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GRAMMATICAL SYSTEMS ACROSS LANGUAGES: A STUDY OF
PARTICIPATION IN ENGLISH, GERMAN AND SPANISH

City University of New York

PH.D.

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GRAMMATICAL SYSTEMS ACROSS LANGUAGES:

A STUDY OF PARTICIPATION IN

ENGLISH, GERMAN AND SPANISH

by

ELSA LATTEY

A dissertation submitted to the Graduate Faculty
in Linguistics in partial fulfillment of the
requirements for the degree of Doctor of Philosophy,
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1980

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This manuscript has been read and accepted for
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of the dissertation requirement for the degree of
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Abstract

GRAMMATICAL SYSTEMS ACROSS LANGUAGES:

A STUDY OF PARTICIPATION IN
ENGLISH, GERMAN AND SPANISH

by

Elsa Lattey

Adviser: Professor Erica C. García

A comparative/contrastive analysis in the Form-Content (F/C) framework, this study is based on hypothesized signals and meanings of the grammars of English, German and Spanish that constitute Systems of Participation (SPTs). In a semantic theory based on a communicative orientation and on the role of the human factor in language use, a cross-language comparison must start from the undeniable fact that bilinguals know when two linguistic expressions are translations of each other--translation is the given. The goal is to go beyond mere description to determine why message X expressed in language A by the signals and meanings available in A corresponds to message X' expressed in language B by the signals and meanings available in B.

From the quantitative study of differences in form and communicative strategies involving the same meanings an important point emerges: the form of a signal is crucial and has been unjustly overlooked in the focus on the primacy of system.

The hypothesis investigated--that quantitatively recognizable differences among the languages in the distribution of specific forms equatable on the basis of their meanings reflect biases in production understandable in the light of the grammatical systems available--is based on the assumption, central to F/C and derived from the human factor, that statistical tendencies are explained by the grammar.

Form, scope and implementation are factors seen to contribute to the systemic signal differences and to differences in relative ease of communication. Uniform distinctions, explainable in terms of these factors, are found between Spanish and the other two languages, Spanish inclining to express participants more than the others. Quantitative differences in novels and translations are corroborated by data from native-speaker narratives and agree with expectations that take inferential expertise into account.

The relative exploitation of the SPTs for German vs. English is not as clear in the data as for Spanish vis à vis the other languages, but form seems to operate

against English when it comes to expressing three entities at a time and scope seems to work against German when it comes to expressing individual entities.

The translation data reveal that a hierarchy of participant propensity, established by ranking source-language text percentages, shows a direct relationship with the distribution of forms in the target-language texts, specific facts of participant loss or gain being relatable to the SPts and pointing to a cognitive view of events apparently shared by these languages and understandable in terms of the scalar SPt meanings.

Frequencies of non-finites (Spanish and English favor non-finites; German disfavors them) are also explainable in SPt terms: Spanish speakers use their inferential expertise to identify the obvious high participant; English speakers omit a participant to reduce the complexity of their word-order signal, the high participant being the one most likely to be obvious.

German and English speakers are seen to share a communicative strategy: they warn the hearer/reader of a difficult inference when low participation in the message and pronominal reference (which implies a certain prominence in the discourse of the entity referred to) coincide in a single form. German speakers express the low participant pronoun in a linear order before the mid participant. English speakers (who cannot use such reordering means

without destroying the word-order signal) tend to prepositional phrases or non-mention of a participant.

An interaction of grammatical facts, discourse considerations and communicative strategies in the several aspects investigated is found to reflect the role of the factors characterizing the SPt. Where the grammatical system places restrictions on the language user--in distribution or perception--he finds alternative ways of reaching the communicative goal, developing language-specific strategies of inference and communication.

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LIST OF ABBREVIATIONS

e	entity
ERH	Extended Relevance Hypothesis
p	message participant
P	grammatical participant
SPt	System of Participation
#	number
~	non-

In loving memory of
my father
Franz Xaver Geissler

Chapter 1

Introduction

1.0

This study presents a comparative and contrastive analysis within the Form-Content framework, based on certain hypothesized signals and meanings of the grammars of English, German and Spanish.¹ It thus applies to interlingual data a semantic theory of language based on a communicative orientation, and shows how signals and meanings of one language--whose particular values are exploited in the conveying of messages by the speakers of that language--correlate with signals, meanings and values in the other languages.

Within a language, the task of the linguist is seen to be the postulation of hypotheses about signals and meanings in that language, hypotheses which shed light on the occurrence of the (hypothesized) signals in view of the specific messages communicated by speakers. The validation of these hypotheses lies in the plausibility of the meanings that the linguist has postulated for particular signals in view of the messages conveyed with those signals. He thus attempts not merely a description of the observed distribu-

tion, but an explanation in terms of the meanings involved.

Just as we cannot ignore the fact that language communicates--which means that we know what has been communicated, i.e., the message is "given"--so any attempt at cross-language comparison from a communicative point of view must start from the basic and undeniable fact that bilingual speakers are aware of, know, when two different linguistic expressions are translations of each other. In such an interlinguistic study, then, translation is the "given": it is, for the contrastive problem, the analogue of the message in a monolingual linguistic analysis.

Accepting translation as a given in interlingual comparison, then, we want to take a further step beyond mere description of the observed distribution; that is, we seek to answer why particular linguistic expressions are translated in particular ways--why message X, expressed in language A by the signals and meanings available in A, corresponds to (i.e., translates into) message X', expressed in language B by the signals and meanings available in it.² This examination of fresh data may well lead to a better understanding of the linguistic systems of the various languages involved relative to each other.

The linguistic systems we shall investigate and discuss in the course of this work are the Systems of Participation--an area of grammar traditionally discussed in

terms of "case" or "case relations"--of English, German and Spanish. The Systems of Participation (SPts) concern elements central to the grammars of the languages involved, and have high potential for revealing interesting and important facts about language and language use.³ Although the SPts differ in certain respects from language to language, they deal with the same semantic substance--participation--and have been hypothesized as containing the same meanings. There are differences, however, on the signal side of the signal-meaning correspondences and differences in value, and this study will demonstrate the effects of these differences on the distribution of the forms in question in equatable situations, i.e., in descriptions of the same event by native speakers and in texts translated from one language into the other.

1.1 Distribution and "sameness" across languages

What do we mean when we speak of "distribution" in an interlinguistic comparison, and how are we to investigate differences in distribution across languages keeping meaning and communication in view? What is meant by distribution of the signals of the SPts in this study is their frequency of occurrence and their cooccurrence with each other and with other signals of the language. Meaning and communication will be kept in view by relating differences in distribution to grammatical systems (of signals and meanings) in the several languages and by considering how

different kinds of signal contribute to getting the message across.

How can we compare the distribution of signals of a grammatical system with those of the corresponding grammatical system in another language and feel reasonably sure that the speaker of language A is communicating the same thing as the speaker of language B? It was pointed out above that in interlingual study it is translation that is given, and it therefore seems that an empirical study of this sort does well to take as its starting point the work of professional translators, skilled bilinguals engaged in the activity of rendering the same message in more than one language. For,

les traductions, au moins celles d'une qualité supérieure, restent un moyen efficace, sinon le seul, de comparer deux langues, car en traduction la même pensée et le même sentiment sont exprimées selon les moyens particuliers et propres des deux langues.
(Barth 1961:9)

A good translation of a text is as close as we can come to having the "same material" in two language, as it attempts to get across the full impact of the original with respect to content, communicative import, style, and to as many other features as the translator is able to isolate and deal with:

The criterion for an adequate translation . . . is to render an utterance in a second language such that it evokes the same, or nearly similar as possible, set of ideas, concepts, emotive reactions, sememes . . . in native speakers of the second language as the original utterance does in native speakers of the first language.
(Alverson 1969:247)

With translation as a given in contrastive analysis, and in order to do contrastive analysis at all, we must set aside such pessimistic attitudes as those expressed by Winter in an essay presenting a linguist's views on "why the translator must necessarily despair of achieving a completely faithful rendering of his original" (1961:68), which ends with the ominous proclamation: "We have seen that to translate is to attempt the intrinsically impossible" (1961:81). We rather agree with Jäger (1972:258), who answers doubters of translatability in the first place with the observation: "Zweifellos ist bereits die Praxis des Uebersetzens ein wichtiges Argument für die Bejahung der Uebersetzbarkeit." It is done, and has been done for years, and this very fact evidences the feasibility of the endeavor, although we recognize that there are limitations involved.

The translator, just as the original author, is faced with the description of a scene. This scene can be described in a variety of ways. For instance, given a scene involving a number of entities in a more or less direct way, various alternatives are open to the writer or translator who wishes to describe that scene in a particular language. As far as the entities on the scene are concerned--and these entities are the potential participants under study in this dissertation--he may refer to them

a) with more or less specific terms:

(1) man, book vs. he, it, that

b) as directly involved with the occurrence or as somewhat removed from it:

(2) The man is reading the book.

(3) It is green.

vs.

(4) The man bought the book from a street vendor.

where the role of the entity is inferred with additional help from the preposition, and not from the verb and the signal referring to the entity alone

or

c) the speaker may choose not to refer at all to an entity on the scene:

(5) The man bought the book (_____).

--it is not stated from whom, although the scene of buying the book must have included, e.g., a street vendor.

Although both the writer and the translator are faced with the description of the same scene, there is a difference in the preconditions for each. The writer has at his disposal all the alternatives offered by his (the source) language. The translator's alternatives are conditioned by his (the target) language and are limited by the choices already made by the writer (in the source language). That is, the scene has already been described,

with a particular viewpoint imposed upon it, by the author. Had the author chosen utterance (5), for example, to express the book-purchase-from-a-street-vendor scene, the translator would not have had the option of including the street vendor -- an option that was open to the original author. That the translator, although restricted in his alternatives by the author's having already chosen to view the scene or event in a particular way, still has more than one alternative at his disposal can be seen in the many occurring instances of non-equivalence in translation.

We shall take just a few examples from among the verb forms of English and German, where a variety of correlations occurs in our texts, to illustrate that various alternatives exist in both language and that any of the forms can be substituted for any other in the process of translation:

The English finite verb can be translated into a German infinitive:

- (6) a. Again a gesture of the judge's hand arrested a speaker before he finished his speech. (AC p.97)
- b. Wiederum hinderte eine Geste des Richters den Sprecher, seinen Satz zu beenden. (AC p.97)⁴

or a composite:⁵

- (7) a. His eyes turned slowly till they rested on her. (AC p.98)
- (8) b. Langsam wandte er den Blick und liess ihn auf dem jungen Mädchen ruhen. (AC p.98)

The English -ing form shows up as a German infinitive:

- (8) a. I take it, Dr. Armstrong, that a woman would have been physically capable of striking the blow.... (AC p.98)
- b. Ich nehme an, Herr Dr. Armstrong, dass die Körperkraft einer Frau ausreichen würde, um den Schlag zu führen. (AC p.98)

or as a German -end form:

- (9) a. On Blore's side, assisting him to the best of our ability will be myself, Dr. Armstrong and Miss Claythorne. (AC p.130-131)
- b. auf Blores Seite--ihn nach besten Kräften unterstützend--werden kämpfen: ich selbst, Dr. Armstrong und Miss Claythorne. (AC p.129)

or as a German finite verb:

- (10) a. I can believe in Rogers killing his wife because he was scared of her breaking down and giving him away.... But I can't see him as the lunatic Mr. Owen dealing out crazy justice and starting on his own wife.... (AC p.99)
- b. Ich kann mir vorstellen, dass Rogers seine Frau tötet, weil er fürchtet, sie könne zusammenbrechen und ihn verraten;.... Aber ich kann mir Rogers nicht als irrsinnigen Mr. Owen vorstellen, der eine verrückte Justiz ausüben will und mit seiner eigenen Frau beginnt.... (AC p.99)
- (11) a. Someone enters bringing her a tablet. (AC p.101)
- b. jemand tritt ein und bringt ihr ein Pulver. (AC p.101)

And the English infinitive may wind up as a German participle:

- (12) a. To put it simply,.... (AC p.99)
- b. Kurz gesagt,.... (AC p.99)

and so on. If the source language text--let us use English as an example--has an -ing form, and we are translating into German, we have at our disposal at least a German infini-

tive, or an -end form, or a finite verb. The decision as to which one is most suitable for translating the choice the writer made from among his alternatives will depend on the Sprachgefühl of the translator.

This Sprachgefühl, however, is molded by the translator's knowledge of the two languages in question. And in order to be able to understand what motivates the translator's Sprachgefühl, we need to have the relevant analyses of the involved meanings in both source and target language.

If we find that with various alternatives available to the writer (or translator), he chooses certain of them more than others in particular situations, then there must be some explanation of his choice. If more writers choose the same alternatives with high frequency, then it is likely that the explanation is to be found not in individual idiosyncrasy but in human nature and/or in the language(s). And if the users of one language behave consistently in one way while the users of another language behave consistently in another way, the likelihood increases that the explanation is to be found in the language rather than in human nature.

A frequently observed correlation between a particular form and a particular message can help lead the investigator toward the desired analysis of the meaning of that form. But the recognition of such a skewing in the distribution of an item is only a useful tool in determining the direction an investigation should take. The goal

of the investigation is to provide the semantic analysis that will support or disconfirm the hypothesis that the correlation is based on a particular meaning signalled by the form in question.

Interlinguistically, quantified observation can lead to--or confirm--the suggestion that certain elements of separate languages can reasonably be considered as making the same contribution to corresponding messages. The messages will not always be identical across languages, as they are dependent on the meanings available in each language. For example, if a language has both a dual and a plural available, and it is being translated into a language that has only plural, then certain possible message components of the former may be lost in translation--or may have to be conveyed by other means than by a dual:plural opposition. An observance of corresponding messages is, however, the only means for getting at whether particular signals of different languages that are hypothesized to be equatable on the basis of their meanings contribute to similar messages and is, consequently, the only basis for a semantic contrastive study. We will examine such corresponding messages from language to language and observe--on the basis of the relevant semantic analyses--to what extent the same meanings are exploited in these messages.

1.2 Different approaches to the (non) equivalence of languages

Interlingual studies have been approached in a number of ways. The primary orientations can be collected under the following headings: the traditional and structuralist approaches, which conceive of case as performing certain functions in the organization of the sentence, and the generative grammar and/or "case grammar" approaches, which conceive of case as a semantic relation between entity and action.⁶

a) traditional grammar and structuralism

Common to the traditional and structuralist approaches (to the latter at least in practice) is the assumption that the same labels are applicable to each language, that there are (universal?) grammatical categories and/or functions, and that each language makes use of them. The contrastive analyst compares languages, accepting the particular language analyses as valid and taking the labels at face value, with no guarantee that they do in fact mean the same thing in the different languages. There is no basis for this assumed parallelism in the absence of a demonstration that an item in one language is semantically the same as an item in another language or is a member of a similar semantic system.

We find several types of traditional approach, all

with the implied goal of telling the reader how best to translate a given utterance of language A into language B. The most common approach is that represented by Curme (1931, 1964), who, although his works are language-specific grammars, can nevertheless be included in a discussion of contrastive approaches because he has produced grammars of German and English in the same vein, often drawing parallels between the languages.

Curme operates with traditional categories, including case (that form of a noun or pronoun which marks it as subject or object, etc.), and finds the same cases (nominative, dative, accusative⁷) present in German and English, although he admits that the morphology of these cases has been lost in the latter language. Indeed, according to Curme (1931:II:127), these grammatical relations are indicated in English by

- 1) position of the noun with regard to the verb or preposition
- 2) inflectional prepositions, and
- 3) often by context alone.

The relations are seen as performing certain functions in each language:

nominative → subject, predicate, direct address

accusative → object, adverb, objective predicate

dative → object (distinguished from accusative direct object by being called indirect object),

and as having a common meaning, though this meaning is difficult to trace and to specify:

The original concrete meaning of the accusative is unknown...one of its chief meanings....indicating a person or thing toward which an activity is directed. (Curme 1964:489)

or

The accusative denotes the direct object or thing affected or produced, and the dative the indirect object, the person or thing to whose advantage or disadvantage the action accrues, or the person to whom the statement seems true or with reference to whom it holds good, or the person.... (Curme 1964:524)

Curme thus equates particular relations (subject, object, etc.) signalled by distinct (case) morphology in German with relations of the same name in English, the latter sometimes signalled and sometimes inferred, and assumes that under ideal conditions these relations are also expressable in terms of meanings which are, however, regrettably no longer readily definable.

Wandruszka (1969), though perhaps a structuralist in his theoretical orientation, in practice characterizes languages in traditional terms, dealing primarily with forms and structures. His attitude toward the cases is not clear, for he says at one point that the accusative has displaced the nominative in examples like it's me (1969: 262), whereas after like one uses the Dat.-Acc.-Nom. [sic] as in like me (1969:263). Here he appears to define the relations in terms of their translation into other languages. His major concern is what is actually used in trans-

lations for certain forms of language X, especially when language X makes a distinction not made in the target language. Thus, as König (1971:269) put it, he "compares usage rather than systems". He does not, however, relate this usage to the meanings of the forms in the separate languages, and so does not begin to ask why such and such particular forms are used in translating message A from language X into language Y. Both Curme and Wandruszka operate with traditional categories which--for English at least--are motivated neither by morphological signals actually occurring in the language nor by specific meanings. And without such motivations it is impossible to tell what the presence (how established?) of a category (meaning what?) contributes to the message being communicated--or why the speaker should use it at all.

Also traditional in their approach are Bausch (1963) and Barth (1961), although these--especially Barth--introduce quantitative considerations into their traditional comparisons.⁸ That is, the individual example comparison is enhanced by counts of translation equivalents. The quantificational approach in principle holds promise for revealing--by showing what bilinguals actually do when translating--not only what correlations are possible but which are preferred (such a percentage of the time). However, the contrastive concern in these studies is with the transposition of one category into another, for example, a

nominal expression in one language translated as a verbal, adjectival, or adverbial expression in another, in the attempt to establish categorial tendencies attributable to particular languages: "la tendance de l'anglais est vers le verbe [in noun/finite verb correlations] et celle des langues romanes, vers le nom" (Barth 1961:23). These comparisons of categories are regrettably not backed by any analysis demonstrating that they mean the same thing from language to language.

Weinreich's theory (1953) is structuralist, though at times it appears that he, too, has not broken loose from traditional grammar in practice. His basic assumptions are structuralist: the basic units of expression and content are defined within each language by opposition to other such units in the language (1953:7), and he recognizes the interlingual implications of such opposition, seeing a danger for the bilingual speaker in that: "inasmuch as a language is a system of oppositions, a partial identification of the systems is to the bilingual a reduction of his linguistic burden" (1953:8). The danger is apparently in identifying parts of systems that do not translate.

Weinreich categorically distinguishes morphemes from grammatical relations (e.g. word order) "because grammatical functions which are performed in one language by morphemes may be identified by bilinguals with relations in another language" (1953:29). He suggests, for example,

that English-Russian bilinguals "may identify the order relation between loves and Mary in John loves Mary with the morpheme -u in the Russian sentence Ivan Mari-u ljubit, where it expresses the accusative and thus makes Maria the direct object" (1953:29-30). Such apparently successful identification of morpheme- and word-order-signalled functions across languages seems rather to point to the desirability of not distinguishing morphemes from grammatical relations. Weinreich's purpose for the distinction is apparently to be able to describe such bilingual difficulties ("interference") as transferring the "denotative" English word order SUBJECT + VERB + OBJECT into Russian, where this order exists, but has a "stylistic" rather than denotative function, the latter being performed by a morpheme (1953:7). His basic concern is, however, equating the functions such as direct object across languages, and (as in the case of Curme's grammars) these are not uniquely defined. That is, the contribution of the direct object function to what is communicated is not made clear by Weinreich.

Lado (1957), another structuralist, also recognizes the importance of systemic relationships when he characterizes the phoneme as a complex unit in the sound system of a language (L_1) and says that the L_1 system must be compared with another such system (L_2) in order to be able to produce a pedagogic grammar. As a procedure for

such comparison he recommends establishing similarities and differences in the physical nature, structure and distribution of phonemes.

The same methodology is applicable (in theory) to grammatical structure:

To describe the grammatical structure of English is not to describe every observable feature of usage but to describe those features that systematically convey meanings and relationships. (Lado 1957:53)

That is, a language is "a system of habits" and these habits must be compared with those of another language in terms of "word order, inflection, correlation of forms, function words, intonation, stress and pauses" (1957:53). In basic agreement with the traditionalists and with Weinreich, Lado recommends comparing two languages structure by structure, pattern by pattern, to determine whether for each foreign language structure there is a native language structure "signalled the same way, that is, by the same formal device; having the same meaning; and similarly distributed in the system of that language" (1957:66).

Structure is the important aspect. And although Lado mentions "meaning" several times, and although it is an integral part of the analysis in his formulation of the procedure to follow, yet it is not clear what status meaning actually has in his theory. For instance, in one case he identifies who? and ¿quien? as signalling the same meaning: 'question' (1957:60);⁹ elsewhere he appears to

equate meaning with function or grammatical category: the "sameness" of grammatical meaning in two languages is defined by citation only: 'modifier', 'subject', 'statement' (1957:59).

Again, what is meant by meaning is not clear. Lado makes no direct reference to case. It appears, however, that Lado would probably agree with Curme in identifying case as performing certain functions, presumably the same functions in each language.

A further essentially structuralist approach is found in Kufner (1962). His comparison, too, is one of patterns and their transferability:

Once again we must make it clear that this possibility [replacement of indirect object by a prepositional phrase] is a peculiarity of English and that it cannot be transferred to German. (1962:44)¹⁰

Kufner is led by his assumption that case has no meaning to an acceptance of government as the controlling factor for pairing of the verb and the case of an entity, but thereby slips into the circularity of suggesting in one instance that choice of case depends on the verb and in the next that choice of verb depends on the case in which the object appears (1962:43).

Kufner's discussion of case--he describes the word-order signal of English as VERBAL + INDIRECT OBJECT + DIRECT OBJECT, and correlates this with the dative and accusative cases in German--centers around a remarkable

interpretation of his definition of object: "objective modifiers of the verbals are pronominals or expressions for which pronominals can be substituted" (1962:42).

In the situation with two objects, Kufner says, it will depend on the verbal whether the secondary substantival is in the dative, in the accusative, or in the genitive. There are a larger number of verbals which take accusative and dative objects. There is only one verb in German which is followed by two accusative objects: lehren 'teach'. (Kufner 1962:44-45)

Lehren is to be treated as an exception; the usual formula is dative + accusative. Kufner's odd interpretation of objects--they must apparently be "pronominals or expressions for which pronominals can be substituted" in the particular context--leads him to discount as taking double accusatives verbs like fragen 'ask', kosten 'cost', etc., as in

(13) Er fragte mich schwierige Dinge.¹¹
'He asked me hard questions.'
(literally: difficult things)

(14) Das Stück kostete mich im Grosshandel eine Mark.
'Each piece cost me a mark wholesale.'

which appear to most analysts to be parallel to lehren.

