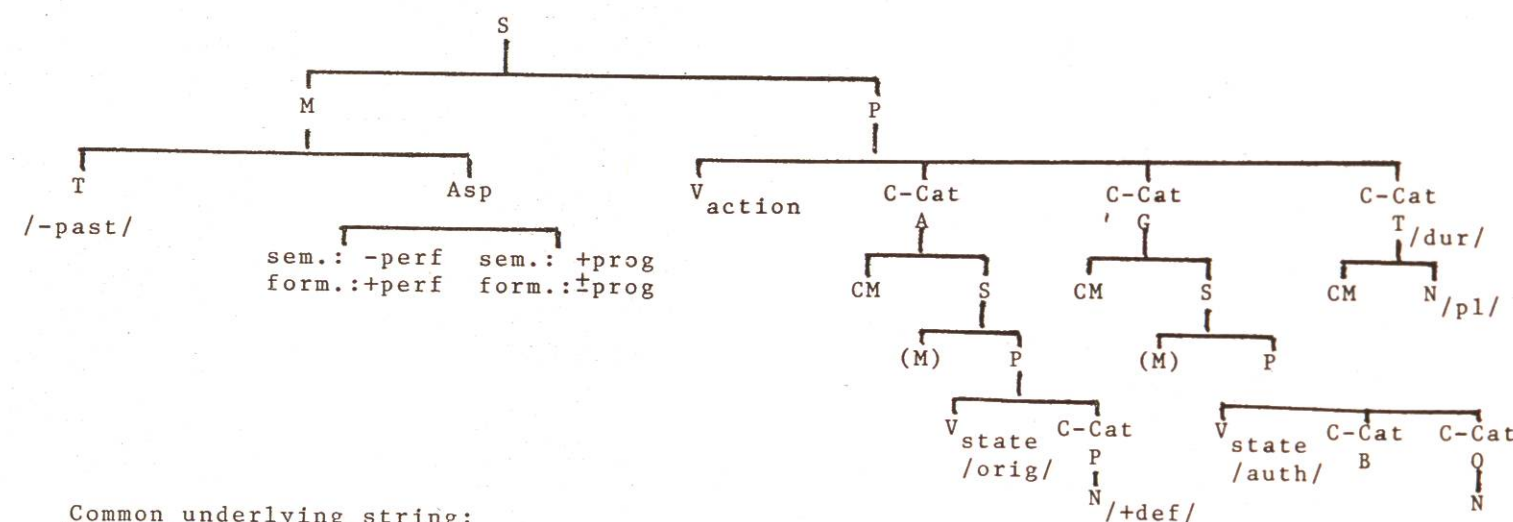
swers. They will be accepted gratefully by everybody who really wants to do CA.

In the following sections, a few complete deep-structure analyses will be presented, followed by a set of suggested problems in the contrastive analysis of correspondent sentence pairs in English and Spanish.

1. Data

The American student has been working on her master's degree for three years.  
 La estudiante norteamericana ha trabajado durante tres años para su grado de maestría.

2. Common semantico-syntactic deep structure



Common underlying string:

/-past/ + /+perf/ + /+prog/ + V<sub>action</sub> + A (CM + [V<sub>state/orig/</sub> + N<sub>/+def/</sub>]) + G (CM + [V<sub>state/auth/</sub> + B + O (N)]) + T (CM + N/+pl/)

3. Lexemes

V<sub>action</sub>: work - trabajar  
 V<sub>state/orig/</sub>: American - norteamericana  
 A + B (N/def/): student /fem/ - estudiante /fem/  
 G (N): master's degree - grado de maestría T: three years - tres años

Language-specific deep structures:

/-past/ + /+perf/ + /+prog/ + work + CM + A    /-past/ + /+perf/ + /+prog/ + trabajar + CM + A  
 ([American + student/+def/]) + CM + G ([/auth/ ([norteamericana + estudiante/+def/]) + CM + G  
 + B + Master's degree<sup>/+fem/</sup>] + CM + T (three years) ([/auth/ + B + grado de maestría<sup>/+fem/</sup>] + CM + T (tres años))

4. Realization rules

1. Slot arrangement:

[A] + M + work + CM + [G] + CM + [T]

[A] + M + trabajar + CM + [T] + CM + [G]

2. Addition of particles:

CM + [G] = on + [G]

CM + [G] = para + [G]

CM + [T] = for + [T]

CM + [T] = durante + [T]

3. Definitizing, etc.:

.student /+def/ = the student /+fem/  
 /+fem/

estudiante /+def/ = la estudiante  
 /+fem/

[/auth/ + student /+fem/] = her

[/auth/ + estudiante] = su

.American + student = American student

norteamericana + estudiante /+fem/ =  
estudiante norteamericana

4. Verbinflections

./+perf/ = have + en

./+perf/ = haber -do

./+prog/ = be + ing

./+prog/ = no specific form

./-past/ 3rd pers sing = has

./-past/ 3rd pers sing = ha

has been working

ha trabajado

5. Statement of contrasts

Find all specific contrasts in sections three and four and discuss each in the light of the studies published by your grammar authors.