Schwierige Dinge and eine Mark in the above examples are thus excluded by Kufner from consideration as objects.

Lehren is taken care of by citing it as an exception, and fragen and kosten are ruled out by the odd object interpretation as possible candidates for occurring with two objects. Kufner thus excludes these verbs from treatment in a manner similar to other verbs in the language, but

does not elaborate on the resulting disparity with English, where the glosses of (13) and (14) would presumably follow the normal word-order signal: VERAL + INDIRECT OBJECT + DIRECT OBJECT.

A continued problem for analyses based on government, not solved by Kufner either, is the fact that they do not allow for a verb's selecting now one case and now another, as in:

(15) Er schlug dich ins Gesicht.

Acc.

'He hit you--in the face.'

(16) Er schlug dir ins Gesicht.

Dat.

'He hit you in the face.'

(Cf. Zubin 1972, Chapter 5 for a detailed discussion of such examples.)

We thus see that although the traditional labels were presumed to represent some common semantic content (or relevance) and to make claims about the correlation of forms with messages, this has not been demonstrated by the contrastive analysts in the traditional or structuralist approaches. The unvalidated belief in the general applicability of categories across languages even led to the postulation of grammatical signals where none exist--e.g. Curme's identification of accusative vs. dative in English by context alone. At this point the distinction made on page 11 between the traditional and generative approaches becomes obscured: it is no longer clear whether case, for

example, is a phenomenon to be identified by the presence of a recognizable signal for sentence organization or whether it is a conceptual categorization of the real world that need have no physical shape and that is consequently not signalled in the process of communication.

b) generative grammar and "case grammar"

These approaches have their common feature in the acceptance of a surface representation and an underlying representation. Case relationships are taken to hold in the underlying representation and can therefore be the same from language to language.

König (1971), for example, combining Fillmorean absolute cases such as agent, objective, instrument, etc. with suggestions about the form of semantic structure and transformations by McCawley, Lakoff, Ross and Postal, proposes an underlying structure for the common propositional content of equivalent sentences (equivalent presumably on the basis of this common propositional content) in several languages. He then seeks to account for surface differences in terms of different transformations and lexical insertions.

Di Pietro (1971) and Hellinger (1977) also posit a common deep structure in order to allow for mutual convertibility among languages. The strings of language X are related to those of language Y by the common deep structure

and the different sets of transformations undergone by each. Di Pietro finds a metric to measure the similarity between languages in that "languages are similar to each other in proportion to the number and hierarchical ordering of rules shared in the intermediate levels" (1971:27). Swain (1972:24) applies this idea to the speakers of two languages, suggesting that bilinguals have "a common core of rules with those specific to a particular code [i.e., language] tagged as such through a process of differentiation."

Pleines (1977) proposes a modification of the case grammar model for pedagogically oriented contrastive analysis. He rejects both the idea that deep cases are "autonomous universal entities" (1977:4) and the usefulness of fixed case frames, and suggests that the relations of each verb be analysed, those of the target language being, at first, phrased in terms of the relations occurring with a similar verb in the source language. Pleines thereby rejects the desirability of a small limited set of relations (the problematic definition of which he and others, e.g. Finke 1974 and Fillmore 1977 had already realized) and opts for an unbounded pairing of verbs (simple and complex) and relations, the latter depending in each case on the specific verb.

What these versions of the generative approach have in common is the recognition of deep case relations

as the most basic level of analysis--though Pleines seems to lift this restriction, at least in practice: "they are not declared to be the actual, really underlying relations (as is done in case grammar)" (1977:12). The deep cases are syntagmatic phenomena rather than paradigmatic oppositions, and thus say nothing, except by the implication of such restrictions as that there may be only one of any deep case relation per clause, about systematic oppositions present in the language.¹²

An apparent exception to the generative approaches discussed above is the treatment in Stockwell et al (1965). Although operating with phrase-structure rules and transformations as the basis for their contrastive grammar of Spanish and English, Stockwell et al differ from the other generativists in that they do not necessarily posit the same underlying structure for both languages; e.g.

(17) The girl expected it.

is viewed as a kernel sentence (base form), while its Spanish translation

(18) La muchacha lo esperaba.

is not. The pronoun lo 'it' is here derived from an underlying noun phrase.

As is only natural, considering its 1965 publication date, this approach follows closely the "standard theory" of transformational grammar, wherein case is a surface phenomenon, a language-specific realization (in-

troduced by transformation) of deep structures whose abstract nature includes no resemblance of case (Finke 1974:3). Therefore, despite the transformational theoretical base, as far as case is concerned the method of comparison for Stockwell et al is still very much a structuralist-like pattern comparison, e.g.: adverbs of interest [which include le or a + noun] are "usually equivalent, when an equivalence exists, to the indirect object in English" (1965:192), and object pronouns "follow a pattern in Spanish somewhat different from that in English" (1965:189).

When similarity between the languages exists, Stockwell et al take this as an indication of non-difficulty: the direct object, they claim, "offers little difficulty since the English and Spanish [surface] constructions are almost identical" (1965:188). This is an assumption that follows naturally from a pattern by pattern comparison, but structural similarity is no guarantee of equatability. The approach is again strictly syntagmatic, does not reflect systemic coherence, for it says nothing about oppositions to other forms or structures in the language, nor for this very reason is it a guarantee of ease of learning.¹³

Let us now contrast the views of case held by the generative grammarians on the one hand and the traditionalist/structuralist grammarians on the other. The former

see case as a notional category or deep structure concept; its interpretation is a matter of deduction from the nature of the entity and of the event or activity in which the entity is involved. That is, "case" is not something generally communicated from speaker to hearer--it is information inferrable from the nature of the world. In those instances where the nature of the world allows for more than one interpretation--i.e., if there are two animates, each of which could be, for example, agent or goal--then the speaker's choice of subject helps the hearer in his inference, communicates to the hearer which of the animates is to be taken as agent (this assumes that speaker and hearer operate with a hierarchy of subject selection such as that proposed by Fillmore, plus the stipulation that there may be only one of each case per clause).¹⁴

Very different in terms of the communicative event is the identification of case via inflectional morphology or as a surface phenomenon. The morphology is assumed to have a meaning, and that meaning is to be conveyed from speaker to hearer. The case morphology is thus expected to tell the hearer how the speaker sees the event and how the hearer is to interpret the message conveyed, i.e., it serves a communicative purpose. Fillmore, recognizing the communicative emptiness of his earlier proposals, now suggests inclusion in the theory of case grammar of "the

conditions under which a speaker can choose to draw certain situation participants into perspective" (1977: 79)--the others being left out of perspective via particular deletion operations somewhere between the underlying representation and the surface structure.

If we relate these two approaches to the task of the contrastive linguist as outlined at 1.0, we find that each fails to accomplish it, but for different reasons. The contrastive linguist's task was described as seeking to answer why particular linguistic expressions of one language are translated into particular linguistic expressions in another language. This is possible only by showing that the meanings of the forms occurring in each utterance are plausible for conveying the correlating messages.

The traditionalist/structuralist analysts have not succeeded in uniquely defining the case signals (finding the signalled meanings) and have therefore not drawn the precise connection between meanings and forms that would allow the translation question (why these forms?) to be posed and answered. We do not know what contribution is being made by what element of the language to the message communicated.

The difficulty with the notional (underlying) case categories is that they are covert (not generally signalled by anything in the surface utterance nor expected by

the analysts of these approaches to be thus signalled). As covert semantic categories they do not make a contribution to the communicative event, i.e., do not signal a meaning. The surface assignment of case morphology (where it occurs) follows, in this approach, a mechanical procedure according to category- (subject-, object-, etc.) selection rules, of the type: If there is an agent, it becomes the subject (nominative).... (Hearing the nominative, however, does not give the German hearer, for example, the information necessary to identify the underlying absolute case--such as agent or instrument--of the entity referred to. That is possible only after all of the entities and the event have been mentioned, and the relations sorted out.)

In this approach, surface case morphology takes on part of the traditional flavor of sentence organizing, rather than the semantic role of relating entities to events. And interlinguistically the assignment of surface case morphology is--because it is mechanical--trivial. What is to be compared across languages is the underlying representation, i.e., the covert, non-communicated categories. And because in translation these underlying cases are assumed to be identical for source and target language, they have no contribution to make to answering the question why particular forms plausibly occur when particular messages are conveyed in this or that language. For the

generative linguist the question of the occurrence of surface case morphology is not a semantic one; it is a matter of derivational rules--and the only interesting cross-language comparison is which and how many rules the languages have in common.

1.3 What is to be compared across languages in the Form-Content framework?

In the previous section we saw what the traditional/structuralist and the generative frameworks consider to be the basis for contrastive study. In this section, we will approach this question from the Form-Content viewpoint.

It is our contention that when it comes to inter-linguistic studies, the way to reach an understanding of language (to find the answer to the why) is through insight into linguistic systems and their use by speakers in communicating. The comparison of structures, patterns and sentences does not in itself tell us much about the nature of language; these are significant only in the light of the systems to which they belong. If our objective is the comparison of grammars, then we must compare the elements grammars are made of, namely grammatical systems such as number, gender, focus, participation, etc., grammatical systems being made up of signal-meaning correlations. We expect that the differences between languages will be understandable in terms of the different grammatical

systems available to the speakers of a particular language, differences in the (same) grammatical systems in two languages, and/or differences in strategies of communication developed by the speakers of one particular language vis à vis those developed by the speakers of another language.

These systemic and strategic comparisons are primarily concerned with the communicative use of language; we therefore find the theoretical approach of Form-Content analysis with its communicative orientation the most suitable starting point and theoretical framework for contrastive study. Form-Content analysis is "best characterized as an explanatory theory which differs from other linguistic approaches in taking seriously--as the actual basis for analytic work--two self-evident and seemingly trivial orienting principles" (Kirsner 1977:21):

1. Language is a particular device of communication
(= communicative factor)
2. Language is a particular instance of human behavior
(= human factor)

With these two principles as a guide, we can observe speakers using language or languages and make certain predictions on the basis of their behavior with the meanings of the languages.

An example is found in Klein (1976), who shows that what appear to be the same interlinguistically--

English the and Spanish el

English a and Spanish un

(traditionally called definite and indefinite articles)--are not the same, because el and un have different meanings than (and do not constitute a system as do) the and a, suggesting a way "in which linguistic elements in different languages may be partially similar and yet partially different" (1976:414).

In this dissertation we will show that even where the same systems (with the same meanings) exist across languages, differences deriving from form, scope and implementation (these terms will be defined in 5.1) will result in differences in distribution. The signal side of the signifiant-signifié pairing has been unjustly overlooked in the focus on the primacy of system. Saussure proclaimed early in this century that "in language there are only differences without positive terms" (Saussure 1916/1959: 120), an idea rephrased by Jameson (1972:15) as follows:

the positive nature of the substance used is not as important as its function in the system...a given unit of currency has the same function whether it be gold or silver coin, assignat or wooden nickel.

This study will show, however, that interlinguistically at least, the nature of the positive terms cannot be ignored.

Our investigation relies on previous analyses¹⁵ of the Systems of Participation of each of the three languages mentioned in 1.0 (cf. Chapter 2 for descriptions); we shall examine how speakers of the different languages exploit these systems to communicate the same messages ("same" in the sense of section 1.1).

For such an investigation the ideal experimental situation would be to have a single scene described by an observer who is a monolingual native speaker of more than one language, so as to keep both the content and the human idiosyncrasy constant, although even in this impossible ideal case, we would have to assume (without proof) that the subject does "see" the same scene in the same way for each description. As the impossible is not a feasible goal, however, two distinct approaches will be used in this study to yield a composite picture that approximates the ideal by including both of its features, although not in a single operation. That is, we will combine a study of original novels and translations with a study of monolingual speakers' descriptions of an identical scene (cf. 1.4). The reason for using originals and translations of connected narrative is twofold: the purpose of the translation is to get at the "same material" mentioned above; the aim of the connected narrative is to provide a cohesive corpus for quantitative observation, that is, a corpus that will reflect frequencies in a "natural" way, something impossible with selected examples.

Since the ideal monolingual speaker of more than one language mentioned above does not exist, we are faced, in working with translations, with the different styles of different authors (each writing in his native language). This difficulty is not to be overcome. A certain extent

of idiolectal quantification is no doubt possible (the point will be taken up at various places below), but it is not the central objective of this study.

1.4 A second approach to the problem

Despite Barth's claim that good translations are the best means for comparing and contrasting two languages (Barth 1961:9), they do present one serious drawback as a tool for contrastive work. The observer can never be certain to what extent the phenomena found in the translation are actually attributable to the characteristics of the target language and to what extent they are due to the influence of the source language.

For this reason, we have added a second approach: additional data are included, obtained by having native speakers of the three languages in question describe the same sequence of events--in the nature of picture stories with no verbal content. In this way, the potential influence of a "source language" is reduced. Insofar as the chosen scene is a culturally neutral one, the potential influence of a possible "source culture" is also reduced. The drawback of this approach is that there is no getting around the "eye of the beholder"; that is, each narrator is free to interpret the scene in his own fashion, and the end result may be less comparable linguistic material than that found in translations because different aspects of the scene may have been highlighted.

It is hoped that by approaching the problem from both these angles--translations of texts and original narratives of the same picture sequences--the pluses will be multiplied and the minuses balanced out. If a quantitative comparison of different texts in a language, some originally written in that language, others translated into it, yields recognizable statistical or distributional patterns distinct from those exhibited by a similar comparison of texts--original and translations--in another language, then we have, it seems, an indication that counterbalances the criticism of possible source-language interference. If, in addition, the same interlingual distinctions emerge when native speakers of different languages narrate the same scene, while recognizable patterns unite the narrators from the same language background, then we have, as it were, risen above the drawbacks into a useful area of exploration.

Put graphically, information from the sources could produce evidence that would allow a grouping as follows:

I	II
1. Original text L_A	1. Original text L_B
2. Translation of text L_B into L_A	2. Translation of text L_A into L_B
3. Native L_A narration _i	3. Native L_B narration _i
.	.
.	.
4. Native L_A narration _n	4. Native L_B narration _n

If the elements in Column I are more like each other than like any element in Column II, and the elements in Column II are more like each other than like any element in Column I, then these common denominators will presumably derive from some language-specific feature or features. That is, if the translation of, say, a Spanish novel into English is more like an original English novel in the distribution of its forms than like the Spanish original it is a translation of, then the linguistic influence of the target language has overridden the influence of the source. And if the German native-speaker narratives, say, have more distributional tendencies in common with each other and with the German texts than with the Spanish narratives or with the Spanish texts, that also can be attributed to dictates of the German linguistic system.

In addition, we must consider the distinction between translation and native narrative. The former is an exact skill, while the latter appears in comparison to be more or less spontaneous. That is, the translator is to a certain extent bound by choices already made by the author, while the author (of a novel or of an elicited narrative) has the full scope of choices available to him. If correlations such as those suggested above are observed, they would be a good indication that all the writers are primarily influenced in their behavior by the linguistic system in which they are writing. Let us express the "ifs"

above as a hypothesis for investigation:

1.5 General hypothesis

It is hypothesized that there will be quantitatively recognizable differences among the languages in the distribution of specific forms that are equatable on the basis of their meaning. It is further hypothesized that these differences reflect biases in production that are understandable in the light of the grammatical systems available to the speakers and writers of the different languages.

For example, having established that each of the languages under comparison contains a signal for focus, we may find that one of the languages mentions entities in focus more often than another. This might be the case if one of the languages employs a signal (such as inflection on the verb) that does not explicitly mention the entity, while another language conveys the focus meaning via the noun referring to the entity.

The general hypothesis rests on the assumption (central to Form-Content analysis, and based on its human factor orientation) that statistical tendencies are explained by the grammar, and that the motivation for quantifiable differences is to be sought in the basic elements of the linguistic system itself--in its signals, meanings and value relationships.

Quantitative interlinguistic study is rare, and

where it has been done, as in Barth (1961), it has presented a collection of statistical facts in a theoretically unprincipled and incoherent way. The tendencies expressed as a result of such quantified investigation are not relatable to a grammatical theory. It is perhaps in recognition of this that Bausch rejects the primacy of quantitative data:

Auch wir haben uns, um Tendenzen zwischen unseren Uebersetzungssprachen angeben zu können...an statistischen Auszählungen orientiert. Solche Zahlen stehen aber bei uns bewusst nicht als Hauptziel--im Gegensatz zu Barth--da wir uns der Relativität statistischer Ergebnisse innerhalb begrenzter Materialgrundlagen bewusst sind.... Die qualitative Seite soll vielmehr eine Stütze durch die quantitative finden, die nur Tendenzen zeigen will. (Bausch 1963:3, fn.7)

But if we can count on theoretically motivated semantic indications of "sameness", we may expect quantitative interlinguistic study to yield insight into biases in the communicative behavior of speakers that relate to the involved linguistic systems. We would expect, in short, that the meanings of the forms involved and the nature of the systems in which they occur will help provide an explanation for the observed distributions. It should be clear, of course, that such biases in production cannot be observed in individual sentence translations but only from a quantificational examination of the data.¹⁶

1.6 Extension of the general hypothesis

In keeping with the general hypothesis stated above we may expect that the influence of the target language

(L_2), i.e., the language being translated into, will override the effects of the source language (L_1). One could, however, also expect that the source language will not remain without effect.

It is therefore further hypothesized that the dominating influence in the case of $L_1 \rightarrow L_2$ translation will be that of the L_2 , and that the quantitative relationship between source and target languages can best be understood in the light of what is known about both L_1 and L_2 .

The question posed by this extension of the general hypothesis can only be answered--despite its deceptive simplicity--by an approach to interlinguistic comparison that has solved the theoretical question of what constitutes a meaningful comparison. To the extent that the Form-Content approach to language and to interlinguistic study succeeds in doing this, we will be able to pursue this question in the terms of our theory.

The substance of these hypotheses will be tested in this study with respect to the Systems of Participation (SPts) of English, German and Spanish in a number of specific areas.¹⁷ The SPts are briefly characterized in Chapter 2. Chapter 3 contains an application of quantitative method to known grammatical facts and an argument for extending the procedure to ascertain less known facts. Chapter 4 describes the procedure followed in this study.

The data are discussed in chapters 5 and 6, the former dealing with bulk quantitative data, the latter with more specific utterance comparisons. Chapter 7 suggests some areas for further research and the final chapter presents a summary and conclusion.

Notes to Chapter 1

1. That is, it subjects to interlingual test the analyses that have been made within individual languages, in keeping with the communicative orientation of Form-Content analysis. It is founded on acceptance of this orientation as the best means for dealing with the data. Its primary focus, however, is not argument for or against theories, but a study of data from this particular orientation. We have therefore omitted an extended discussion of the Form-Content approach, assuming that the reader is familiar with its basic premises and development (if not, we refer him/her to Diver 1975, García 1975, Kirsner 1969, 1973, 1977, Klein 1976, Otheguy 1977, Reid 1974, 1977, Zubin 1972, 1978). We include theoretical discussion only to the extent that it becomes relevant to the investigation.
2. Jakobson (1959:233) pointed out: "On the level of interlingual translation, there is ordinarily no full equivalence between code-units [signal + meaning] , while messages may serve as adequate interpretations of alien code-units or messages."
3. Sapir pointed out that "we must know what concrete concept is directly related to what other, and how" (1921:23) and that "in every intelligible proposition at least two of these [objects, actions, qualities] radical ideas must be expressed, though in exceptional cases one or even both may be understood from the context" (1921:93). These very basic aspects of grammar can be understood from the meanings of the elements in the SPTs and their relation to the activity or event involved.
4. Here the German infinitive is doubtless conditioned by the choice of the main verb. (References in parentheses are to texts and translations used. Cf. Appendix 1.)
5. Composites consist of two verbal elements, a finite and a non-finite form, where no preposition occurs to separate the two. For example,
 - i. I heard him enter the room.
 Cf. 4.2 for a more detailed description.
6. In this section we discuss some primarily theoretical presentations (which may or may not refer specifically to case) and some grammars applying the theories. Where an author has taken a specific position with regard to case analysis, that is brought into the dis-

cussion. Where not, we attempt to draw the connection between the theoretical position and the comparison of case across languages.

7. Genitive is omitted here because it falls outside of the scope of our investigation, i.e., it is not included in the SPTs.
8. Wandruszka also points out repeatedly that languages sometimes "differ not so much because one has a construction not available in the other but rather in regard to the acceptability or frequency of occurrence of constructions" (König 1971:270), but does not support this with quantitative data.
9. Surely these forms signal more than just 'question'--as opposed, e.g., to what?, where?, etc., which Lado would no doubt also interpret as signalling 'question'.
10. Cf. Hellinger (1977:38) for examples in which the "deep structure dative element" is realized also in German "with the help of a preposition," e.g.,
 - i. Maria schickte ihm ihre Bewerbung.
'Maria sent him her application.'
 - ii. Maria schickte ihre Bewerbung zu ihm.
'Maria sent her application to him.'
 although Hellinger admits that semantic or stylistic Verschiebungen (displacements) may result.
11. And in the proper context, even this "direct object" could be pronominalized:
 - i. Er fragte mich schwierige Dinge. Er fragte sie mich leichthin, als ob ich ohne zu Überlegen die Antworten aus dem Ärmel schütteln könnte.
'He asked me hard questions. He asked me them offhandedly, as though I could shake the answers out of my sleeve, with hardly a thought.'
12. Nor do they take into account elements in the discourse, e.g. what is known and what is new in an utterance. Hellinger (1977:38) points out that these factors can affect the situational equivalence of expressions and suggests that this is an argument against sentence-based grammars for contrastive analysis. We fully agree, though we do not go into the problem in detail here. Cf. Chapter 6 for some discussion of discourse.
13. The several pedagogic grammars, because of their pattern by pattern approach, are led (without proper justification, we feel) to the assumption that structural similarity of patterns precludes learning difficulty--

and do not take into account differences in distribution (frequency or cooccurrences).

14. There are cases of surface ambiguity that remain unresolved in the communicative interaction, e.g.,
 - i. Ich schrieb ihr einen Brief.
'I wrote her a letter.'
ambiguous between wrote the letter to her or for her.
15. García 1975, Zubin 1972, Diver: personal communication.
16. So, for example, one of the possibilities for expressing an original English -ing in German is with -end, as in Example (9). The quantitative summary of occurring forms in German reveals, however, that this option is used extremely infrequently. While the original English text employs 427 non-nominalized -ing forms, the German translation exhibits only 15 verb forms with -end, and most of these do not occur as translations of original English -ing. They generally do not describe simultaneous events, like Example (9), but are best interpreted adverbially, as in
 - i. a. Beinahe schaudernd vor Widerwillen, vermied sie Emily Brents Gegenwart. (AC p.82)
b. She had avoided Emily Brent with a kind of shuddering aversion. (AC p.81)
 - or
 - ii. a. Lombard hob warnend den Finger. (AC p.86)
b. Lombard held up an admonitory finger. (AC p.87)

though by simple examination of the German utterance it is not entirely clear if simultaneity or adverbiality is intended by the writer.

We can see from these examples that the few occurring German -end forms have varied sources in the original English. As a matter of fact, of the 15 occurring German forms, only 4 derive from an English -ing. Without completed semantic analyses for the -ing forms in English and the -end forms in German, we have no reason to expect greater correlation. In fact, the lack of correlation here may be an indicator that we are either not comparing the same things or that they enter into totally different value relationships in the two languages.
17. The results of this investigation--largely restricted to one work by one author in each language and translations thereof--will not produce absolute norms for any of the languages, but should--because of the length of the examined texts and the comparison with original narratives by ten different writers in each language--provide sufficient data for relative comparisons.

Chapter 2

The Systems of Participation (SPTs)

2.0

The general hypothesis and its extension (1.5 and 1.6) are to be tested with respect to the Systems of Participation in English, German and Spanish because analyses of these systems in these languages have been made by linguists working within the framework of Form-Content analysis: García 1975 (for Spanish); Zubin 1972, 1978 (for German); Diver, personal communication (for English), thus providing the analytical basis from which a contrastive study can be undertaken.

2.1 Basic relational concepts

Zubin (1978:45) points out in summary of a discussion on the essential concepts in communication that "a human being, regardless of the particular language he speaks, will want to convey information about events involving entities." He is discussing a point brought up by Sapir (1921:93), who wrote: "We must have objects, actions, qualities to talk about, and these must have their corresponding symbols in independent words or in radical elements. No proposition, however abstract its intent,

is humanly possible without a tying on at one or more points to the concrete world of sense."

The Systems of Participation constitute hypotheses about how the speakers of a particular language tie on to the world of sense, how they conceive of entities in relation to events ("objects" in relation to "actions" in Sapir's terms)--i.e., in terms of degrees of participation. Since such entities and events are the basic things speakers talk about, we can expect a high density of data available for our study.

2.2 Grammatical systems

Although all speakers talk about entities and events, whether or not a particular language possesses a grammatical system designed to talk about them in particular ways and if so what semantic substance this system will employ are "empirical questions about the grammar of the specific language, not about universal grammar" (Zubin 1978:45).

Each of the specific languages in question in this study has been found to have such a grammatical system (designed to solve a communicative problem). These systems are hypotheses about correlations of substance, form and meaning. The substance¹ is in each language that of Participation², an abstract relational concept.

"Contribution" [read: "Participation"] does not constitute this concept, but rather names it as pragmatically as possible. Its manifestation in messages can

most often be conveniently described in terms of potency or activity. The extent to which Contribution [read: Participation] may be considered a unitary semantic substance ultimately rests on the extent to which "activity," "potency" and other manifestations can be explicitly defended as contextual inferences from the abstract substance. (Zubin 1978:52)

The forms and meanings are concrete correlations within this abstract substance, concrete in that there is an invariant relationship of form to meaning in all utterances in the language. The forms--signals³--of the SPTs are different for English, German and Spanish. The meanings of the individual forms, however, are the same: HIGH, MID, LOW; see below.

These meanings are theoretical constructs arrived at in the process of a linguistic analysis and validation, and they play a role in a wide range of communicated messages. It is important to understand the theoretical distinction between meaning and message in Form-Content analysis and we will therefore discuss it at 2.3.

2.3 Meaning and message

Meanings are products of the linguistic analysis. They are hypotheses of the content of certain sound sequences (the hypothesized signals) and are arrived at by the analyst as a result of a study of the distribution of the corresponding signals in messages conveyed by speakers of the language. The Form-Content linguist seeks to arrive at these meanings (in our case, of the SPTs) through his analysis; the case relations, however--among them, the who-does-

what-to-whom--are messages that can be plausibly understood from these meanings in context. As Zubin (1972:28) states it:

The specific nature of roles (such as giver, receiver, gift) in an event are inferred from the verb in question (say, give) together with the surrounding context, and not from the case morphology. That is to say, the imprecise case meanings give no information about the exact kind of contribution [read: participation] -- such as 'agent' or 'patient'--made by a participant in an event, but function only as aids in the assignment of the participant to a role in the event, a role entailing some specific amount of contribution.

Messages, on the other hand, are that which is communicated from speaker to hearer, writer to reader. In Form-Content analysis, in contrast to other theoretical frameworks, message is a pretheoretical notion. It is understood as a given in the communicative event. It is thus not the task of the linguist to explain the generation of the message from some underlying component of the grammar, but rather to show why the forms occurring in the utterance (with their meanings) are plausibly used in conveying such-and-such message. This is done, as a rule, by demonstrating that the meanings of the forms produced are coherent with and can be shown to contribute to the message intended and conveyed.⁴

Thus, the meanings of individual signals are seen to contribute in a plausible way to the message. "In a plausible way" means that it is possible for the analyst to demonstrate an inferential process or a communicative strategy served by the signal-meaning combination in

getting the message (across). This is very different from the mechanical procedure advocated e.g. by Postal:

Besides a dictionary which associates sequences of... semantic markers (readings) with lexical items, the semantic component of a linguistic description will also contain a set of projection rules which will combine the readings of lexical items in order to obtain derived semantic characterizations for higher order constituents, on up to the constituent sentence itself. (Postal 1969:32)

Thus Postal can speak of the result of this formal procedure as the meaning assigned to the sentence, which is then a theoretical construct in the theory of generative grammar.

Under the orientation of Form-Content analysis, such an adding-up of meanings into ever larger meaning stretches is not possible; a meaning is always associated with a specific signal and provides speaker and hearer with a tool for solving the communicative problem: conveying or understanding the message.

Let us consider an example relevant to the current study: Both the traditionalist/structuralist and the generative approaches try to incorporate into the "meaning" of case forms the potentially infinite roles that entities can play in events. The former thus proliferate the indications of, e.g., the accusative: "the person or thing to whose...or the person to whom..., or the person...." (Curme 1964:524), while the latter remain uncertain as to what and how many cases they will ultimately need to cover all contingencies.

In Form-Content analysis, the signals of the SPTs

serve a different purpose. They are not expected to communicate directly what roles are being played by the entities involved in an event. Rather, they enable the hearer--by giving him the necessary relative information (the signals of the SPTs rank the entities actually named in the utterance as to degree of participation in the event)--to infer the roles being played. The position before the verb in English, e.g., signals that the entity referred to participates most (=HIGH)--of the entities mentioned--in the event, and the role played by that entity in the event can be agent, as in

(1) a. The child gave his friend the toy.

b. The sun dried up the puddle.

or instrument, as in

(2) a. His fender scraped the garage door.

b. The key opened the door.

or any one of a number of other roles. I.e., knowing the degree of participation of an entity in an event and knowing what entity and what event are involved, are what enables the hearer to arrive--through a process of inference--at the role played by the entity in the event.

2.4 Three SPTs and the Spanish System of Focus

We shall now characterize briefly the SPTs of German, Spanish and English, as well as the Spanish System of Focus.⁵

German System of Participation (German SPt)

<u>Substance</u>	<u>Signals</u>	<u>Meanings</u>
	Nominative =	HIGH ⁶
Participation ²	Dative =	MID
	Accusative =	LOW -- in the activity described by a signal of the System of Occurrence (verb)

Example: Der Vater gab seiner Tochter einen Kuss.
 Nom. ↑ Dat. Acc.
 HIGH MID LOW
 Occurrence
 'The father gave his daughter a kiss.'

Fig. 1. Adapted from Zubin 1972:28.

As the morphology of nominative, dative and accusative is carried either by pronouns or by articles, demonstratives and adjectives, to use traditional terminology, it is only when a pronoun is present or when a modifier (or modifiers) cooccurs with a lexical entity-referring form (noun) that meanings of the SPt can be signalled.

E.g., in

- (3) Er gab Maria einen Ball. 'He gave Maria a ball.'
 Nom. Acc.
- (4) Es kostete ihn Mühe. 'It cost him (an) effort.'
 Nom. Acc.
- (5) Er sandte ihr Blumen. 'He sent her flowers.'
 Nom. Dat.

only the underlined forms are signals of meanings in the SPt. The roles (case relations) of the entities referred to by these forms can thus be inferred directly via the

signalled meanings. The roles of the remaining entities (those without SPt signalling) must be inferred indirectly, using lexical information plus the information already provided by the other forms which do signal SPt meanings.

In (5), for example, the "agent" role for er 'he', and the "goal" role for ihr 'her' can be directly inferred from the case morphology (nominative and dative)⁷ and the meaning of the verb--nominative signals HIGH participation, the dative signals MID, and this interacts with the meaning of the verb senden 'send' to suggest that er (the most active participant) is agent and ihr (a less active participant) is goal. The "patient" role of Blumen 'flowers' can be indirectly inferred: with nominative and dative signals (HIGH and MID) already occurring, chances are high that a further occurring entity, especially an inanimate one, will play a low-participant role in the activity send.

Spanish System of Participation (Spanish SPt)

<u>Substance</u>	<u>Signals</u>	<u>Meanings</u> ⁸
	(verb ending = <u>high</u>) ⁹	
Participation ²	<u>le/les</u>	= MID
	<u>lo/los</u> <u>la/las</u>	= LOW
Examples:	<u>Le</u> dí un libro. MID (high + low inferred) 'I gave him a book.'	<u>Lo</u> dí a ella. LOW (high + mid inferred) 'I gave it to her.'

Fig. 2. Adapted from García 1975:66-68,99.

This system interlocks¹⁰ with, among others, the System of Focus, which can be represented as in Fig. 3.

<u>Spanish System of Focus</u>		
<u>Substance</u>	<u>Signals</u>	<u>Meanings</u>
Focus	verb ending + <u>yo, tu, él, ella,</u> <u>ello, nosotros,</u> <u>vosotros, ellos,</u> <u>ellas</u>	= FOCUS
	<u>me, te, nos, os,</u> <u>le/les, lo/los,</u> <u>la/las</u>	= NON-FOCUS

Fig. 3. Adapted from García 1975:68-71.

The entity referred to by the verb ending, i.e., the entity in focus, plays an implicit role in the System of Participation in that it is (generally) inferred to be high participant although that meaning is not specifically signalled. I.e., Spanish does not have a signal for HIGH participant. It gets along without it, because in most cases the entity in focus can be inferred to be most active (= highest in participation) in the event.¹¹

Although the Spanish SPt has two opposed meanings, MID and LOW, at most one of these can be signalled grammatically in a given utterance. If two third-person NON-FOCUS entities are both to be referred to with clitics-- which would yield le (or les) + lo (or la, los, las)-- the mid participant is referred to with se, a clitic unspecified as to Focus and Participation. That is, the sequence

le lo never occurs.¹²

Another important feature of the Spanish SPT is the interlocks in which the forms are involved. Whenever le/les, lo/los, la/las appear, they signal a good deal of grammatical information in addition to that pertaining to the System of Participation. That is, in addition to MID or LOW in this system, they also signal THIRD PERSON, SINGULAR or PLURAL, GENDER, NON-FOCUS, HIGH DEIXIS, etc. (cf. García 1975, Chapter II).

Correspondingly, the first- and second-person clitics, me or te, which do not signal a meaning in the SPT, do signal--because of interlocking systems--a number of other meanings: FIRST or SECOND PERSON, SINGULAR, NON-FOCUS--from the last of which a non-high degree of participation is inferred. The appropriate non-high role is inferrable for their referents from the presence (or absence) of additional participants: a mid role when another less potent form cooccurs, e.g. a lexical item like flores or a specific signal like lo, as in

- (6) Me mandó flores. '{He } sent me flowers.'
 {She }
- (7) Me lo mandó. '{He } sent {it } to me.'
 {She } {him }

or a low role when that is appropriate:

- (8) Me golpeó. 'He hit me.'
 She

The clitics thus "either signal case participants directly or...they contribute grammatical meanings (PERSON, FOCUS,

and DEIXIS) that are highly pertinent to the inference of case roles, inasmuch as they speak directly to the question of number of different participants" (García 1975: 79).

English System of Participation (English SPt)

Substance: Participation

Signals: P1 V P2 P3

Meanings: HIGH MID LOW

Example: Hans offered her some cake.
 P1 P2 P3
 HIGH MID LOW

Fig. 4. From Diver, personal communication.¹³

The English Participation System is a collapsing¹⁴ system, interlocked with Focus.¹⁵ It uses word-order signals, except for those 'pronouns' that have a two-way morphological differentiation that is used consistently with the word-order signal¹⁶....The P's [grammatical participants] are identified negatively by the absence of any preposition, which eliminates most of the significant competition--i.e., words whose lexical meanings make them eligible for participant status--, positively by satellite morphology where available (I hate yesterdays vs. He left yesterday, but I hated yesterday is non-distinct), elsewhere by inference, in response to the question of whether participant or non-participant status is the more coherent in respect to the entire message: He left money, He left yesterday. [money is a P, yesterday is not, in the last two examples.] (Diver, personal communication)¹⁷

It can be seen that the English SPt differs from the other two SPts in that its signals are relative position in the utterance rather than distinct segmental morphology.

2.5 Similarities in the SPTs

This difference aside for the moment--it will play a major role in the discussion of the communicative and inferential strategies employed by speakers of the three languages--the systems have a great deal in common: All three deal with the same semantic substance: participation in the occurrence described by the verb. All three have signals whose meanings are relative, i.e., they are ranked in a scale, where the precise delineation of each meaning is dependent on its value relationship to the others. Each system has, in effect, a three-way valuation of the substance, HIGH-MID-LOW, although in Spanish the high is not a signalled meaning but an inference. Indeed, the existence of the meanings MID (less active) and LOW (least active) in Spanish intrinsically implies, and leads the listener/reader to look for, a participant who (that) can be inferred to be high (most active).

Another point that should be made about the three SPTs has to do with closed grammatical systems (an example is the System of Number, where in English SINGULAR -Ø, meaning 'one', and PLURAL -s, meaning 'more than one', exhaust the substance). In such closed systems the value¹⁸ relationships among the individual elements become crucial. Whether a substance is exhaustively characterized by two forms or half a dozen makes considerable difference as to the scope of the individual forms.¹⁹

The Systems of Participation are closed systems. The signals and meanings postulated exhaust the substance in German and English, both of which have three-member systems. In Spanish, the substance is covered by two signalled meanings and a non-signalled inferred third participant. English further collapses two of the signals in two-participant situations. That is, when there are three participants, English uses its word-order signals as indicated above, with an ordered ranking with respect to the occurrence: 1 - verb - 2 - 3. Since the English SPT operates with word-order signals, however, it exhibits a peculiar property relative to the other two languages. When only a single participant follows the verb, it could be either a P2 or a P3, i.e., it is nondistinct as to first or second position after the occurrence (indicated as P2/3). In addition, when only one participant is expressed, it is indistinguishable, as far as signalling goes, as to P1, P2 or P3. This is not the case with the Spanish and German SPTs, for their signals consist of segmentable morphology which is either present or not. There is, therefore, a value distinction between the SPTs, in that the English system exhausts the substance either with three or with two members, depending on how many are mentioned, while Spanish and German are bound by the three-member opposition whether all members are mentioned or not.

Another difference that must be considered is the

number of forms in the language that can signal the meanings of the SPt. In Spanish, the signals are the clitics le(les), lo(los), la(las), that is, only certain third person pronouns. In German, however, the meanings of the SPt can be signalled not only by pronouns, but by all lexical and grammatical forms in the language capable of exhibiting case morphology, when they do not occur following prepositions. Examples appear below. The participants in

(9) a. Mein Onkel kaufte mir ein Buch.
 Nom. Dat.Acc.

b. Er kaufte es mir.
 Nom. Acc.Dat.

c. Er kaufte es für mich.
 Nom. Acc.

are mein Onkel, mir, ein Buch,²⁰ er, es, but not mich as it occurs there--because it follows a preposition.

In English, the signals include all lexicon not appearing after prepositions²¹ and semantically interpretable as contributing participant status to a message (my uncle, me, a book, he, it in the translations of (9) that appear in (10) below, but not the me that occurs after for).

(10) a. My uncle bought me a book.

b. He bought it for me. (translates both 9b
 and 9c)

English proper names are included because their use constitutes a signal--they occupy a linear position with

respect to the occurrence signal--while in German proper names do not signal participant status.²²

A graphic illustration of the signals and meanings involved shows the correspondences indicated in Fig. 5.

The Signals and Meanings of the SPts

MEANINGS:	HIGH	MID	LOW
Spanish		le	lo
German	Nominative	Dative	Accusative
English	P1	P2	P3

Fig. 5

The systems share meanings and substance and one might therefore expect translation to show a one-to-one correspondence among the signals (forms) associated with those meanings. But the systems differ in type of signal (morphology vs. word order) and value (number of oppositions) as well as in the number of forms that can carry the signal (a short listable number, as in Spanish, vs. whole categories, e.g., most or all terms referring to entities, as in German and English). It is therefore possible that the speakers/writers will opt for different alternatives from among those available, depending on which language they are speaking/writing. A study of the distribution of the signals of the SPts in equatable situations appears to be ideally suited to yielding insights about different communicative strategies used by the speakers and imposed,

or at least motivated, by the grammars. It will thus be our task first to establish what those strategies are, and second, to attempt to shed light on them, given what we know about the signals and meanings of the systems involved.

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Notes to Chapter 2

1. Substance is what is covered by a system of co-existing values (see below). Within this system are meanings, each of whose value is delimited by the value of the other meanings in the system (Saussure 1959:115). We use the term synonymously with "semantic domain". Examples of Substances are: Number, Focus, Participation. Cf. Diver 1974.
2. Zubin uses the term Contribution as a label for the substance in German; García calls it Relative Activeness in her work on Spanish. We are here generalizing the term Participation to all three systems in order to avoid terminological confusion and to make it clearer that the same substance is involved.
3. Signal = form. The term is derived from Saussure's signifiant (Saussure: signe = signifiant + signifié).
4. Since the message is a given, and in fact a prerequisite to the explanation of coherence between it and the meanings signalled, only those messages that are completely clear can be used in the validation of an analysis. That is, if we cannot agree on the content (message) of an utterance, then the Form-Content analyst cannot use that utterance in validating his analysis.
5. For more detailed description of the Spanish, German and English SPTs, cf. García 1975, Zubin 1972, 1978, and Reid 1974 respectively. The fact that only the Spanish System of Focus is described here is not to imply that German and English have no Systems of Focus. They do. Cf. Note 2, Chapter 3 for brief descriptions. However, because the Spanish high participant is generally inferred via the signal for FOCUS, the Spanish System of Focus is included in the basic System of Participation descriptions here.
6. It is a convention in Form-Content analysis that MEANINGS are written in capital letters.
7. The nominative in this example is an unambiguous signal in the SPT. In some instances, however, the morphology for nominative and accusative is not distinct. Such cases are discussed in greater detail in Chapter 5.
8. García used the terms most, LESS, LEAST. We are again generalizing terminology in the interests of comparability.

9. Not grammatically signalled. Cf. explanation below.
10. An interlock occurs when a single signal is paired with more than one meaning, the several meanings belonging to different grammatical systems. E.g., the Spanish form la is a member of the System of Number (vs. las), the System of Gender (vs. lo), the System of Person (vs. first and second person forms), as well as the Systems of Focus and Participation.
11. It cannot be said that the verb ending signals both FOCUS and HIGH participant because of utterances like:
 - i. Se arreglan coches. 'Cars repaired.'
 an "impersonal passive" in traditional nomenclature, where the verb ending "agrees" with the plural coches 'cars' and cannot be assigned the meaning MOST ACTIVE (HIGH participant in the terminology used here). Example and explanation from García 1975:68.
12. Cf. Garcia 1975:410-417 and 6.12 below for a discussion of the reasons why.
13. Letter of March 8, 1977. Cf. also Reid 1974:48-49.
14. When only two participants are present, the signals are: P1 V P2/3. When only one participant is present: P1/2/3 V.
15. Participant before the verb = FOCUS, participants after the verb = NON-FOCUS in the sequence P1 V P2 P3. Cf. also Note 2 to Chapter 3.
16. The two-way opposition between I : me, he : him, she : her, we : us, they : them thus reflects a morphological differentiation consistent with the meanings of the SPT, the first of each pair of terms being consistent with HIGH, the second with NON-HIGH.
17. Letter of March 8, 1977.
18. Cf. Ferdinand de Saussure (1916/1959:111-122) and Diver (1974).
19. E.g. If a language provides only the two forms chair and sofa for seating facilities in the home, their scope of application will be very different than in a language that includes all of the following: chair, seat, armchair, stool, bench, sofa, couch, etc. Some of the value relationships significant to this study will be of a somewhat different type; they will be in the form of differential overlap with other grammatical systems, to be further discussed below.

20. Although ein Buch is nondistinct as to whether it is nominative or accusative, in the utterance there is already an expressed nominative, mein Onkel, and in German it is not possible to have two nominatives for a single occurrence unless conjoined in a single role, e.g.
- i. Mein Onkel und mein Vater besuchten mich.
'My uncle and my father visited me.'
(This mich 'me' is a signalled participant, contrary to the one in
 - ii. Mein Onkel kaufte ein Buch für mich.
'My uncle bought a book for me.'
because it does not follow a preposition.)
21. Items occurring in prepositional phrases are not signalled as participants. Whatever else the prepositions are determined (after analysis) to signal, it seems clear that they remove entities from direct involvement with the verb. Note the intuitive reaction to the following set of utterances:
- i. I taught them math.
 - ii. I taught math to them.
 - iii. I taught math at them.
- The difference between ii. and iii. will be explainable in terms of the meanings of the individual prepositions. But the difference in i. vs. ii. and iii. lies in the direct participation of them in the activity of teaching (i.e., they learned the math I taught them) and a less direct participation (the utterance is neutral as to whether the teaching was successful or not: to them; or it implies that it was not successful: at them).
22. In some dialects of German, and colloquially, it is possible to prepose an article to the proper name, e.g. der Fritz, die Lotte. In this case, the sequence modifier + proper name can also signal participant status, as the article carries the necessary morphology.

Chapter 3

Quantitative Method

3.0

We suggested in Chapter 1 that quantitative data was an invaluable tool in comparative analysis because it could reveal speaker biases relatable to particular features of the linguistic systems. In this chapter we will show--on the basis of a system other than the SPT--that known differences between grammars, i.e., unquestioned analyses, can be shown to shed light on observable differences in distribution. We will argue that when the same kind of explanatory relationship exists in other cases, we can use observable differences in distribution to shed light on and lend support to particular analyses.

We will show here that known facts about the verbs¹ in the several languages--i.e., the informational value of the verb endings--allow us to explain the distribution of terms referring to the entities involved in the activities described by the verbs. To do this, we shall examine the relative frequency of different types of forms when reference is to be made to focus vs. non-focus entities. These forms are either lexical or grammatical signals (the pronouns, nouns and demonstratives of traditional grammar).

3.1 Focus and non-focus entities

What is known about these forms in the languages in question? The personal pronouns of all three languages show certain distinctions in morphology:

	<u>Spanish</u>	<u>German</u>	<u>English</u>
FOCUS ²	yo	ich	I
	tu	du	
	él/ella	er	he/she
	nosotros	wir	we
	vosotros	ihr	
	ellos/-as		they
NON-FOCUS	me	mir, mich	me
	te	dir, dich	
	le, lo/la	ihm/ihr, ihn	him/her
	nos	uns	us
	os	euch	
	les, los/las	ihnen	them
NON-DISTINCT	se	sie	you
		es	it

That is, in most cases one can tell at a glance whether an occurring pronoun is a FOCUS or a NON-FOCUS pronoun.

English and German share a non-specificity in verb endings, i.e., the verb ending does not signal the participant in FOCUS as it does in Spanish. In

(1) Hablo español.

the verb ending signals that the FOCUS entity is first person singular (present tense). But

(2) speak English

provides no such information (it simply indicates that the verb, if finite, is present and not third person singular indicative), while

(3) spreche Deutsch

is interpretable as first person only if it is clear that the utterance is in the present indicative. Both (2) and (3) lead the listener/reader to assume an imperative at first. The English verb form in (2) conveys only the lexical content and suggests present tense (other than third person singular indicative); the German verb form in (3) conveys lexical content plus singular. Other information must be derived by inference from the context or--and this is generally the case--from cooccurring forms such as I or ich.

We have, then, the following known facts:

- 1) all three languages have distinct morphology indicating FOCUS or NON-FOCUS in the pronouns.
- 2) Spanish signals almost unambiguously in all tenses and moods, the person and number of the participant in FOCUS via its verb ending.
- 3) German signals FOCUS with nominative morphology; the verb indicates--but not unambiguously--number and

person. The number of distinct forms varies according to the verb:

3 distinct forms: hasse - hasst - hassen 'hate';
sitze - sitzt - sitzen 'sit'

4 distinct forms: will - willst - wollt - wollen
'want'; fische - fischst - fischt -
fischen 'fish'

5 distinct forms: spreche - sprichst - spricht -
sprecht - sprechen 'speak'; nehme -
nimmst - nimmt - nehmt - nehmen
'take'

- 4) English signals FOCUS with position before the verb; the verb itself almost never provides information as to person and number of the participant in FOCUS (the only exception being third person singular for present indicative of non-modals and several forms of the verb to be: am - is - are).

3.2 Frequency of focus entity mention

To determine how these known facts are quantitatively reflected in the use of the relevant forms, let us pose the following question: How frequently does each language actually mention the entity being focussed on?

In order to control for identity of subject matter and thus to assure that there are the same number of entities on the scene (that the scene is the same), in principle giving each an equal chance to be mentioned, our

comparison is based on original texts and their translations. We have made counts of the mentions of the entities in focus that occurred in a chapter of original texts in Spanish, English and German (cf. Appendix 1) and in their translations.

The count involved a) the signals for FOCUS, b) the number of finite verbs, and was designed to ascertain how many of the entities understood to be in focus were in fact explicitly mentioned. In English and German the signalling of FOCUS eo ipso entails the mention of an entity by virtue of the signal's imperatively cooccurring with the form referring to the entity.

- (4) a. He found an enormous old umbrella in the trunk. (GM p.5) (Position before the verb = FOCUS)
- b. In der Truhe fand er einen altmodischen riesigen Regenschirm. (GM p.9) (nominative = FOCUS)

In Spanish, however, the signalling of FOCUS occurs on the verb:

- c. Encontró en el baúl un paraguas enorme y antiguo. (GM p.9) (verb ending = FOCUS, entity not explicitly mentioned)

and so explicit mention involves the additional presence of a word referring to the entity:

- (5) La ropa blanca estaba sin planchar a causa del asma de la mujer. (GM p.9) (verb ending = FOCUS, entity understood to be in focus also explicitly mentioned)
'Because of his wife's asthma, his white suit was not pressed.' (GM p.5)

Ratios of the explicitly mentioned FOCUS entities to the number of finite verbs (we shall be concerned here only with these) show the following distribution:

TABLE 1

3RD PERSON FOCUS ENTITIES EXPLICITLY MENTIONED
PER 3RD PERSON FINITE VERBS

	<u>Spanish</u>	<u>German</u>	<u>English</u>
AC/ Focus entities explicitly mentioned	193 /	330 /	294 /
Finite verbs	376 = 51%	371 = 89%	373 = 79%
GM/ Focus entities explicitly mentioned	135 /	237 /	231 /
Finite verbs	294 = 46%	278 = 85%	275 = 84%
GG/ Focus entities explicitly mentioned	197 /	234 /	287 /
Finite verbs	416 = 47%	358 = 65%	326 = 88%

The explanation for this skewing is that we have here simply a statistical consequence of the known grammatical facts mentioned above. The fact that focus relies on morphology on the terms that refer to the entities themselves or on their modifiers in German and on position of the terms that refer to the entities in English, whereas in Spanish focus is signalled in the verb, is coherent

with the high percentage of expressed FOCUS entities in the former two languages. That is, in order for a speaker of English or German to convey that an entity is in focus he must make reference to it (because "position before the verb" or the morphology "nominative" cannot exist independently of the form referring to the entity). The Spanish speaker, on the other hand, can allude to the entity in focus (via the verb ending) without necessarily referring to that entity lexically or with a pronoun.

The failure of both English and German to reach 100% is traceable to the fact that in these languages speakers sometimes choose not to exploit the System of Focus, moving instead into the grammatical periphery, thus forcing the hearer to arrive at the message by inference rather than with the help of direct signals of the grammatical system.³ The chief reason for moving into the periphery of a linguistic system is that what would be signalled by the grammar is completely obvious from the linguistic and/or situational context. In our case, the grammatical signals are dispensed with when the focus entity is not mentioned in German or English--and it is not mentioned where it is obvious what (or who) that entity is, e.g.

- 1) Included in the count are finite verbs whose Focus entity--the traditional "subject"--is, as it were, carried forward from the (or a) preceding finite verb,

as in

- (6) a. Dann trug er den Hahn in die Küche,
band ihn an einen Fuss des Herdes,
goss frisches Wasser in den Napf,
und schüttete eine Handvoll Mais
daneben. (GM p.8)
- b. Then he took the rooster into the kitchen,
tied it to a leg of the stove,
changed the water in the can,
and put a handful of corn next to it.
(GM p.4)

where he (er) is the entity in focus for all of the verbs, though explicitly mentioned only with the first.

- 2) Contrary to expectation and the teachings of grammar books,⁴ the "subject" (focus entity) is not always expressed in German and English, even in independent simple sentences. The texts in question contain a fair number of occurrences like the following:

- (7) a. "Und du?" fragte sie.
"Habe schon getrunken," log der Oberst.
^ (GM p.6)
- b. "And you?" she said.
"I've had mine," the colonel said. (GM p.4)
- (8) a. "Gevatter, wie geht's dem Hahn?"
"Geht ihm gut," antwortete der Oberst.
^ (GM p.15)
- b. "Friend, what's new with the rooster?"
"He's still there," the colonel replied.
(Literally: It goes him well. = He's doing fine. GM p.9)
- (9) a. Der Arzt unterbrach die Lektüre seiner Zeitungen. ^Blickte den Oberst an. Dann blickte er den vor dem Telegrafen sitzenden Beamten an und von neuem den Oberst. (GM p.22)
- b. The doctor interrupted his reading of the newspapers. He looked at the colonel. Then he looked at the postmaster seated in front of the

telegraph key, and then again at the colonel.
(GM p.12)

as well as an occasional one like:

(10) a. Auf dem Friedhof wurde dem Oberst übel.
(GM p.16) (no nominative)

b. The colonel felt ill at the cemetery. (GM p.9)

Examples (7) - (10) are instances in which the German translation of the Spanish original fails to refer to the entity in focus. The omission of the entity in focus is, however, not unusual for English, either, as demonstrated by (11) - (15):

(11) "∧Thank you for the compliment," the doctor
said. (GM p.17)

(12) ∧Spent thousands on it, so it was said. (AC p.11)

(13) "∧Ought to ferret out the mystery before we go."
(AC p.48)

(14) Somehow he couldn't face that. ∧Gave him an un-
comfortable feeling. (AC p.55)

(15) "Sorry - er - Rogers. ∧Heard someone moving
about in here, and thought - well - " (AC p.87)⁵

and occurs also in the original German text:

(16) ∧War englisches Werkzeug. ∧Stand eingestanz
drauf: Sheffield. (GG p.12)
'Made in England. Stamped on the metal:
Sheffield. (GG p.14)

Such omissions are possible not only because context disambiguates, but also because there is some verbal morphology still extant in German and (more rarely) in English that is used consistently with the morphology (or position) signalling entity in focus.

Given the much scanter residue of this verbal morphology in English, one might expect English to omit the focus entity more reluctantly than German. One would expect a less pronounced skewing--with German located somewhere in the middle between English and Spanish--on the basis of the number of distinctive forms:⁶

	<u>Spanish</u>	<u>German</u>	<u>English</u>
PRESENT	6 distinct forms	3-5 distinct forms, depending on the verb, cf. p.59	2-3 distinct forms ⁷
SIMPLE PAST	6 distinct forms	4 distinct forms	1-2 distinct forms ⁸

However, it can be seen from Table 1 that this is generally not the case; rather, a binary communicative opposition seems to be reflected in the skewing:

maximum distinction = no decoding problem	vs.	non-distinct forms occur = there is a decoding problem-- and so one makes use of explicit mention of the entity in focus in order to compensate

We thus see that an obvious grammatical fact on which all grammarians and linguists would agree--the informational value of the verb ending in Spanish as opposed to English and German--lies behind a quantitative skewing of forms that is plausibly related to the verb ending's role.

3.3 Focus/non-focus vs. pronoun/noun

The validity of the hypothesis that a skewing in the distribution of forms reflects a bias understandable from the language-specific resources, i.e., the grammatical system, can be demonstrated by another comparison as well: a count of the occurrences of expressed focus vs. non-focus entities and their correlation with pronouns vs. nouns and demonstratives.

We can ask ourselves: what kinds of entities do speakers focus on? What kinds of entities do they not focus on? One tends to focus one's attention (talk about) what is important to the telling of the story at a particular point in the narrative. Conversely, the entities not focussed on will most likely be those not or not yet especially important to the narrative at that point. What is important to the telling of the story, i.e., the entity in focus at a particular stage in the development of the narrative, is likely to be (or become after its first mention) obvious or identified. Entities that are less important, and consequently out of focus, are likely to be less obvious or known. We can now further ask which of the two kinds of entity (focus vs. non-focus) we would expect to find referred to with pronouns, which with nouns and/or demonstratives.

It is a plausible expectation that less important, less obvious entities (i.e., those not focussed on) will,

on the whole, require referring terms that provide greater specification. Nouns (in contrast to pronouns and demonstratives) convey lexical information that helps identify their referent. Demonstratives (in contrast to nouns and pronouns) provide identification by means of their specific deictic character (they point out their referent). The entities that generally require greater specification--the non-focus entities--can be expected to receive this specification from the naming quality of the nouns and the pointing feature of the demonstratives. We would therefore expect a high correlation between non-focus and nouns and demonstratives, and this is indeed what we find.

TABLE 2

EXPRESSED FOCUS VS. NON-FOCUS ENTITIES
RELATIVE TO THE DISTRIBUTION OF
PERSONAL PRONOUNS VS. NOUNS + DEMONSTRATIVES⁹

	S		G		E	
	Focus	Non-focus	Focus	Non-focus	Focus	Non-focus
AC/						
Pronouns	16	42	127	22	152	42
Nouns/Dem.	177	471	203	439	142	435
GM/						
Pronouns	9	36	98	24	108	24
Nouns/Dem.	126	443	139	377	123	416
GG/						
Pronouns	13	82	63	22	107	38
Nouns/Dem.	184	789	171	714	180	655

The data in Table 2, based on original texts and translations (one chapter of each, as above), yield the follow-

ing percentage of non-focus nouns + demonstratives per total nouns + demonstratives:

	S	G	E
AC	471 / 648 = 73%	439 / 642 = 68%	435 / 577 = 75%
GM	443 / 569 = 78%	377 / 516 = 73%	416 / 539 = 77%
GG	789 / 973 = 81%	714 / 885 = 81%	655 / 835 = 78%

thus exhibiting the expected high correlation between non-focus and nouns + demonstratives.

On the other hand, precisely because the things we tend to focus on are important and thus likely to be repeatedly referred to and because the non-specific nature of pronouns allows them to be used in referring to what is obvious and/or already identified, we would also expect a high correlation between focus and pronouns. This expectation is borne out by the percentage of focus pronouns per total pronouns (cf. Table 2) for German and English:

	S	G	E
AC	16 / 58 = 28%	127 / 149 = 85%	152 / 194 = 78%
GM	9 / 45 = 20%	98 / 122 = 80%	108 / 132 = 82%
GG	13 / 95 = 14%	63 / 85 = 74%	107 / 145 = 74%

Yet for Spanish the prediction does not hold. There, most of the pronouns refer to non-focus participants. Why? This is another reflection of the usual omission of the Spanish focus entity. The omission is not due to the

entity in focus being regarded as unimportant, but is rather the plausible result of having most of the "pronoun" type information (person and number) about that entity already signalled by the ending on the verb. This allows the focus pronouns to be "reserved" in Spanish for conveying other information, such as gender and/or emphasis; as far as person and number are concerned, they are redundant:

- (17) El coronel se disponía a salir cuando su esposa lo agarró por la manga del saco.

--Péinate--dijo.

El trató de doblegar con un peine de cuerno las cerdas color de acero. (GM p.12)

'The colonel was getting ready to go out when his wife seized him by the sleeve of his coat.

"Comb your hair," she said.

He tried to subdue his steel-colored, bristly hair with a bone [sic] comb. (GM p.6)

Here, specification of gender--él--enables the reader to make the shift back to the man, where non-occurrence of the focus pronoun would have left "trató de doblegar" ambiguous. The pronoun communicates the non-redundant gender information. When specifying person and number would be the sole function of a focus pronoun, however, economy of effort dictates that the pronoun be omitted.¹⁰

So again a known grammatical fact, the informational value of the verb morphology in Spanish, has the expected result: it explains a distribution which is plausibly skewed relative to that of languages which do

not have such distinct verbal morphology.

The observed distribution of nouns + demonstratives vs. pronouns in these two clear cases--i.e., cases where the conditioning factor (the information conveyed by the verb endings) is known--so uniformly coincides with what could be predicted on the basis of the grammatical analyses of the Systems of Focus that it justifies the procedure of quantitative contrastive analysis and indicates that such analysis may be relied on to suggest--and even to validate--other hypothesized differences in the grammars. This will be the objective of the following chapters.

Notes to Chapter 3

1. We make use of some traditional grammatical labels in this dissertation without thereby subscribing to traditional analyses. We use the labels to refer to elements of the grammar which have not yet been subjected to Form-Content analysis or whose analysis has not produced results that contradict the traditional categorization. We shall use especially the labels verb, pronoun and noun as a communicative shorthand, although the last of these has been shown in Otheguy 1977 not to exist as a category separable from adjectives in Spanish. When we use noun referring to Spanish we mean those lexical items cooccurring with the l-forms (el, la, los, las, lo).
2. The terms FOCUS and NON-FOCUS are used here as grammatical meanings. (Cf. García 1975:68-71 for a description of the Spanish System of Focus, Zubin 1978:26-27 for the German system.) In Spanish the verb ending and the listed pronouns signal the entity in focus. The German and English systems, though with different signals--G: nominative = FOCUS, dative/accusative = NON-FOCUS; E: position before V = FOCUS, behind V = NON-FOCUS-- have the same meanings. (It is not yet established whether the signal for FOCUS in English is the participant (P) directly before the verb or the first P before the verb, i.e., whether the interlock between FOCUS and Pl is complete or not. E.g. in the utterance
i. Him I gave the book.
Diver has not yet established whether him or I signals FOCUS. It is clear, however, that I = Pl. For the purposes of this count, we are considering position directly before the verb as the signal for FOCUS. Sentences of the type of i. are extremely rare in these texts at any rate.)
3. We note that in each language, the original text (as opposed to the translations) has the lowest percentage of explicitly expressed entities understood to be in focus. I.e., the move into the grammatical periphery occurs most frequently in original (native-language) production.
4. Lederer (1969:512-513) states for German: "Since the conjugational forms of the verb by themselves do not always suffice to identify person and number unequivocally, the subject (noun or pronoun) must always be mentioned." But he hastens to append a footnote: "In colloquial usage and in certain poetic forms, the subject pronouns are sometimes omitted." Curme (1964:332

and 455-462) recognizes the existence of utterances like Mich hungert 'me hungers' = 'I am hungry', but points out that there is no subject understood in them. The predicating type of sentence, he adds, requires a subject for a verb, except in such short terse expressions as Stimmt! (= Es stimmt!) 'That's right.' and certain set expressions like Bedaure sehr, kann nicht dienen '(I) regret very much that (I) cannot serve you'. For English, Stockwell et al (1965:241) maintain that "this kind of omission never occurs in English.... Except for the imperative, all full verb phrases in English require expressed subjects."

5. Cf. also footnote 6 to Thompson (1978:33):
 "Subjectless sentences do occur in English. Imperatives are subjectless, of course. Joan HOOPER and Paul SCHACHTER have also reminded me of the relevance here of such sentences as:
 - i. Guess I'll go over to Frank's.
 - ii. Want to come with me?
 - iii. Saw Dave at the co-op this morning.
 The circumstances under which the subject can be omitted in conversational English are restricted in ways that are not clear to me. For example, the factors that contribute to making (iii) acceptable, but (iv) unacceptable, are not well-understood:
 - iv. Have a headache. (= I have a headache.)
 In any case, my point is simply that subjectless sentences occur in English only under very restricted conditions."
 (In a letter or on a post card, (iv) would be o.k., too. -- EL)
6. The one text comparison that shows the expected skewing is GG (S: 47%, G: 65%, E: 88%). However, the relatively low percentage for German (65%) of mentioned focus entities in this text is attributable primarily to Grass' style: he uses a great many clauses whose entity in focus is carried forward from a preceding event (an example of similar usage in the GM text was seen as Example 6).
7. But three occur for only a single verb, to be: am - is - are. All others are one (modals) or two (most verbs).
8. The two occur only for to be: was, were.
9. Spanish se does not participate in the opposition between focus and non-focus. We have therefore omitted se, as well as German sich and English -self, in these and subsequent counts. The nondistinct pronouns sie,

es and you, it have been counted as FOCUS or NON-FOCUS, depending on whether they would be commutable with one of the distinct FOCUS or one of the distinct NON-FOCUS pronouns. For Spanish, focus nouns and demonstratives = forms referring to entities also referred to by the verb ending; non-focus nouns and demonstratives = all other entities.

10. Economy of effort is a factor of human behavior, described by Bolinger (1975:29) as follows: "The principle of least effort decrees that speakers will work no harder than they have to in order to make themselves understood. This form of laziness results in the blurring of sounds. But the same principle decrees that listeners will work no harder than they have to in order to understand. And this form of laziness compels speakers to use care if they expect cooperation and if they do not want to have to repeat themselves." The principle is of course applicable to all areas of linguistic communication.

Chapter 4

Procedure

4.0

The hypotheses posed in Chapter 1 will be tested by quantitative examination of the data, bearing in mind the systemic differences in the SPTs and the two orienting principles (communicative and human factors) of Form-Content analysis. In this chapter we will detail the procedure employed in the investigation and the specific concepts involved in collecting the data.

4.1 Context of study

Since a correspondence of data across languages is a prerequisite to interlinguistic study, we have chosen as our corpus translation texts and descriptions of the same picture story by speakers of the several languages, in both of which the likelihood of correspondence is high. Because the texts are originals and their translations, it can be assumed that the overall content is the same.¹ In addition, the figures are always compared relative to a single text (original or translation) and are consequently not significantly affected by minor deviations (such as when the translator omits a block of occurrences because

of literary, moral or ethic reasons, or because of a lexical translation problem resulting from ambiguity in one language that is not realizable in another.)² In the original narratives, too, the overall content is the same from language to language (description of the same picture sequences); in this case deviations arise from the "eye of the beholder" problem mentioned in section 1.4, but do not affect the basic content being described.

This content correspondence (the same story being told in each language) makes it easier to track the effect of differences among the systems, given the recognizable similarities between them: both substance and meanings correspond.

Since we are concerned with quantitative examination of the data, the first decision to be made is: What is to be counted?³ In Chapter 1 we stated that our comparison is between grammatical systems which comprise certain signals and meanings. We are also concerned, however, with the extent to which the various systems are exploited in the conveying of corresponding messages and specifically the extent to which recourse is had to grammatical signals when reference is made to entities involved in a particular event. That is, we want to know not only when entities are referred to with the aid of grammatical signals of the systems under investigation, but also what percentage of the time this is the case, and this requires us to take

account of the times when they are not referred to with that aid. In short, we need a count of references to entities and specifically to those entities participating in an event.

Although it takes only two participants to establish a value relationship with respect to a particular occurrence, it is when three or more entities are present that the primary function of the participant systems--providing the necessary information for assigning participants to roles in an event--can be realized to its fullest extent. Situations with "three or more" entities are highly relevant because three is the maximum number of oppositions in the SPTs under study: both English and German allow the distinct identification of three participants (cf. Chapter 2), and in these situations the native speaker of Spanish always infers the high participant and almost always has either MID or LOW expressly signalled in an utterance. We will therefore limit this investigation to events involving three or more entities.

Because we are concerned with the extent of exploitation of the systems (i.e., when they are and when they are not exploited), our study can be expected to shed light on the interplay between grammar and inference, i.e., between the use of grammatical signals of the SPTs vs. reliance on lexicon and context for the communication of participant roles.

Since in order to study Systems of Participation one must deal first of all with occurrences (events) and participants in these occurrences, we shall first discuss these concepts in some detail.

4.2 Occurrences

The signals and meanings of the participant systems state degrees of contribution to (of potency in) activities and states expressed by the verbs--that is, participants are seen in relation to events or occurrences. It is thus not possible to determine how many participants are involved in an event without first determining what constitutes an occurrence. This decision is not an obvious one. Though "verb constructions" have been extensively studied for the three languages,⁴ the disagreement among analysts is such as to suggest that only a careful and thorough examination of the data from a consistent theoretical position is likely to yield fruitful results. Such a study obviously exceeds the scope of this dissertation, and since a thorough analysis of the verb systems is not critical to the counts required for this study, we will proceed on a common-sense basis, grounded in our actual experience with the data, adopting the following rules of thumb as the best judgment for delimiting occurrences. What is crucial, as mentioned in Note 3, is the maintenance of consistency across languages.

The following occurrence types have been counted separately:

- a. finite verbs, including the first element of composites (see below)
- b. non-finites, including infinitives, gerunds, and past participles, the second element of composites and, for English, imperatives

The finite verb categorization requires little further comment. Counted as single finite occurrences are the following:

1. single finite verbs
2. (inflected) modal plus infinitive (with or without preposition): can understand, ought to go
3. (inflected) aspectual plus infinitive or plus -ing: continues dancing, attempted to deliver

A representative, but by no means exhaustive, listing follows in order to exemplify the counting.

English

$\left\{ \begin{array}{l} \text{will} \\ \text{can} \\ \text{should} \\ \text{may} \\ \text{be to} \\ \text{ought to} \\ \text{be able to} \\ \text{get to} \end{array} \right\}$	+ infinitive	$\left\{ \begin{array}{l} \text{be likely to} \\ \text{be about to} \\ \text{have to} \\ \text{have got to} \\ \text{be going to} \\ \text{come to} \\ \text{be obliged to} \end{array} \right\}$	+ infinitive
begin	+	to + infinitive	+ V-ing
continue	+	to + infinitive	+ V-ing
try	+	to + infinitive	+ V-ing
attempt	+	to + infinitive	+ V-ing
keep			+ V-ing
stop			+ V-ing

seem	+	to + infinitive
suppose	+	to + infinitive
manage	+	to + infinitive

Spanish

$\left\{ \begin{array}{l} \text{querer} \\ \text{poder} \\ \text{deber} \\ \text{parecer} \\ \text{comenzar a} \\ \text{empezar a} \end{array} \right\}$	+ infinitive	$\left\{ \begin{array}{l} \text{hay que} \\ \text{ir a} \\ \text{tratar de} \\ \text{acabar de} \\ \text{tener que} \\ \text{haber de} \end{array} \right\}$	+ infinitive

German

$\left\{ \begin{array}{l} \text{wollen} \\ \text{dürfen} \\ \text{müssen} \\ \text{mögen} \\ \text{können} \end{array} \right\}$	+ infinitive	$\left\{ \begin{array}{l} \text{scheinen zu} \\ \text{haben zu} \\ \text{beginnen zu} \\ \text{versuchen zu} \\ \text{sollen} \end{array} \right\}$	+ infinitive

Counted as more than one occurrence, then, are all other types of combination of finite and non-finite verbs. A special combination of finite and non-finite verb, existing in all three languages, is the composite. Examples like:

- (1) a. He saw him consume a drink. (GM p.20)
- b. Lo vio consumir un refresco. (GM p.40)
- c. Er sah ihn einen Saft trinken.⁵ (GM p.38)

where no preposition separates the finite from the infinitive form (Joos' presentative, 1964:31-38) of the verb, are counted as two occurrences (a finite and a non-finite), but one of the occurrences--that of the finite verb--includes the other as a participant in its message. E.g. in (1a) saw is an occurrence (finite) and consume is an occurrence (non-finite), but the occurrence of consuming is a participant in that which is seen. (That is, saw is an

occurrence with three message participants: he, him, and consume a drink; the occurrence consume has only a single participant: a drink.⁶⁾

The other non-finite verbs include infinitives, gerunds and participles. When infinitives or gerunds were clearly nominalized, i.e., expressed with an article, they were not counted as occurrences:

- (2) Se estremeció al pensar en la cara descompuesta de Anthony Marston. (AC p.73)
'She shuddered as she remembered Anthony Marston's convulsed purple face.' (AC p.58)
- (3) ...und die Leute zum Lachen bringen. (GG p.17)
'And make people laugh.' (GG p.20)

These cases were not counted as infinitive occurrences because of the presence of the article, but Lachen, for example, was counted as an entity (cf. 4.3) involved in the occurrence bringen. In

- (4) Der Oberst nahm sich Zeit zum Nachdenken. (GM p.19)
'The colonel took a good long time to think.' (GM p.11)

the prepositional phrase is not counted as an entity because zum Nachdenken does not play a role in the occurrence nehmen.

For German, all participles in prenominal position --e.g. vom prüfenden Ueberfahren... (GG p.19) 'from passing (them) over my hair to see...' (GG p.22)--have been treated as modifiers of the cooccurring entity. (Alternation of this pattern in German with the -ing forms in English may account for part of the count discrepancy between English

and German non-finites.)

For comparative purposes imperatives have been counted as finite occurrences in Spanish and German because of their distinct inflectional morphology, but are included among the non-finite occurrences in English (cf. also Joos 1964:35) because of their non-distinct form.

The case of the imperative as well as that of the composites may be taken as indicators that the decision procedure, though necessarily subjective, is not mechanical or arbitrary. Where morphology exists, it is used as a guide.

4.3 Entities and participants

The next rules of thumb must serve as a guide to deciding what to count as an entity and what as a participant in an occurrence. It will be useful to deal with a handful of terminological distinctions, all relevant both to this discussion and to a discussion of stages of observation in general: scene, entities, grammatical participants, message participants. These will be exemplified by specific utterances from the corpus and the entire basic count procedure will be illustrated with reference to a passage of text at 4.4.

First, there is the scene. There may or may not be a number of "bodies" (referred to by nouns, pronouns, demonstratives) on this scene. If there are, then some of them may be potential participants--i.e., they could be

ranked grammatically (be associated with a relative meaning: HIGH, MID or LOW degree of participation)--and are expressed by the speaker/writer as independent elements in the occurrence (they are not adnominal modifiers or expressions of manner, time or place). These potentially rankable bodies we call entities.

While with the term entity we refer to potentially rankable bodies, we reserve the term participant for those entities that are actually perceived as ranked. We must now further distinguish two kinds of participant: message participant and grammatical participant. A grammatical participant (P) is one that is not only ranked in the message (see below), but whose ranking is signalled by the grammatical system, as are P1, P2, P3 by virtue of their position in

- (5)

<u>I</u>	gave	<u>him</u>	<u>the</u>	<u>book.</u>
P1		P2	P3	
HIGH		MID	LOW	

as are nominative, dative, accusative by virtue of their case morphology in

- (6)

<u>Ich</u>	gab	<u>ihm</u>	<u>den</u>	<u>Mantel.</u>	'I gave him the coat.'
Nom.		Dat.	Acc.		
HIGH		MID	LOW		

and as are le and la by virtue of their morphology in

- (7)

<u>Le</u>	dio	el	libro.	'{He }gave{him}the book.'
MID				'{She }{her}

and

- (8)

<u>La</u>	vio.	'{He }saw her.'
LOW		'{She }

A message participant (p) is one which, though not necessarily signalling a particular degree of participation, is inferred to have a particular ranking. Given the existence in the language of a scalar System of Participation (as is the case for English, German and Spanish), it can be expected that users of such a language will become accustomed to ranking participants. It is thus understandable that a ranking with respect to the occurrence will be inferred for some entities perceived as being on the scene even in the absence of grammatical signals.

The ranking of (purely) message participants has been discussed under the label "Extended Relevance Hypothesis" (ERH) by Otheguy (1977:329), who bases it on a proposal made by García (1975:78). Otheguy (1977:329) describes the ERH for Spanish as follows:

Inferences about comparative degree of involvement in an event are made not only about le and la/lo (which convey this information directly through their meaning) but also about lexical items such as Carlos, escritorio, etc. In this way the relevance of the SPT is extended to utterances where its signals are not found. This proposal, which I will call the Extended Relevance hypothesis, asserts that the inferential expertise in ranking participants that is acquired and used in handling utterances with le and la/lo is also deployed in utterances where these forms do not appear.

We find that the ERH can plausibly be assumed to hold for German and English as well, i.e., we hypothesize that speakers of these languages, whose SPTs (like the Spanish SPT) are of a scalar nature, also rank participants in the message.

Jespersen (1922:343) suggested something along these lines for German when, discussing sentences like

- (9) Soweit die deutsche Zunge klingt und Gott im Himmel Lieder singt.

'The German tongue resounds afar and
 {sings songs to God in heaven}
 {God in heaven sings songs }'

he wrote: "It is the very fact that countless sentences of this sort are perfectly clear which leads to the employment of similar constructions even where the resulting sentence is by no means clear; but if all, or most words were identical in the nominative and dative like gott... constructions like those used would be impossible to imagine in a language meant to be an intelligible vehicle of thought." How much more so in a language meant to be a vehicle of communication!

As participants in the message we find entities that are potentially rankable (not adnominal modifiers, or expressions of manner, time or place) that have not specifically been removed from candidacy for participant status by being mentioned in a prepositional phrase. Although prepositional phrases for the languages in question have not yet been analysed in the framework of Form-Content analysis, it seems clear that the effect of the preposition is to set aside the entity introduced by it and to give it a peripheral role with respect to participation. That is, the prepositional phrase, whatever else it may signal, appears to indicate that the entity is not a ranked parti-

cipant in the occurrence.⁸ To what extent and how the entity following a preposition is involved in the occurrence--that has to be inferred from the lexical content of the term referring to the entity plus the meaning of the preposition, as it is the preposition that gives specific information as to the entity's role with respect to the event. According to the ERH, the roles of the rankable entities are inferred from the lexical content of the terms referring to them, influenced by the existence of a scalar participant system in the language. How does such an inference proceed?

Spanish: In (10), for example, only le is grammatically signalled. It is the MID participant.

(10)	<u>Le</u>	dí	un libro.
	MID	gave	a book
	3rd p. sg.	1st p. sg.	
	'I gave {him} a book.'		
		{her}	

Both the entity referred to by the verb ending and un libro are ranked by users of Spanish via the Extended Relevance Hypothesis. The entity in focus is inferred to be the most active participant, i.e., the giver (this particular ranking--most active--is always assigned by inference in Spanish, there being no grammatical signal HIGH). Un libro is inferred to be low in the event of giving because of its lexical content, which indicates an inanimate object, by nature less potent than an animate giver or receiver.

German: Such inference is rarely required in German because the morphology usually indicates case on nouns (i.e., on the cooccurring articles and modifiers) as well as on pronouns, thus signalling HIGH, MID and LOW, as in

- (11) Der Mann schickte dem Chef den Bericht.
 Nom. Dat. Acc.
 HIGH MID LOW
 'The man sent the boss the report.'

Only in cases like

- (12) Er gab seinem Sohn Geld.
 Nom. Dat.
 HIGH MID
 'He gave his son money.'

where a lexical participant (Geld 'money') is unmodified, is there recourse to the ERH. In (12) HIGH and MID participants are signalled; there is no grammatical signal to show how the third participant in the message is to be interpreted. As the scalar positions of HIGH and MID are filled, however, the logical inference is low. And indeed, in German two non-conjoined entities are never explicitly cast into a MID role--German speakers do not express two entities in the dative in a single occurrence--so the remaining entity must be commutable with an accusative.⁹

In German, however, the inferential strategy differs slightly from that in Spanish. This derives from the fact that in German it is possible to have an utterance that includes two accusatives.¹⁰ Therefore, although we

find the Extended Relevance Hypothesis applicable and valid for German as well, the justification is somewhat different in this case.

We adopt here Otheguy's characterization of comparatively high, mid and low degrees of participation as "notions that are anchored in a specific hypothesis about the meaning of a finite set of forms" (1977:348) and that have relevance in the interpretation of the messages, i.e., as message categories. Their relative values have the virtue of being adaptable to an infinite number of situations, thus avoiding the difficulties of absolute message categorization encountered for example by Fillmore (1968, 1977).

Not adoptable for German, however, is the reasoning for assigning participant ranking to the non-signalled entities in Spanish. There, Otheguy says, "the meaning hypothesis that constitutes the SPt is formulated in such a way that there can only be one lowest participant." In an example involving the verb pintar 'to paint', he further points out that while there is nothing incoherent about two distinct entities both being inferred to be painted, there is something incoherent about two distinct participants both being inferred to have the comparatively lowest degree of activity in the event (Otheguy 1977:353).¹¹

It is perhaps with awareness of just the double accusative situation that Zubin (1972) selected meanings

for German that, while scalar and ranked, avoid the absolute character of a least. It will be recalled that the German SPt has the meanings HIGH, MID and LOW Contributor. There is consequently no incoherence; two entities may each contribute little to (participate little in) the event and so both be ranked at the bottom of the scale and be assigned the meaning LOW.

It is significant from a communicative point of view that the actually occurring double accusatives--where both are signalled--are rare indeed. In the three German works examined in the course of this study none occur.¹² There do occur, although also with relative infrequency, utterances like

- (13) Es kostete ihn Mühe.
 Nom. Acc.
 HIGH LOW
 'It cost him an effort.'

where a lexical participant--Mühe 'effort'--is unmodified, therefore not signalled with explicit case morphology, but interpreted because of its nature to have a low participant status with respect to the event.

In (13), HIGH and LOW participant are signalled; the third again has no grammatical signal, but is interpreted as low, here not because (as in (12)) HIGH and MID positions are already filled, there being no MID here, but because it is unlikely that an abstract inanimate entity participating in the event of kosten 'cost' should be more potent than an animate participant (the LOW ihn).

It may be argued that in these cases the Extended Relevance Hypothesis is not relevant and that Mühe is not to be ranked with respect to kosten, thus avoiding the entire issue. But we feel that the possibility of two accusatives--and the concomitant necessity for dealing with them within the system--no matter how seldom it is made use of, argues for retention of the hypothesis in those cases where the ranking of an entity as to the event can be plausibly inferred. In the case of Mühe and kosten this ranking appears obvious. And as the meanings for German, which according to the ERH are carried over onto non-signalled participants in the message, produce no incoherence, we find suspension of the hypothesis in these cases inexpedient. That is, we argue that the Extended Relevance Hypothesis and the therein implied acceptance of the meanings of the participant systems as message categories perceivable also in the absence of grammatical signals is valid in most instances for German as well as for Spanish.¹³

In English, with its word-order signals, there are relatively few cases where the ranking of entities rests on inference alone. One can consider examples like

- (14) Him I gave the book.
 P1 P2/3
 HIGH NON-HIGH

parallel to Lo dí a María 'I gave it to Maria', although the parallelism is not complete because the signal the book

indicates NON-HIGH (i.e., when only one position is occupied behind the verb it is P2/3), whereas a third-person participant expressed with a clitic (le, lo) in Spanish is clearly ranked either MID or LOW.

In the English example, therefore, the inferential process deviates from the Spanish in that the hearer/reader does not just have to fill in the vacant slot in the scale when an entity is not signalled to have a particular value: he must also decide for the signalled NON-HIGH participant (the book, in the example above) what its role is relative to the participant whose role must be inferred from lexicon. This allows, when considering the relative roles of three entities, interpretation anywhere at the lower end of the scale; in terms of the notions mid and low, it allows either one. The English user must then weigh both him and the book in the balance in order to arrive at the appropriate categorizations in the message. In the utterance (14) Him I gave the book, the inference is again facilitated by the fact that him refers to an animate entity, while the book is inanimate.¹⁴ As animate entities are by their very nature capable of greater activity and/or greater involvement in an event like giving, we are led to infer for him a more active role as regards the occurrence of giving, than for the inanimate book. Thus him gets interpreted as mid participant in the message and therefore as recipient, book as low participant, the thing given.

Although the speaker could have signalled MID had he wanted to by saying

(15) I gave him the book

the positioning of him in utterance-initial position obviously serves a purpose--conveying prominence--that overrules explicitness of participant ranking.

We have shown in the above discussion that inference of participant ranking in the absence of signals of the SPT is relied upon in the interpretation of utterances in all three languages. Because of the systemic differences among the languages, however, it is relied upon to different degrees.

What, then, does a message participant (one that lacks a signal from the SPT) look like in our data? The following examples are from the novels and translations.

In English, a message participant that is not also a grammatical participant can be a bare (no preposition) noun phrase that is out of position for signalling, e.g.

(16) [...fat lot of good it did me.] (GG p.130)
p P1 P2/3

(17) "I swear that [the dose I gave the woman was
perfectly--]"¹⁵ (AC p.100)

or a stretch of quoted speech:

(18) ["Don't play that today,"¹⁶ the colonel told
him.] (GM p.5)
P2/3

or a personal-to phrase:

- (19) [Lombard said to Rogers, "Get some brandy."]
 P1 P P
 (AC p.33)

or a clause:

- (20) [They tell me I've been marked up for a certain
 P1 P2/3 P
 six,] it's news to me. (GG p.48)

most of which occur in some position other than P3. (Examples (16) - (20) each contains three message participants in the bracketed stretch.)

In German, it is a non-modified noun or a pronoun non-distinct as to dative/accusative (when not occurring after a preposition other than personal-zu):

- (21) Mahlke bot uns Musik. (GG p.49)
 P P P
 'Mahlke offered us music.' (GG p.58)

This example includes three message participants, not one of which is a grammatical participant--Mahlke because it is an (unmodified) name, Musik because it is unmodified lexicon, and uns because the first person plural pronoun is non-distinct between dative and accusative. (We do, however, know that uns is not HIGH participant; the signal for that is wir. In this instance German behaves like English: the non-distinct dative/accusative pronouns are NON-HIGH.)

or another occurrence:

- (22) die Stimme hatte sie beschuldigt, ein Kind
 Nom.=HIGH Acc.=LOW
 ertränkt zu haben! (AC p.57)
 P
 'the voice had accused her of drowning a child'
 (AC p.56)

or a stretch of quoted material:

- (23) "Setz auf die Elf," murmelte er Alvaro ins Ohr.
 p Nom. p
 =HIGH
- (GM p.95)
' "Bet on eleven," he whispered into Alvaro's ear.' (GM p.50)

In Spanish, the message participants that are not grammatically signalled include any entity referred to by forms other than le, lo, la and their plurals (as long as these forms do not occur after prepositions other than the personal-a), as well as quotations and clauses that can be interpreted as contributing to the occurrence a certain degree of activeness or potency. Thus even an utterance like

- (24) Mahlke nos hizo una demostración. (GG p.11)
 P P P
 'Mahlke proved it.' (GG p.9)
 (Literally: Mahlke did us a demonstration.)

contains no signals from the SPT, although it does have three message participants. Example (25)

- (25) Le dijo: -- Apúrese, compadre.¹⁷ (GM p.15)
MID FOCUS= p
inferred
high

'and said (to him): "Hurry up, friend."' (GM p.8)

contains one signalled participant, le; the other two are
inferred message participants, lacking SPt signals.

What we have, then, is three degrees of specification: entities, message participants and grammatical participants, reflecting degrees of semantic precision of the entity's role. The first, entities (e), involves independent elements connected with the occurrence (elements--also

those following prepositions--that are not expressions of manner, time or place); the second, message participants (p), involves entities ranked as to the event; and the third, grammatical participants (P), comprises those entities whose rank is explicitly signalled. Of course, the utterances we are confronted with are not necessarily all of a kind: We find grammatical and message participants, entities and grammatical participants, etc., all cooccurring.

It is important to remember also that the relationship among these three categories is one of implication:

$$(P) \supset (p) \supset (e)$$

That is, a grammatically signalled participant is of necessity also a participant in the message, as well as an entity in a 3-entity situation. The total number of message participants minus the total number of grammatically signalled participants indicates for how many entities the hearer/reader must infer the degree of participation (or the entity's role in the event) without the aid of a specific signal from the SPt.

4.4 Example of procedure

We illustrate the above by application to a passage of text from the Agatha Christie original and translations:

- (26) My wife and I were with Miss Brady/till she died./She was always in poor health, sir,/
always from the time we came to her./There was a storm, sir, that night / the night she was taken bad./The telephone was out of order./
[We couldn't get the doctor for her.]/I went for him, sir, on foot./But he got there too late./[We'd done everything possible for her, sir.]/Devoted to her,¹⁸ we were./[Anyone will tell you the same.]/ (AC p.45)

The scene involves Rogers, his wife, Miss Brady. In successive utterances one or more of them are referred to by independent elements in the utterance; they thus become entities in the events described. (Other entities referred to include telephone, storm, doctor.) The passage contains thirteen occurrences (underlined). The slashes set off the elements felt to be related to each occurrence. Three of the occurrences ([...]) are 3-entity events.

The her in the first two 3-entity events ((27) and (28)) occurs in a prepositional phrase and does not directly participate in the event.

- (27) We couldn't get the doctor for her.
P1 P2/3

- (28) We'd done everything possible for her, sir.
P1 P2/3

Her in (27) and (28) is therefore not a message participant.¹⁹

The third 3-entity occurrence

- (29) Anyone will tell you the same.
 P1 P2 P3
 HIGH MID LOW

is also a 3-p (message participant) and further a 3-P (grammatical participant) occurrence.

We represent the three possible types from the examples above plus example (i.) from Note 19 (= (31) below):
 3-e only:

- (30) We couldn't get the doctor for her.
 e e e
 p p -
 P1 P2/3 -

3-e plus 3-p:

- (31) who could possibly have administered cyanide
 e e
 p p
 P1 P2/3

 to Anthony Marston.
 e
 p
 -

3-e plus 3-p plus 3-P:

- (32) Anyone will tell you the same.
 e e e
 p p p
 P1 P2 P3

Example (33), which appears at first glance to be a 3-entity event,

- (33) I went for him, sir, on foot.

is not, because on foot is an "expression of manner, time or place," a type which has been excluded from consideration as an entity. (33) is a 2-entity (I, him) event,

involving 1-p (which is also a P), namely I.

We illustrate below our procedure for Spanish and German from the translations of the above passage:

- (34) Mi mujer y yo hemos estado a su servicio /
 hasta que murió. / Siempre estaba enferma: /
 la noche que se agravó / hubo una gran
 tempestad, / el teléfono estaba descompuesto; /
era imposible, pues, / llamar al doctor / y
fui yo mismo / a buscarlo a pie. /
"Llegamos demasiado tarde, / lo hicimos
todo / para salvarla. / Le estamos muy
 agradecidos, / [todo el mundo se lo dirá,
 señor...."] / (AC p.57-58)

This passage contains twelve finite verbs plus three infinitives, which equals fifteen occurrences (underlined); also there is one 3-entity event ([...]):

- (35) todo el mundo se lo dirá, señor....
 e e e
 p p p
 - p -

'everybody will tell you that, sir....'

(35) is a 3-p utterance and also involves what for Spanish is maximum grammatical signalling (1P, because le and lo do not cooccur).

- (36) Meine Frau und ich waren bei Miss Brady, /
 bis sie starb. / Ihre Gesundheit war
 immer schlecht, Sir, / immer, schon damals,
 als wir zu ihr kamen. / Es war ein Sturm

in jener Nacht, Sir / in jener Nacht, als
 es so schlimm mit ihr wurde. / Das Telefon
war ruiniert. / Wir konnten den Arzt nicht
rufen. / Ich ging ihn holen, Sir / ich ging
 zu Fuss. / Aber er kam zu spät. / [Wir haben
 alles, was wir nur irgend konnten, für
 sie getan, Sir,] / wir waren ihr sehr
 anhänglich, Sir. / [Jeder, der ins Haus kam,
wird Ihnen das bestätigen.] / (AC p.47)

This passage, with a total of sixteen occurrences, contains two embedded clauses (at end, instead of /) and four discontinuous events (each part underlined twice).

There are also two 3-entity events ([...]):

(37) Wir haben alles für sie getan, Sir.

e	e	e
p	p	-
P	-	-

'We did everything for her, sir.'

(37) is a 3-entity, 2-p (message participant) and 1-P (grammatical participant) event.

(38) Jeder wird Ihnen das bestätigen.

e	e	e
p	p	p
P	P	P

'Everybody will confirm (you) that.'

(38) is a 3-entity, 3-p and 3-P event.

4.5 Double mention

An entity on the scene that is mentioned more than once in the utterance nevertheless has been counted only once. That is, we are counting mentioned entities, not

number of mentions of entities. All references to -self, sich, se were therefore not counted. And these doubly mentioned entities, the one time they were counted, were counted as single ranked participants, i.e., were given the value of the grammatical signal (if any) associated with the non -self, sich, se mention. In

(39) He bought himself a new car.

which could be interpreted as P1, P2, P3 according to the sequential appearance of the entity references, the would-be P2 is not counted because it is the same entity as P1, although seen in a different role.²⁰

Double mention can also occur via lexical rather than grammatical means, as in

(40) denn alle nannten ihn Tullas Cousin (GG p.64)
'for everybody referred to him as Tulla's
cousin' (omitted in the English translation)

(41) "Das wäre mir ein verdammt merkwürdiger Unfall."
(AC p.88)
'"Damned queer sort of accident."' (AC p.89)

These too were regarded as single entities (i.e., the cited examples contain only two participants).

4.6 Non-finites and non-expressed high participants

Included in the three-or-more entity events are also those non-finites (and for English, imperatives) that occur with two expressed non-high entities/participants, as well as those finite cases with no expressed P1. In the case of the non-finites, the most active participant is usually not expressed because it is stated (or alluded

to) in the accompanying finite clause, as in (42) and (43):

- (42) a. I am empowered to hand you one hundred guineas.... (AC p.8)
- b. Estoy autorizado para entregarle la suma de cien guineas.... (AC p.11)
- c. Ich bin ermächtigt, Ihnen hundert Guineas auszuzahlen.... (AC p.8)

- (43) The driver said, addressing his remarks to Mr. Justice Wargrave:.... (AC p.15)

although there are cases where specifying the high participant is not desirable, either because it is obvious (e.g. the speaker) or generic (i.e., everyone), as in (44) and (45):

- (44) a. (to give him the name he himself adopted) (AC p.95)
- b. por darle el nombre que él ha escogido.... (AC p.118)
- c. (um ihm den Namen zu geben, den er selbst angenommen hat).... (AC p.95)
- (45) No vale la pena de dar importancia a esas infamias. (AC p.55)
'It's not worth the trouble of attributing importance to these infamies.' (Actual English text: 'Best really to leave this sort of thing unanswered.' AC p.44)

In the finite cases, it is also the most active participant that is omitted, either because it is a "subject carried forward" from a preceding occurrence, or because, though not specifically expressed, it is "understood", i.e., in both cases the omitted participant is obvious from the context. (Cf. pp. 68-69 for examples of omitted Pl.) As avoiding the obvious is a plausible thing to do

both from the communicative and the human factors, these instances of unmentioned participants illustrate a logical result of having recourse to the system in accordance with plausible strategies of human communication.

4.7 Interpretation of the utterance

It must be pointed out that there can be entities on the scene that have no recognizable degree of activeness (involvement) with respect to the occurrence described by the verb, thus leaving open the question of whether they are an instance of low (which can reach all the way down to zero) or whether the entity is so inactive or unrelated to the event that the speaker does not view it as even rankable in terms of the occurrence.

For English, this is related to a basic problem with respect to word-order signals: how can one be sure whether an element in the linear sequence is a signal or is "just there", i.e., whether it is occupying a word-order position or is simply expressed at that point in a necessarily temporal sequence? In the following utterance pair

(46) I sent her candy.

(47) I sent her home.²¹

it is only the content of the lexical items candy and home taken jointly with that of the verb that allows us to infer that the former is a signalled participant in the event of sending, whereas the latter simply occurs in temporal sequence after the her which signals P2/3.

This is, in effect, the same inferential process that enables us to decide whether a body on the scene is an entity merely involved in the event, or a message participant contributing to the event. That is, in the absence of specific grammatical signals, speakers must rely on the lexical content of the occurring items and common sense (human intelligence) to make the appropriate inferences (the common sense is often aided by extended relevance).

For German, this question becomes acute when an utterance has two accusative participants, both being LOW contributors according to the morphology. In some cases, such as examples with kosten, interpreting both accusatives as LOW with respect to the verb seems coherent with the message conveyed. E.g. in

- (48) Es kostete ihn { Mühe.²²
Nom. Acc. -
HIGH LOW } sein Leben.
Acc.
LOW }
- 'It cost him { an effort.'
his life.' }

the impotence of the person referred to is adequately reflected by the choice of the accusative ihn. At other times, however, one of the accusatives appears to play no role at all in the event, as in

- (49) Das geht Sie einen Scheissdreck an. (GGp.70)
 Nom. Acc. Acc.
 HIGH LOW LOW

'That's none of your business.'
(Literally: that concerns you shit.)

where the underlined accusative appears to be more of a comment on the occurrence than a possible participant. As Zubin (1972) pointed out, case morphology is only an aid in role assignment, the specific nature of which must be inferred from verb plus context plus morphology.

In this connection it is to be noted that the morphology of case plays a role not only in the substance of participation, but in other semantic domains, e.g. that of focus, as well. It can therefore occur that a particular occurrence of a case form is motivated by its relevance to the interpretation of the message with respect to one semantic substance but not to another. Furthermore, the case indicated on a particular form may constitute the least inappropriate choice of meaning given the message that is to be conveyed. In the example above, and given that modified nouns in German cannot but exhibit case morphology, we can consider the accusative (=LOW) on einen Scheissdreck as the least inappropriate meaning (because at the bottom of the participant system scale, where it can equal zero) given Scheissdreck's lack of a role in the event of angehen.

In this example, Scheissdreck ('shit') is a lexical (emphatic) gloss of nichts ('nothing'). The absence of case morphology on nichts in utterances like

- (50) Er hat mir nichts gesagt.
'He didn't tell me anything./He told me nothing.'

can be seen as an indication that no grammatical rank is involved. Nichts can, however, still be a participant in the message, as is especially clear in

- (51) a. Nichts würde mir mehr Freude bereiten.
 b. Nothing would give me greater pleasure.

For German, the non-signalling is clear, because of the absence of case morphology. For English, however, whether a particular item is a signalled participant or not is not automatically determined. Rather it must be decided in each instance whether the lexical content of the item is such that it could be a participant in the activity. In (52), for example

- (52) Never saw such a thing.

never is not inferred to be a participant and is therefore not P1. "I" is understood from the context. In (53), on the other hand,

- (53) Nobody saw such a thing.

nobody may qualify for participant status and be P1. Knowing that a participant is involved then enables us to identify its degree of participation from the position occupied: P1, P2, P3. But as we saw in (47) and (52), the position alone does not determine the entity's participant status. As for items like nothing and nobody, the question of whether their lexical content makes them eligible for participation in the activity give, for example, as in (51b), or saw, as in (53), is open. We tend, especially in cases

like (51b) and (53), where nothing and nobody occupy P1, to consider them participants. The texts in our study contain no such examples, however, and so we will shelve the question to await the specification of Diver's analysis.

4.8 Application of procedure in two approaches

Having described above the general procedure for counting occurrences and participants, we shall in this section characterize more fully the "two distinct approaches" mentioned in the introduction (cf. 1.3 and 1.4).

A. Novels and translations

The one approach to the data is made via three original novels, one in each language, and translations into the other two--thus yielding a study of nine corpora (the three originals plus six translations).

In each novel and translations, counts were made of references to entities, message participants and grammatical participants (cf. 4.3) and these counts were compared across languages. The texts themselves were selected from among the contemporary authors whose work had been translated into the other two languages, the translations being accessible. The authors ultimately chosen for this study²³ for the above reasons were Gabriel García Márquez (1928-), Günter Grass (1927-), and Dame Agatha Christie (1891-1978). (Cf. Appendix 1 for details.)

B. Native-speaker narratives

It was pointed out at 1.4 that there is a difficulty in knowing to what extent the phenomena found in translations are due to the target language and to what extent they go back to the source language. In order to overcome this drawback, it was decided to include in the contrastive analyses native-speaker descriptions of identical picture stories in each language. The native-speaker narratives, while avoiding the potential influence of any "source language" (because they are produced in response to non-verbal stimuli), nevertheless have a built-in problem of their own: the eye of the beholder. Each narrator, being free to interpret the scene sequences in his own way, may produce data that is substantially different from that produced by the next native speaker.

It seems reasonable to assume, however, that if the data derived from the originals and translations and those derived from the native-speaker narratives are comparable, both obstacles will have been surmounted.

1) Data collection

The narratives were collected in writing from native speakers of each of the three languages, in all cases in a native-language setting. The Spanish narratives were collected in Buenos Aires, Argentina; the German narratives were written in Tübingen, Germany. Most of the English narratives were collected in Brooklyn, New York,

with only three exceptions. The latter, while written near Munich, Germany, were nevertheless produced in a monolingual native-language setting: the writers are Americans associated with an American military installation and continuing their studies--in English--as part of the Maryland University education abroad program.²⁴

All subjects were given two picture stories to narrate in their own words and a mini-questionnaire designed to ascertain their qualification as native speakers of their respective languages, asking, e.g., what other languages they know, since what age, and how well. The questionnaire and the instructions for the narrative task were kept as short as possible and were in each case given in the language in which the narrators were expected to write (cf. Appendix 2).

2) Subjects

All the subjects are students or young teachers in their respective countries, all are between the ages of 17 and 30. There are ten narrators in each language group, making a total of thirty, each of whom wrote two narratives, yielding sixty narratives. There is an almost equal distribution of male vs. female:

Spanish:	4 male	6 female
German:	5 male	5 female
English:	4 male	6 female

A few additional subjects wrote narratives but were

eliminated for one of two reasons, reducing the groups to a uniform ten each. The reasons for elimination were:

- 1) childhood included a period of living in a non-English- (or non-Spanish-, or non-German-, respectively) speaking area,
- 2) the format of the written work was markedly different from that of the rest of the writers (e.g., dialogue instead of narrative).

Subject selection was on a volunteer basis, the individual subjects' "credentials" were subsequently checked and necessary eliminations made, as indicated above. The object of the selection was to get subjects who had completed their basic language development, who were reasonably adept at writing their native language, and who grew up essentially monolingual (there was no other-language influence during childhood except languages learned as subjects at school) and continue to live in an actively monolingual community (i.e., have contact with other languages chiefly via studies). These objectives were generally achieved--the only other-language influence that began at an early age (5 or 6) was Hebrew for two of the English speakers (No. 2, No. 5) and as Hebrew is not one of the languages under study this influence may be disregarded. The sample can perhaps be described as a limited judgment sample, selected without any intention of representing the population as a whole, but seeking to get

the same content handled by a number of comparable native speakers of each language.

3) Task

The subjects were given two illustrated picture sequences to narrate, one consisting of eight frames, the other of ten. Each is taken from a cartoon collection (cf. Appendix 1 and 2). The subjects were requested to narrate the stories in their own words and as they see them. The study was described as designed to determine whether different people "see" the same series of graphic representations in the same way. The amount of detail was left to the narrators, but they were asked to keep to the story line as presented in the pictures. The total task (both stories) was characterized as taking approximately half an hour. This time indication was given in the hope of getting relatively similar-length narratives. There was, however, no time limit and consequently some of the German students spent somewhat longer, having been carried away by their tale, a fact reflected in the comparatively longer German narratives.

4) Nature of the data

The collected narratives contain a total of 1359 occurrences, or an average of 23 per story. Broken down according to language, the average occurrences per narrative are: Spanish 16, German 31, English 21. This results in quite a small body of data, especially when we

come to consider 3-entity situations, and even more so at the level of signalled participants (cf. Chapter 5, Part IB for detailed discussion). Nevertheless, we subject these narratives to the same investigation as the novels and translations and compare the data to those obtained from those sources in order to test via the dual approach mentioned earlier the hypotheses outlined in Chapter 1.

Notes to Chapter 4

1. That individual occurrences do not always match across languages will emerge in the detailed comparisons in Chapter 6.
2. The former instance occurred in the Spanish translation of the Grass original (German); the latter in both German and Spanish translations of the Christie text (English). See 7.2 for details.
3. It must be pointed out immediately that decisions as to what to count as an X, what as a Y, in our quantification must needs be of a subjective nature in the absence of a full-fledged grammatical analysis. This does not, however, discredit the procedure, as long as the decisions are made with consistency. In the case at hand, where the object of study is interlingual correspondence, it is crucial that similar decisions be made (where warranted) for each language. It is (perhaps) not too important whether a particular form gets assigned to X or to Y within a language, as long as what can reasonably be viewed as the same thing gets assigned to the same category in the other languages.
4. To cite only a few references:
 For Spanish: Gili Gaya 1961:67-68, 103-119, 131-143;
 Bull 1965: 149-197; Bull 1971
 For German: Lederer 1969:107-116, 131-159;
 Engel and Schumacher 1976;
 Curme 1964:209-211, 259-60, 318-323
 For English: Curme 1931:Vol. II, 63-71, 201-334;
 Joos 1964;
 Quirk et al 1972:61-122, 799-853;
 Fillmore 1968:27-51; Fillmore 1977:63-65,
 68.
5. Curme (1964:538) points out for German that in
 - i. Ich sehe ihn laufen.
 'I see him run(ning).'
 "the simple infinitive here...is the accusative of an old type of verbal noun which still as in the prehistoric period has no article before it....there has sprung up in the course of time a close association between the two accusatives, so that the second one is now felt as the predicate to the first one, the subject."
6. It may be argued that consume has two participants, at least in the message, with him acting as a participant in both occurrences, but as this study is restricted to

3-entity events, that is immaterial here. (It may, however, be considered that the morphology of him can be taken as an argument against him's figuring as high participant in the occurrence consume.)

7. In Spanish only one grammatical participant may be signalled at a time, as the two signals in the system do not cooccur. (When both non-focus entities are to be referred to pronominally--e.g. if libro in (7) is to be referred to with lo 'it'--then the remaining entity, the recipient, is referred to with se, as in

i. Se lo dio. '{He }gave it to{him.}'
 {She} {her.}

Se is a clitic that is non-distinct as to degree of participation. It is therefore not a signal in the SPT, although its referent is a message participant.)

8. It appears that "personal-a phrases" in Spanish and possibly also "to + person" in English and "zu + person" in German--when not strictly locative expressions--are exceptions, at least as far as ranking participants in the message is concerned. Cf. García 1975:92 for a discussion re Spanish. Such a personal-zu phrase in German is extremely rare: the few that occur are with sagen 'say', e.g.

i. "----" sagte der Oberst zu ihm. (GM p.21)
 "----" the colonel said (to him).' (GM p.12)

and occur in the translated rather than the original text.

9. Two "datives" are, on the other hand, possible (though rare) in the message in Spanish, e.g. García's (1975: 81-82) example:

i. Me le pintó la mesa.

Dat.

MID

'On account of me, he painted the table for her.'

10. Admittedly this possibility exists for very few verbs. Kosten 'cost' and lehren 'teach' are the two most frequent.

11. It will be remembered that García's characterization of the Spanish SPT includes the meanings LESS and LEAST, generalized in this treatment to MID and LOW for ease of comparison.

18. This is another one of those cases for which it must be determined what the occurrence is: be devoted or be devoted to, a question beyond the scope of this dissertation. (This example would contain at most two participants, in any case.)
19. Her in these examples is not a grammatical participant either, because an entity cannot be a grammatical participant if it is not a message participant. Anthony Marston in (i.), however, following the preposition to,
 - i. who could not possibly have administered
 P1
 cyanide to Anthony Marston.... (AC p.100)
 P2/3
 does participate directly in the event (i.e., is a message participant). Anthony Marston in (i.) is, however, not a grammatical participant because it follows a preposition and prepositional phrases--even to-phrases, which can contain message participants--do not contain signals of the SPTs. (Cf. pp.89-90.)
20. Of interest here is the question of a new car: the slot for P2 is filled, consequently we can assign to a new car the value P3, rather than the P2/3 that is assigned when there is only one entity following the verb. But because this is a two-participant event (although one involving three roles) it is not included in the present study.
21. Examples (46) and (47) are from Diver.
22. Mühe does not signal a degree of participation because it is unmodified. It is nevertheless a participant in the message. Cf. sein Leben, which is a parallel case that does signal degree of participation (LOW).
23. Preliminary work was done on short stories by J. L. Borges and a novel by H. Böll.
24. I am indebted to Clara Wolf (Buenos Aires), Laura Kitch (Brooklyn) and Al Ashforth (Munich) for their invaluable assistance in finding subjects and distributing and collecting the materials. I am also indebted for their cooperation to the subjects themselves--those in the locations mentioned above as well as my own students in Tübingen.

Chapter 5

Exploitation of the SPTs

Part I - General Hypothesis

5.0

In order to test the general hypothesis--repeated here for the reader's convenience--we will examine the data investigated relative to the SPTs.

General hypothesis:

It is hypothesized that there will be quantitatively recognizable differences among the languages in the distribution of specific forms that are equatable on the basis of their meanings. It is further hypothesized that these differences reflect biases in production that are understandable in the light of the grammatical systems available to the speakers and writers of the different languages.

A. Novels and Translations

5.1 Factors affecting the signals of the SPTs

A look at the brief characterizations of the SPTs in Chapter 2 reveals that the systems share the meanings HIGH, MID, LOW (except for Spanish, where high is always

an inference from the verb ending and other signals). Consequently, the systematic differences among them shall have to be (the Spanish meaning difference aside) on the signal side of the signal-meaning combinations or shall have to be differences in value relationships, i.e., in relationships to other meanings existing in the language.

In this chapter we will look at these systemic differences; other differences (communicative strategies and individual correlations) will be examined in Chapter 6.

One would expect the following factors--at least--to contribute to systemic differences in the signals of a grammatical system, and we shall see below that they do play a role in the differences among the SPts:

- 1) form of the signal (for example, whether it is a word-order signal or a morphological one)
- 2) scope (e.g. whether the signals occur only on clitic pronouns vs. on most references to entities expressable in the language or whether the signals are associated with--interlock or overlap with--third person only vs. with all persons)
- 3) implementation (how many entities can be grammatically signalled per event)

If we consider the various realizations of these three factors in the languages under study in terms of their communicative value and/or perceptual complexity, we find considerable differences. Let us evaluate the reali-

zations of the factors form, scope and implementation from a communicative point of view by identifying those that contribute to ease of communication and those that make communication more difficult. Communication is made easier primarily by providing more opportunities for signalling meanings, thus providing more explicit aids to inference; a lack of such opportunities makes communication more difficult. We attribute a + when the realization of one of the factors in a particular language eases communication, a - when it makes signalling more difficult:¹

	+	-
form:	morphology	word order
scope:	more types of referring forms	fewer types of referring forms
	more associations	fewer associations
implementation:	more signals per utterance	fewer signals per utterance

If the + realizations aid ease of communication, then we assume that the more + a language has to show with respect to these factors the more it will exploit its SPt, because the speaker can convey his message easily with the aid of its signals.

What we mean by exploitation of the SPts is the following: The SPts are designed to rank entities on the scene or in the event and the operation of the SPts is thus essentially designed for multiple-entity occurrences. As the limit of signalling capacity for the SPts is three

per occurrence or per system, their maximum effect can be seen in occurrences involving at least three entities. We will therefore examine numbers of signals per 3-entity situations, since we want to know how often signals of the SPts are produced by speakers/writers expressly in those instances where ranking of participants becomes crucial, namely when there are at least three potential ones on the scene. We will thus count entities, message participants and grammatical participants and calculate the frequency of their occurrence per 3-entity situations as a measure of SPt exploitation.

A measure of the + and - assignment should give us an indication of which SPt is more exploitable, and thus enable us to predict a ranking of the SPts with respect to frequency of occurrence of their signals. In order to do this, we must determine how the three SPts line up with respect to these factors.

5.2 Correlation of factors with the SPts

Form: Both Spanish and German have morphological signals, readily recognizable whenever they occur. The English SPt, on the other hand, has word-order signals. There the hearer has not only to recognize a lexical item referring to an entity (it may, of course, also be a pronoun), but must also register its linear position relative to the verb, and to the other mentioned entities.

We thus distribute communicative pluses and minuses with respect to the form factor as follows:

Spanish + German + English -

Scope: The Spanish SPt is greatly restricted in scope. It is, as indicated above, limited to certain third person clitics (le, lo, la and their plurals), short signals that express meanings from other grammatical systems as well. This is true also for the German pronouns, although in German persons other than third are also included in the SPt.

The Spanish signal is, however, not added onto another morphological (lexical) signal, as is the case for non-pronouns in German. There, nominative, dative and accusative also cooccur with lexical items referring to the entities involved. That is, the signals of the German SPt also occur as case morphology on the articles, adjectives and demonstratives grouped with the words actually naming the entities. In these cases, identification of the participant is aided by the specific nature of the noun: a pronoun requires the hearer to seek out the referent, whereas a lexical mention spells out which entity is being referred to.

Thus the scope of the German SPt extends over all the pronouns and most lexical entities (via the case morphology on the modifiers) with the exception of proper names (generally unmodified).

The English SPt, however, has even greater scope, for it includes all pronouns and all lexically mentioned entities, since their ranking is signalled by their position in the utterance.

Another aspect of this difference in scope is the extent to which signals of other grammatical systems express meanings of the SPt as well: wir 'we' in German, for example, is a signal expressing the meanings FIRST PERSON and PLURAL, among others, in addition to its SPt meaning HIGH participant. We thus find an interlock between the systems of participation, person and number (and others) in the signal wir.

In English we can see a similar association--let us call it overlap--between morphology and word order. In

(1) He sent us a letter.

the us expresses FIRST PERSON and PLURAL by virtue of its morphology. Also expressed by the morphology of us is that it is NON-HIGH (vs. we; cf. Note 16, Chapter 2). However, only the P2 word-order position expresses its MID meaning in (1). Thus the sequence us conveys some information by its morphology, some by its position.

As for our three SPts as a whole, then, all of them are associated with (interlock or overlap with) the Systems of Person in the respective languages; in German and English, however, more values of the Systems of Person interlock or overlap with the SPts than in Spanish, thus

giving speakers of English and German greater scope with respect to the SPts. They can signal a degree of participation at the same time as they express a FIRST PERSON or SECOND PERSON meaning, an option not available to Spanish speakers.

<u>German</u>		<u>English</u>	
<u>Person</u>	<u>SPt</u>	<u>Person</u>	<u>SPt</u>
1st = SPEAKER = ich Nom.	✓	1st = SPEAKER = I + Pl	✓
2nd = HEARER = du Nom.	✓	2nd = HEARER = you + Pl	✓
3rd = OTHER = er, etc. Nom.	✓	3rd = OTHER = he, etc. + Pl	✓
E.g. { I You } loved it. He }			

<u>Spanish</u>	
<u>Person</u>	<u>SPt</u>
1st = SPEAKER	---
2nd = HEARER	---
3rd = OTHER = <u>le</u> , ² <u>lo</u>	✓

Fig. 6. Interlock of SPt with Person

Another significant difference affecting scope is the extent of interaction of the SPt with the lexicon. While it may not be desirable to speak of the lexicon as a system, for there are many semantic substances involved, it is nevertheless recognizable that the signals of the Spanish SPt are not added to any lexicon, being restricted

to clitics, while the signals of the English and German SPTs are grouped with nouns as well.

Our distribution of + and - with respect to the factor scope thus yields:

Spanish - German + English +

Implementation: The individual correspondences of signals and meanings of the SPTs detailed in Figure 5 (p.56) correlate somewhat differently when we consider the factor of implementation. Represented graphically, the maximum signalling capacity of the SPTs (how many entities can be grammatically signalled per utterance) is as follows:

The Signalling Capacity of the SPTs

MEANINGS:	HIGH	MID	LOW	Maximum
Spanish		le OR lo		1
German	Nom. +	Dat. +	Acc.	3
English	P1 +	P2 +	P3	3

Fig. 7

We thus ask and answer a different question with Fig. 7 than we did with Fig. 5. There we asked:

- 1) What signals correspond in each language to the meanings of the SPT?

Here we are asking:

- 2) What combinations of signals are (maximally) possible in each language?

The answer to 2) is the factor implementation.

Spanish speakers can grammatically express only one participant at a time (per occurrence): le or lo.³ German and English speakers can express up to three participants per occurrence. Our communicative + and - can thus be distributed as follows with regard to the factor implementation:

Spanish - German + English +

A summary of the communicative values of the SPts according to the factors affecting the signals appears in Figure 8.

	<u>Form</u>	<u>Scope</u>	<u>Implementation</u>
Spanish	+	-	-
German	+	+	+
English	-	+	+

Fig. 8. Communicative values of the SPts

A simple addition of + and - reveals that the German SPt contributes the greatest ease to communication in terms of these factors, followed by English, with the Spanish SPt bringing up the rear:

German + + +
 English + + -
 Spanish + - -

The + and - values we have assigned above on the basis of form, scope and implementation derive largely from a paradigmatic view of the SPts. We shall, however,

be concerned primarily with the syntagmatic effects of these factors, namely as they affect the frequency (in running text) of 3-entity, 3-participant and 3-Participant events. Since the paradigmatic ranking German (G) : English (E) : Spanish (S) is based on factors of communicative ease vs. difficulty and on the presence vs. absence of opportunities for signalling, we would expect it to be reflected syntagmatically, i.e., the frequency of occurrence of the signals of the SPt should likewise rank G : E : S, because the SPt is exploited in the expression of messages. When a language provides its speakers with more opportunities to signal a degree of participation in a perceptually simple way, we would expect them to take advantage of the chance. We therefore expect that German speakers will exploit the German SPt more than English speakers exploit the English SPt and that these in turn do so more than Spanish speakers exploit the Spanish SPt.

5.3 Semantic precision of 3-entity situations

Having focussed on 3-entity situations, we can turn around the exploitation question and ask a question more coherent with a communicative view of language: Given that the scene involves three entities, how will speakers of each language go about dealing with them? That is, will the signals of the SPts be involved when reference is made to these entities--or will speakers handle them in some other way?

Message participants and grammatical participants

We pointed out in chapters 1 and 4 that the most plausible basis for interlingual comparison was a comparison of messages--especially in professional translation, as it can be assumed that the translator has sought to convey the same message as the original author. But the messages are not objects of grammatical analysis--signals and meanings are. We therefore want to deal with two aspects of communication: messages and signal-meaning correlations.

That is, as was indicated in Chapter 4, we will talk about participants in two ways: participants in the message and grammatical participants (signal and meaning correspondences). Participants in the message (p) are notional constructs used to characterize a distribution of entities understood to be ranked by degree of activeness or potency in the message conveyed. This "understanding" may be due only to inference or it may be due to the presence of a signal correlated with an SPt meaning. That is, some or all of the inferrable participant rankings may have been grammatically signalled (P) by the speaker--in which case he exploited the SPt.

We thus have a three-step distinction. The first step is the mention of three entities on the scene. We proceed on to the message the speaker conveyed and ask whether or not those three entities are ranked partici-

pants in the event. And finally we ask, did the speaker signal the rank of the participants using the means afforded by the SPt? (Cf. 4.3 and 4.4 for examples.) Basically it is a question of semantic precision: given the scene, for how much of it does the speaker imply (p) or fully specify (P) rankings? The more precise a speaker gets, the more aids to inference he supplies.

And the interlinguistic question that derives from this is: Do speakers of Spanish, German and English refer to 3-entity scenes with the same degree of semantic precision? On the basis of the three factors discussed above, we would expect to get a negative answer to this question, and indeed we do.

5.4 Individual instances vs. entity complexes

The question of semantic precision brought up in 5.3 can be seen from two perspectives, a particular and a complex one. That is, we can ask for each individual entity on the 3-entity scene: Does the speaker imply a ranking of this entity (p), specify the rank of the entity (P)--or neither? And we can ask of the 3-entity complex, i.e., of all three as a unit: Does the speaker suggest rankings for the 3-entity complex (max p), does he specify the ranks of the entities (Max P)--or neither? In other words: Does he exploit the maximum signalling capacity of the SPt?

Let us exemplify these questions with the following

utterances:

- (2) a. ...und wir ihm Treibsand zum Putzen anboten.
(GG p.15)
- b. ...la arena que para ello le ofrecíamos.
(GG p.22)
- c. we offered him sand (GG p.18)

First, as to the individual entities: we can ask for each of we, him, sand whether it is a message participant (p) and if so, whether it is also a grammatical participant (P). Let us take sand: In Spanish, arena is referred to in the occurrence ofrecer 'offer' via que 'that', which cannot be a grammatical signal of the SPT (it is not a clitic). It is, however, ranked (via extended relevance) with respect to the event and is therefore a participant in the message (p). Treibsand in German is also not a (P) because it is unmodified and therefore is not grouped with a case-morphology-bearing form. The English sand, however, by virtue of its P3 position, is a grammatical signal of degree of participation (LOW) in the English utterance. We thus have a differential treatment of this entity. The English text signals its rank fully as a (P); the German and Spanish texts simply let the hearer infer its ranking (p).

We can ask the same question for the utterance as a whole: Is the 3-entity complex given maximum grammatical treatment? In German, 2 out of 3 entities are signals (P): wir 'we' + ihm 'him' (but not Treibsand 'sand'). In

English 3 out of 3 entities = (P). In Spanish one entity out of 3 is grammatically signalled (P): le 'him'. If we look back to Figure 7 (page 127), however, we see that both English and Spanish have provided maximum signalling (Max P) for the 3-entity complex (English with 3, Spanish with 1 signal).

In this way it must be determined interlinguistically to what extent speakers of the different languages give the entities on the scene--individually or as 3-entity units--the same treatment. We will look at the observed differences and will attempt to understand them in light of what we know about the differences in the SPTs.

5.5 Matrix and predictions

If we put the comparisons discussed above in a graphic representation, we get a four-cell matrix characterized as follows: The individual cells represent ratios of message participants to entities (p/e), maximal message participant complexes to 3-entity complexes ($\max p / 3-e$), grammatical signals to entities (P/e), and maximally signalled complexes to 3-entity complexes ($\max P / 3-e$). The figures 1., 2. and 3. are the rankings which will be assigned to the individual languages according to the ratios found for the data in our corpus. The matrix is displayed in Figure 9.

	message participants (p)	grammatical signals (P)
individual entities	p/e 1. 2. 3. A	P/e 1. 2. 3. C
entity complexes (maximum signalling)	max p / 3-e 1. 2. 3. B	Max P / 3-e 1. 2. 3. D

Fig. 9. Comparison of the exploitation of the SPTs in 3-entity situations.

An examination of the data will enable us to fill in the ranking of the languages. It will be recalled that on the basis of our signal-oriented factors we predicted a ranking of German : English : Spanish for grammatical signalling, assuming equal weighting for each of the factors involved. This prediction is relative to the cell labeled C (P/e).

We would expect the same ranking for cell D (Max P / 3-e), but the relative effect of the different factors must be taken into account, since in this cell the effect of the factor implementation is particularly marked. That is, by comparing maximum signalling per 3-entity complexes

for the three languages in question, we are in effect comparing apples and oranges, or at least 1-pea pods with 3-pea pods. For maximal signalling in Spanish consists of 1 (le or lo), while maximum signalling in German and English consists of 3 (nominative + dative + accusative or P1 + P2 + P3). Considering that there will very probably be many more 3-entity situations in which a Spanish speaker will choose to signal grammatically at least one (a MID or a LOW) than there will be 3-entity situations in which German or English speakers will choose to signal grammatically all three (a HIGH and a MID and a LOW), we can predict that Spanish will move to the top of the ranking, yielding Spanish : German : English for cell D.⁴

What predictions do the factors form, scope and implementation allow us to make for cells A and B? None whatsoever. In order to make such predictions we would have to assume that factors playing a role in the exploitation of the signal-meaning correlations of the SPTs also play a role in the notional organization of message categories. That is, we would have to assume that factors affecting the frequency of the signals also affect the frequency of expressed message participants that are not grammatically signalled. If this assumption is made, the ranking German : English : Spanish would be predicted for both cell A and cell B. (We assume the carry-over from

cell C to both cells A and B because the factor implementation, which played a role relative to cell D, is not relevant here. That is, max p is the same for all three languages, namely 3-p.)

The assumption is not illogical--after all, seen in terms of semantic precision of the scene, message participants are a partial treatment--the rankings are suggested--while the grammatical signals constitute a full treatment of the same kind, specifying the rank of the participants.⁵ Let us proceed with the above assumption as a working hypothesis, then, and predict the same ranking of languages in cells A and B as in cell C.

5.6 The data from the texts

What results, then, do the data yield to the question raised in this chapter and to the matrix at 5.5? We will look at one cell at a time and examine the data from each novel (and translations) and from the native-speaker narratives separately. Results from each text are presented separately and an average for each language is given below. (Texts: Agatha Christie, Ten Little Niggers = AC; Gabriel García-Márquez, El coronel no tiene quien le escriba = GM; Günter Grass, Katz und Maus = GG. Original language is underlined in the tables. Cf. Appendix 1 for details on texts and translations.) Since, in effect, we are viewing the question as one of semantic precision in two degrees we will look at the lesser

precision first, namely the rendering of entities on the scene as participants in the message (p).

I. message participants (p) / individual entities (e) =
cell A in the matrix

In this section we will examine all the 3-entity situations in the various texts in order to ascertain how many of these individual entities are message participants. The figures given represent all entities not referred to in prepositional phrases⁶ and semantically capable of participating in the event.⁷ The prediction based on assuming an effect for our signal-oriented factors (form, scope, implementation) on message participants as well is that the languages will rank in the order German : English : Spanish in expressing entities as message participants (p). We see in Table 3a that the prediction does not hold. When we calculate the percentage of mentioned entities that appear as message participants (p) we find it is always highest for the Spanish text or translation.

Ranking the results displayed in Table 3a gives us a uniform distribution for each text across languages, always Spanish : German : English. The figures are found in Table 3b.

TABLE 3a

p / e : MESSAGE PARTICIPANTS / INDIVIDUAL ENTITIES
(IN 3-ENTITY SITUATIONS)

S			G			E		
Tot. # of ent.	# of p	%	Tot. # of ent.	# of p	%	Tot. # of ent.	# of p	%
AC: 1482	1247	84.14	1632	1210	74.14	<u>1266</u>	852	<u>67.30</u>
GM: <u>825</u>	<u>661</u>	<u>80.12</u>	933	712	76.31	789	574	72.75
GG: 1008	834	82.74	<u>972</u>	<u>752</u>	<u>77.37</u>	858	622	72.49
Average: 82.33			Average: 75.94			Average: 70.85		

TABLE 3b

RANKING PRODUCED IN TABLE 3a

	<u>AC</u>	<u>GM</u>	<u>GG</u>	<u>Average</u>
Spanish	84.14%	<u>80.12%</u>	82.74%	82.33%
German	74.14%	76.31%	<u>77.37%</u>	75.94%
English	<u>67.30%</u>	72.75%	72.49%	70.85%

We can enter these clear results (average figures) in
cell A of our matrix:

Cell A (p / e)

1. Spanish 82%
2. German 76%
3. English 71%

II. message-participant complexes ($\max p = 3-p$) /
 3-entity complexes (3-e) = cell B in the matrix

In this section we examine the 3-entity situations to ascertain in how many of them speakers rank all three entities in the message. The figures obtained contain all cases in which none of the entities is referred to in a prepositional phrase⁶--the ranking of $\max p / 3-e$ is, in effect, a measure of avoidance of prepositional phrases--and in which the entities can be semantically understood as participating in the event.⁷ The prediction, again based on the assumption that our factors also apply to the message, is that the languages will rank in the order German : English : Spanish for cell B. We see in Table 4a that also this prediction does not hold.

Ranking the results displayed in Table 4a again gives us a uniform distribution for each text across languages, always Spanish : German : English. These figures can be found in Table 4b.

TABLE 4a

max p / 3-e : MESSAGE-PARTICIPANT COMPLEXES /
 (=3-p) 3-ENTITY COMPLEXES (IN 3-ENTITY
 SITUATIONS)

	S			G			E		
	Tot. # of 3-e	# of max p	%	Tot. # of 3-e	# of max p	%	Tot. # of 3-e	# of max p	%
AC:	494	320	64.78	544	196	36.03	422	115	27.25
GM:	275	143	52.00	311	128	41.16	263	92	34.98
GG:	336	222	66.07	324	153	47.22	286	123	43.01
	Average: 60.95			Average: 41.47			Average: 35.08		

TABLE 4b

RANKING PRODUCED IN TABLE 4a

	<u>AC</u>	<u>GM</u>	<u>GG</u>	<u>Average</u>
Spanish	64.78%	<u>52.00%</u>	66.07%	60.95%
German	36.03%	41.16%	<u>47.22%</u>	41.47%
English	<u>27.25%</u>	34.98%	43.01%	35.08%

The clear results for cell B of the matrix are thus:

Cell B (max p / 3-e)
 =3-p

1. Spanish 61%
2. German 41%
3. English 35%

We thus have a ranking Spanish : German : English for both cells having to do with message participants in relation to entities on the scene in 3-entity situations. We had, however, predicted for both cells that the grammatical participant ranking of German : English : Spanish expected for cell A on the basis of our signal-oriented factors would be carried over. That is, we proceeded with the working hypothesis that the expected grammatical ranking would also be found in the message. This is obviously not the case. Let us consider why.

We established above that entities can be interpreted as participants in the message even when they are not accompanied by signals of the SPt. At 4.3 and 4.4 we gave examples of such non-signalled message participants whose roles in the event are inferred from context and the appearing signals (if any). We also pointed out that speakers of our three languages rely upon such inference to different degrees, depending on systemic differences in the SPts.

We are concerned here with the effects of two primary types of systemic difference:

- 1) A language whose SPt provides little opportunity for signalling--like Spanish--forces its speakers and hearers to infer participant roles from context and appearing signals (if any), while one whose SPt provides substantial opportunity for signalling--like German and English-- allows

its speakers to rely on direct signalling of degree of participation as an aid to conveying participant roles.

2) Speakers of a language whose SPt signals are easy to understand because readily recognizable--like Spanish and German, which have morphological signals--are more likely to exploit the system than speakers of a language whose SPt signals are perceptually complex--like those of English.

These effects of the systemic differences can lead us to predict a ranking of the languages as to relative reliance on inference in just the order produced in Table 4 (max p / 3-e complexes), namely Spanish : German : English, because Spanish has a more restricted scope than both German and English, thus requiring more inference on the part of its speakers, and German ranks above English with respect to the factor form, which affects perceptual complexity.

While this may at first appear circular, it is not. On the one side--the counts that produced Table 4a--we have judgments as to whether the entities occurring in a particular utterance can be interpreted as playing a contributive role to the activity described by the verb. In these judgments, which though subjective could be made by any speaker of the language, we are aided by any actually occurring grammatical signals (of the SPts) and by the restriction that all but personal-a-type prepositional

phrases are excluded from consideration. That is, the judgments rely solely on inference only where these other clues fail. Here the linguist making the counts is behaving as the speaker of the language would.

On the other side--the prediction of expertise in inference--we are relying on a comparison of the systems, the SPts, to indicate how much the language forces the speaker to leave to inference alone, inference of participant roles without signals of degree of participation to help. And there we find decided systemic differences controlling the extent of inference required, the effects being particularly marked in Spanish. We see that the severe limitations of the Spanish system as regards scope and implementation force the hearer to depend greatly on inference. The roles of at least two entities per every 3-entity situation must be inferred in Spanish, for only one can be signalled per utterance (implementation). In addition, all first- and second-person pronouns as well as all lexical references to entities are incapable of signalling degree of participation at all (scope). Thus inferential expertise is forced upon Spanish speakers by their system. And it can be seen from Tables 4a and 4b that Spanish speakers are more ready than speakers of German and English to avoid prepositional phrases and to rank the entities occurring on the scene. That is, the high ranking of Spanish in cell B suggests that Spanish speakers

are more inclined to infer participant roles--apparently because they have more practice in doing so.

But what about German and English? If we look at limitations of form, scope and implementation (5.2), we find English with a minus only in form and German with none at all. If Spanish was ranked high in inferential expertise because of its many minuses, shouldn't English rank second because of its one minus vis à vis German with none? The answer is no, and this because of the nature of the factor limiting ease of communication in English: form. That is, English speakers deal with signals that are more complex than those of Spanish and German, because they require a decision as to whether a particular form occurring in the appropriate position (P1, P2, P3 or P2/3) for it to be a signal in the SPt is indeed such a signal, or whether it simply occurs at that point in the necessarily linear sequence of speech.⁸ For this reason English speakers resort more to prepositional phrases to express at least one of the entities in a 3-entity situation, because their processes of inference, based as they are on word-order signals, are more complex, and because the meaning of the preposition specifies the role of the entity. Consequently, English occupies the bottom position in this scale which is, as we have pointed out, a measure of avoidance of prepositional phrases.

As for German, an additional point relative to

inference should be discussed. We have assumed in this work--as did Zubin in his thesis, which presents the German system--that the cases in German are distinct. That is, that one knows for each occurring modified noun and for each pronoun on the basis of the morphology alone whether it is nominative, dative or accusative. This is, however, true only for the pronouns (with the exception of first and second person plural) and the masculine nouns as well as all plural nouns. That is, among the pronouns, uns 'us' and euch 'you, familiar plural' are non-distinct as to dative/accusative; sie 'she, her, they, them' and es 'it' are non-distinct as to nominative/accusative; among the nouns, feminine and neuter forms--e.g. die Blume 'the flower' and das Manuskript 'the manuscript'--are non-distinct as to nominative/accusative.⁹ In both of these instances, then, the speaker must infer the actual case of the item from the context of its utterance. The inference is--in the case of nominative/accusative non-distinctness--however, usually so easy that it is hardly an effort at all (somewhat like the case of the Spanish verb ending which equals high almost all of the time). It is aided by the ending on the cooccurring finite verb (which distinguishes a singular from a plural third person high participant), by word order and by the overall context of the utterance, particularly in terms of the subject matter and universe of discourse. It is also aided by the FOCUS

meaning of the nominative: what is likely to be focussed on (talked about) generally corresponds with what is most involved. It is thus usually easy to distinguish between high and low participation in the event, the extremes of the scalar system. The 3-entity utterances in which both high and low participants are non-distinct as to nominative/accusative, such as

- (3) Die Mutter gab dem Kind ein Buch.
Nom./Acc. Nom./Acc.
'The mother gave the child a book.'

are relatively rare in connected text¹⁰ and the assignment of degree of participation is easily accomplished, even in isolation of larger context. It would require an utterance like

- (4) Die Ministerin schickte dem Präsidenten
Nom./Acc.
die Richterin als er Rat suchte.
Nom./Acc.
'The { (a) woman-minister } sent the president
 { (b) woman-judge }
the { (a) woman-judge } , when he was looking
 { (b) woman-minister }
for advice.'

for case role not to be immediately apparent from the lexical content, and even here word order would aid the inference, such that the (a)-version is much more likely--in isolation.

In addition, it will be remembered, there are many more instances in German than in English when a participant in the message fails to be grammatically signalled --all the instances of names and unmodified nouns. In

English the only mechanism whereby this non-signalling of message participants may occur is by an entity's appearing outside of the P1 V P2 P3 word order, and this occurs only to serve some other specific communicative purpose.

Another contribution to the development of inferential expertise has been suggested by William Diver: Because Spanish and German speakers are forced in two-participant situations to make a choice between MID and LOW participant (they must choose dative or accusative in most instances, as their SPTs do not collapse to NON-HIGH like that of English in this event), they necessarily develop, through constant practice in encoding the scene differentially, a skill in the interpretation of the role of the second (non-high) participant. English speakers never develop such expertise because for them there is no forced choice between MID and LOW in two-participant situations. The lack of this training in 2-p situations, with their greater inferential difficulty (there is less redundant support from lexicon), also accounts for English speakers' not being equipped to exploit the full range of possible mid participant interpretations in three-participant situations, thus resorting more to prepositional phrases to express the proper relationships.¹¹

To summarize, then, the answer to why we get a ranking of Spanish : German : English when we count par-

ticipants in the message (p) appears to be:

- 1) Spanish speakers have developed expertise at inferring because the nature of their SPt forces them to rely on inference. They are consequently readier to rank entities as participants.
- 2) German speakers have a certain adeptness at inferring, derived from the fact that names, unmodified nouns, and certain instances of non-distinct cases also produce a need for inference. (They also have the benefit of the two-participant situation training.)
- 3) English speakers resort more to prepositional phrases to express at least one of the entities in 3-entity situations because their process of inference, based as they are on word-order signals, are necessarily more complex (and because the two-participant situations offer no training ground in inferential expertise). This explanation derives from the factor form.

III. Grammatical participants (P) / individual entities = cell C in the matrix

In this section we will examine 3-entity situations to ascertain how many of these individual entities appear accompanied by grammatical signals of participation: HIGH, MID, LOW. In contrast to sections I and II, the figures obtained in this comparison consist of only those entities for which a degree of participation is actually signalled by means of morphology or word order. They must therefore

be items from Fig. 5 in Chapter 2.

For this comparison our factors (form, scope, implementation) led us to predict a ranking of the languages with respect to frequency of grammatical signalling as follows: German : English : Spanish. A look at the data in Table 5a reveals that we correctly predicted a low position for Spanish.

TABLE 5a

P / e : GRAMMATICAL PARTICIPANTS / INDIVIDUAL ENTITIES
(IN 3-ENTITY SITUATIONS)

S			G			E		
Tot. # of ent.	# of P	%	Tot. # of ent.	# of P	%	Tot. # of ent.	# of P	%
AC: 1482	269	18.15	1632	956	58.58	1266	748	59.08
GM: 825	129	15.64	933	631	67.63	789	513	65.02
GG: 1008	149	14.78	972	557	57.30	858	547	63.75
Average: 16.19			Average: 61.17			Average: 62.62		

NOTE: The variation according to language for each novel is significant using a chi square test:

AC (chi square = 665.54, df = 2, $p < .001$)

GM (chi square = 576.89, df = 2, $p < .001$)

GG (chi square = 554.52, df = 2, $p < .001$), cf. Appendix 4.

An attempt to rank the results to get a uniform distribution across the other two languages fails, however, as can be seen from the summary in Table 5b.

TABLE 5b

RANKING PRODUCED IN TABLE 5a				
	<u>AC</u>	<u>GM</u>	<u>GG</u>	<u>Average</u>
? English	<u>59.08%</u>	65.02%	63.75%	62.62%
? German	58.58%	67.63%	<u>57.30%</u>	61.17%
Spanish	18.15%	<u>15.64%</u>	14.78%	16.19%

Positions 1 and 2 are not clearly assignable, and we have indicated this by inserting question marks before English and German in our ranking. In two out of three texts (AC and GG) English leads in grammatical signalling. In the third, deviating text (GM), German does. The variation between German and English, tested via a chi square test, is, however, hardly significant for the AC and GM texts:

AC: ($\chi^2 = 0.50$, $df = 1$, $p < .50$)

GM: ($\chi^2 = 1.31$, $df = 1$, $p < .30$)

GG: ($\chi^2 = 7.92$, $df = 1$, $p < .01$)

That is, the fact that English is slightly ahead of German in AC and slightly behind German in GM is non-significant, whereas the lead of English in GG is significant to $p < .01$.

The variation according to language between Spanish and each of the other languages is, however, highly significant: $p < .001$ in all instances (cf. Appendix 4).

We thus have a ranking for cell C of the matrix as follows:

Cell C (P / e)

1. English 63%
2. German 61%
3. Spanish 16%

where the distinction between places 1 and 2 is not of significance on the basis of these data.¹²

What does this tell us about the systematic differences? In this case, the counts reveal exactly what we might have predicted on the basis of the factor implementation: if Spanish can signal only one P per utterance, it will undoubtedly lag behind German and English, which can signal up to 3P, when it comes to frequency of occurring P.

We had predicted on the basis of our pluses and minuses that German would lead English in this comparison. We have no clear support of this prediction in these data. Apparently both German and English speakers fail to grammatically signal degree of participation for some entities to a similar extent. The failure results, however, from different processes in the two languages. German speakers mostly employ unmodified (and therefore non-signalling) references to entities, while English speakers rely on prepositional phrases as well as on (fewer) preposed references to entities (cf. further discussion of this point in section V, pp.156 -162).

An interesting question raised by this comparison is: which factor, form or scope, has the greater influence on the signalling of participants? With respect to form, the German SPt was evaluated as contributing more to ease of communication than that of English: the German SPt has morphological signals, while the English SPt relies on the perceptually more complex word-order signal. With respect to scope, it is the English SPt that has a slight edge (it provides more opportunities for signalling), although this difference between German and English is not captured by our assignment of + and - at 5.2. (There both German and English were assigned + in contrast to Spanish, which has -.)

A clear distinction in these results would have supported one or the other as the more effective factor. As English seems to be slightly favored for position 1 in cell C (it leads in the GG text where the difference is significant according to a chi square test), it would seem that scope has somewhat more of an influence than form on the exploitation of individual signals of the SPts (P / e).

IV. Grammatical-participant complexes (Max P) / 3-entity complexes (3-e) = cell D in the matrix

This final comparison with respect to our matrix seeks to ascertain frequencies of maximum exploitation of the SPts per 3-entity situations. The figures appear in Table 6a and show the occurrence of 1-P strings for Spanish

(i.e., le, lo or la or one of their plurals occurs in the utterance, which constitutes maximum-P signalling for that language) and 3-P strings for German and English.

TABLE 6a

Max P / 3-e : GRAMMATICAL PARTICIPANT COMPLEXES /
3-ENTITY COMPLEXES (IN 3-ENTITY SITUATIONS)

S				G				E			
Tot. # of # of Max % 3-e P				Tot. # of # of Max % 3-e P				Tot. # of # of Max % 3-e P			
AC:	494	219	44.33	544	92	16.91		422	53	12.56	
GM:	275	100	36.36	311	78	25.08		263	41	15.59	
GG:	336	108	32.14	324	73	22.53		286	74	24.87	
Average: 37.61				Average: 21.51				Average: 17.67			

This shows a ranking as in the two cells dealing with message participants, with Spanish consistently on top. However, here as in the preceding comparison (cell C), the relative positions of English and German are not clear.

TABLE 6b

RANKING PRODUCED IN TABLE 6a

	<u>AC</u>	<u>GM</u>	<u>GG</u>	<u>Average</u>
Spanish	44.33%	<u>36.36%</u>	32.14%	37.61%
? German	16.91%	25.08%	<u>22.53%</u>	21.51%
? English	<u>12.56%</u>	15.59%	24.87%	17.67%

Why does Spanish lead? An obvious role is played here by the factor implementation (number of entities per utterance expressable by SPt signals). As maximum signalling capacity in Spanish is one participant, it is plausible to expect Spanish speakers to reach this maximum more often than speakers of German or English reach the maximum signalling capacity of their SPts, which is in each case three participants.

But there is another factor playing a role to increase the lead of Spanish. In addition to the effect of implementation, we have the already discussed inferential expertise. Viewed in terms of degrees of semantic precision, the additive effect is best expressed the other way around: Spanish leads in expressing entities on the scene as message participants (because of inferential expertise) and this lead is strengthened by the implementation factor. Thus the difference between Spanish and the next language (let us use the averaged figures, which put German in second place) is even greater in the Max P / 3-e comparison than in the max p / 3-e comparison:

<u>max p / 3-e</u>	<u>Max P / 3-e</u>
S 60.95%	S 37.61%
G 41.47%	G 21.51%
Ratio ca. 3:2	Ratio almost 2:1
$\frac{S}{G} = \frac{1.47}{1.00}$	$\frac{S}{G} = \frac{1.75}{1.00}$

The averaged figures, which yield a ranking for cell D of:

Cell D (Max P / 3-e)

1. Spanish 38%
2. German 22%
3. English 18%

however, hide the fact that the ranking is not consistent for positions 2 and 3. Table 6b shows that the figures for the Grass text (GG, German original) fail to conform.¹³

When one performs chi square tests on these figures, it becomes apparent that the differences for the Grass text on this comparison (Max P / 3-e) are mostly non-significant:

GG/ Spanish : German : English
 $(\chi^2 = 7.97, df = 2, p < .02)$

German : English
 $(\chi^2 = 0.92, df = 1, p < .50)$

Spanish : English
 $(\chi^2 = 2.92, df = 1, p < .10)$

Spanish : German
 $(\chi^2 = 7.64, df = 1, p < .01) = \text{significant}$

But the relationship that is least significant of all for the Grass text is that between German and English, where $p < .50$. It is undoubtedly worthy of note that just in this case does English rise above German. That is, where the ranking of cell D given above by the averaged figures is not supported by the data, the difference turns out to be

non-significant.

It should be added, however, that the German : English distinction for this cell of the matrix is generally not supported as strongly by chi square tests as that between Spanish and the other two languages.

German : English χ^2 on Max P / 3-e

AC: $\chi^2 = 3.53$, df = 1, $p < .10$

GM: $\chi^2 = 7.80$, df = 1, $p < .01$

GG: $\chi^2 = 0.92$, df = 1, $p < .50$

Only for the García-Márquez text do we get a relatively clear result ($p < .01$). That is, the difference between German and English, when it comes to signalled participant complexes (Max P), is not as great as that shown in other comparisons. We had similar difficulty ranking German and English in cell C. There, indications favored a lead for English (with respect to P); here in cell D the indications for ranking (with respect to Max P) place German higher in exploitation of the SPT.

V. Further discussion of Cells C and D

If we compare the individual instances (P/e) to the entity complexes with maximum signalling (Max P / 3-e), we see that when individual Ps are concerned, scope plays the greater role, while when Max Ps are involved, it is form that has the greater effect. That is, in the individual P instances, English has the edge (it has greater scope) and in the Max P instances German leads (it has an easier form).

Can this be explained on the basis of differences in the SPTs? Possibly. To do so, we will first look at another comparison of figures which will make the relative positions of German and English clearer: we will examine the ratio of grammatical to message participants (P/p , $\text{Max } P / \text{max } p$) in 3-entity situations. We have mentioned above that the relationship between message and grammatical participants is one of lesser and greater semantic precision--of suggesting vs. specifying the rank of the entity involved.

Our comparisons in cells C and D opposed grammatical participants to entities; that is, they answered the question: How many of the entities on the scene (in 3-e situations) are referred to with signals of the SPTs? We saw (pp. 151-152) that there is no clear distinction between English and German in this regard. When we put the question in terms of the extent of semantic precision of participant ranking--that is, when we ask: How many participants in the message are referred to with signals of the SPTs?--we get the following answer:

TABLE 7

P / p : GRAMMATICAL PARTICIPANTS / MESSAGE PARTICIPANTS
(IN 3-ENTITY SITUATIONS)

	S			G			E		
	# of P	# of p	%	# of P	# of p	%	# of P	# of p	%
AC:	269	1247	= 22	956	1210	= 79	748	852	= 88
GM:	129	661	= 20	631	712	= 89	513	574	= 89
GG:	149	834	= 18	557	752	= 74	547	622	= 88
	Average: 20%			Average: 81%			Average: 88%		

This time we find a significant difference between German and English for both the AC and the GG texts:

AC: ($\chi^2 = 26.89$, $df = 1$, $p < .001$)

GM: ($\chi^2 = 0.18$, $df = 1$, $p < .70$)

GG: ($\chi^2 = 40.78$, $df = 1$, $p < .001$) (cf. Appendix 4)

whereas our cell C comparison (P/e) produced a significant difference only for the GG text. Thus the English lead in grammatical signalling is strengthened, when the data involve message participants. (The non-supporting text--GM, where English and German both exhibit 89% P/p--is not a contradiction, it merely fails to exhibit the tendency.)

We therefore find support for the ranking shown (but questioned) in Table 5b--English before German--when it comes to extent of grammatical signalling of individual participants. That is, a greater scope in the signalling capacity of the SPt favors exploitation of the SPt for

individual entities: overall more entities in 3-p situations are signalled as participants in English. But if English is ahead in Ps, German must have more instances of unmodified nouns or non-distinct pronouns, items that show no defining case morphology, so that a degree of participation is not signalled for these items. English cannot be vague in the same way. An unmodified noun or a non-distinct pronoun would in English still be a signal of the SPt by virtue of its position relative to the verb. The only option English speakers have for mentioning message participants without signalling a degree of participation is to deviate in word order. But a deviation in word order--usually a fronting of a non-high participant--is not merely an omission of an SPt signal: it is also a positive act, serving a communicative purpose --conveying prominence, emphasis, contrastive stress or some other similar message--that carries more weight than the absence of case morphology in German. I.e., the German speaker fails to signal case because he has chosen an item (from among a large, differentiated set) that does not have the morphological hardware (possibly only in this instance) for signalling participation. The English speaker, in the situation of a fronted non-high participant, fails to signal degree of participation for that entity because he has a more important message to convey via the preposing of the item. It is only natural that the contexts in which the

latter strategy is called for are far fewer than those in which German speakers have reason to select imprecise (as to degree of participation) morphology.¹⁴

Getting down to the ultimate semantic precision, however--all three entities expressed as signals--we run into the complexity of the word-order signal for English again, particularly as pertains to P2 and P3. We saw in Table 6b that the relative ranking of German and English was again unclear--the GG text deviates from the other two. The same is true in a comparison of grammatical vs. message participants:¹⁵

TABLE 8

Max P / max p : GRAMMATICAL PARTICIPANT COMPLEXES /
MESSAGE PARTICIPANT COMPLEXES (IN
3-ENTITY SITUATIONS)

	G				E		
	# of Max P	# of max p	%		# of Max P	# of max p	%
AC:	92	/ 196	= 47		53	/ 115	= 46
GM:	78	/ 128	= 61		41	/ 92	= 45
GG:	73	/ 153	= 48		74	/ 123	= 60
	Average: 52%				Average: 50%		

Contrary to the preceding comparison (P/p), these additional data do not help to clarify the ranking of German and English (with respect to Max P). Both the GM and GG figures show a relatively significant difference according

to a chi square test (cf. Appendix 4):

$$\text{GM: } (\chi^2 = 5.78, \text{ df} = 1, p < .02)$$

$$\text{GG: } (\chi^2 = 4.24, \text{ df} = 1, p < .05)$$

but not with the statistical validity of our previous comparison (where $p < .001$ for AC and GG). In addition, here the AC text exhibits a non-significant difference between English and German:

$$\text{AC: } (\chi^2 = 0.02, \text{ df} = 1, p < .99).$$

We shall, therefore, on the basis of the several comparisons, consider the relative ranking of German and English with respect to Max P as undecided, though favoring a lead for German. The clarification of this particular relationship will have to await further research, since part of the difficulty may lie in the interaction of factors when it comes to cooccurrence of grammatical participants (cf. Chapter 6 for further discussion).

We pointed out above (pp. 141-142) that two primary types of systemic difference are involved in the SPts of the languages under study: extent of opportunities for signalling and extent of perceptual complexity of the signal. The motivation for English speakers' relative reluctance fully to exploit the English SPt may be found in the burden placed on communicative interaction by the latter and the lack of inferential expertise developed as a result of its form; i.e., both the human factor and the communicative factor of Form-Content analysis contribute to

a possible explanation. That is, English speakers are faced with a complex communication situation and have not had inferential expertise developed in them by a system with restricted signalling capacity and forced choice (in two-entity situations). They can signal 3P when they have to, but more often than not they choose to detail their message in a communicatively simpler way--generally via prepositional phrases (or, as will be seen in Chapter 6, by non-mention of one of the entities).

5.7 Filled-in matrix

We are now in a position to fill in the matrix sketched out at 5.5 (Fig. 9) on the basis of the quantitative examination of our nine texts. Although some of the distinctions are clearer than others, the tendencies for all the rankings can be found in the data. Fig. 10 contains a summary of the results.

	message participants (p)		grammatical signals (P)	
	p/e	<u>Avg.</u>	P/e	<u>Avg.</u>
individual entities	1. Spanish	82%	1. English	63%
	2. German	76%	2. German	61%
	3. English	71%	3. Spanish	16%
	A		C	
	max p/ 3-e	<u>Avg.</u>	Max P/3-e	<u>Avg.</u>
entity complexes (maximum signalling)	1. Spanish	61%	1. Spanish	38%
	2. German	41%	2. German	22%
	3. English	35%	3. English	18%
	B		D	

Fig. 10. Results of the comparison of the exploitation of the SPTs in 3-entity situations.

When we compare these results with the predictions made at 5.2 and 5.5, we find the following. The predictions were (differing results in parentheses):

Cell A	1. G (S)	Cell C	1. G (E)
	2. E (G)		2. E (G)
	3. S (E)		3. S
Cell B	1. G (S)	Cell D	1. S
	2. E (G)		2. G
	3. S (E)		3. E

The differing results for cells A and B derive from our initial failure to consider the inferential expertise

developed by Spanish speakers as a result of the limitations of their SPT. When we take this expertise into account, the ranking S : G : E is explained. The differing results for cell C indicate--although the small percentage shows that the tendency is merely suggested by these data (it is reinforced by the P/p comparison)--that scope has a somewhat greater weighting than form in producing grammatical signals (P) with respect to individual entities per 3-entity situations (while form has a somewhat greater weighting relative to signalling 3-entity complexes).

Always highly weighted is implementation: whether directly, as it affects cells C and D--or indirectly, via the inferential expertise that a restricted implementation leads to (cells A and B).

5.8 Mention of three entities at all

The preceding discussion has dealt with 3-entity situations only, i.e., situations in which the speakers chose to mention three entities, regardless of whether they expressed them in prepositional phrases, as message participants, or with signals of the SPTs. That is, the environment of our inquiry was a subset of the larger corpus constituted by all occurrences in the nine texts.

Further data can be looked at regarding the exploitation of the SPTs: Just as we looked at message participants as one way of viewing the scene, one degree in the

semantic precision of the ranking of entities, so we can look at the extent to which speakers of a language are willing to embark on these waters at all. We can ask, given the larger corpus (all occurrences--clauses--in the nine texts), to what extent do the speakers of each language see (talk about) 3-entity situations? The answers are in Table 9a.

TABLE 9a
3-ENTITY SITUATIONS / TOTAL OCCURRENCES¹⁶

	S			G			E		
	<u>3-e</u> <u>sit.</u>	<u>Tot.</u> <u>occ.</u>	<u>%</u>	<u>3-e</u> <u>sit.</u>	<u>Tot.</u> <u>occ.</u>	<u>%</u>	<u>3-e</u> <u>sit.</u>	<u>Tot.</u> <u>occ.</u>	<u>%</u>
AC:	494	8494	5.82	544	8633	6.30	422	9259	4.56
GM:	275	3052	9.01	311	2889	10.76	263	3074	8.56
GG:	336	5739	5.85	324	5032	6.44	286	5516	5.18
	Average: 6.89			Average: 7.83			Average: 6.10		

NOTE: The variation according to language is significant using a chi square test (cf. Appendix 4):

AC: (chi square = 27.90, df = 2, $p < .001$)

GM: (chi square = 9.43, df = 2, $p < .01$)

GG: (chi square = 7.60, df = 2, $p < .05$)

TABLE 9b
RANKING PRODUCED IN TABLE 9a

	<u>AC</u>	<u>GM</u>	<u>GG</u>	<u>Average</u>
German	6.30%	10.76%	6.44%	7.83% = 8%
Spanish	5.82%	9.01%	5.85%	6.89% = 7%
English	4.56%	8.56%	5.18%	6.10% = 6%

Our original prediction for exploitation of the SPTs (5.2) was a ranking of German : English : Spanish. We saw, however, in the discussion of the matrix (5.5-5.7) that we must take into account the factor of inferential expertise, which raises the degree of exploitation by Spanish speakers when it comes to dealing with message participants. It seems that this tendency may carry over into number of three-entity situations, where Spanish moves upward from the expected bottom of the scale to a position about halfway between English and German (cf. 5.15 for further discussion of this point).

5.9 Effects of the SPTs on communication

In all of the data presented above we can see the effects of the SPT, the grammatical system available to the speaker of a particular language, not only in the extent to which a speaker will semantically specify a 3-entity situation, but apparently also in his readiness to visualize and express at all that kind of situation. This readiness is dependent partly on what the linguistic system has to offer and partly on the communicative strategies developed by users of that system.

We do not try to explain these observation in terms of a link between language and thought ("one of the most complex problems of psychology": Vygotsky 1962:xix), but rather seek to demonstrate a correlation between facts about language and the way in which a speaker communicates

about the world. How man communicates about the world is, of course, not unrelated to how he thinks about it, or to what he perceives, but the communicating is the overt evidence accessible to us. That our investigation should lead us to a statement about communication and not about thought is, of course, in keeping with our theoretical orientation.

B. Narratives

5.10 Non-verbal stimulus

In the presentation of the plan of this study, it was pointed out that we needed to try to control for possible influences from the source language (L_1), since we were using translated materials. In order to try to do this, an original narrative task was given native speakers of each of the languages. Here there is no source language. The stimulus is non-verbal. The texts are, of course, considerably shorter than those in our novel corpus and the weight of each instance of an occurring (or non-occurring) item becomes very great. There is also great variety among the individual narrators. So, for example, in the ratio of grammatically signalled participants to entities (P/e) in 3-entity situations, Spanish speakers range between 0 and 50%, German speakers between 44% and 87% and English speakers between 40% and 100% for a single narrative task (the Vater und Sohn episode).

Also, the German narratives are longer than the others (total occurrences: German 610, English 422, Spanish 327). Putting these reservations aside for a moment, let us look at the results, cell by cell of the same matrix as above. We present all the results first, then discuss them together at 5.12.

5.11 The data from the narratives

I. p / e = cell A

message participants / individual entities

For this cell we had predicted (cf. 5.5)--assuming a transfer of the signal-oriented factors to message participants as well--that the languages would exhibit a frequency ranking as follows--German : English : Spanish. But we discovered that the inferential expertise of Spanish speakers boosted that language to the top of the ranks. The same is true for the narratives (cf. Tables 10a and 10b).

The results for the two sets of narratives coincide in this cell (cell A), though the difference between Spanish and English is insignificant for Narrative B.

TABLE 10a

p / e : MESSAGE PARTICIPANTS / INDIVIDUAL ENTITIES
(IN 3-ENTITY SITUATIONS)

Spanish

Subject	Narrative A		Narrative B	
	<u>p/e</u>	<u>%</u>	<u>p/e</u>	<u>%</u>
# 1	7/8	87.50	---	---
2	---	---	3/3	100.
3	3/3	100.	7/7	100.
4	2/2	100.	10/11	90.91
5	11/12	91.67	8/8	100.
6	6/6	100.	6/8	75.
7	3/3	100.	3/3	100.
8	3/3	100.	2/2	100.
10	5/5	100.	6/6	100.
11	2/2	100.	6/8	75.
		<u>879.17</u>		<u>840.91</u>
		÷ 9		÷ 9
	Avg. 97.69		Avg. 93.43	

German

Subject	Narrative A		Narrative B	
	<u>p/e</u>	<u>%</u>	<u>p/e</u>	<u>%</u>
# 1	10/15	66.67	12/18	66.67
2	10/14	71.43	18/23	78.26
3	13/18	72.22	12/14	85.71
4	14/15	93.33	10/12	83.33
5	13/18	72.22	7/9	77.78
6	9/12	75.	10/11	90.91
7	22/26	84.62	15/15	100.
8	16/20	80.	15/18	83.33
9	4/6	66.67	13/14	92.86
10	5/6	83.33	5/5	100.
		<u>765.49</u>		<u>858.85</u>
	Avg. 76.55		Avg. 85.89	

TABLE 10a-Continued

English

Subject	Narrative A		Narrative B	
	<u>p/e</u>	<u>%</u>	<u>p/e</u>	<u>%</u>
# 1	4/5	80.	3/3	100.
2	6/6	100.	6/8	75.
3	9/9	100.	9/9	100.
5	5/5	100.	3/3	100.
6	3/3	100.	3/3	100.
7	11/14	78.57	3/3	100.
8	5/5	100.	6/6	100.
9	11/14	78.57	6/9	66.67
11	4/5	80.	5/6	83.33
13	6/6	100.	3/3	100.
		<u>917.14</u>		<u>925.</u>
	Avg. 91.71		Avg. 92.5	

TABLE 10b

RANKING PRODUCED IN TABLE 10a

p/e	Narrative A		Narrative B	
	1.	S 98%	1.	S 93.4%
	2.	E 92%	2.	E 92.5%
	3.	G 77%	3.	G 86%

However, the narratives produce a different ranking than did the novels. We find that the English and German speakers change position.

Average of Narratives A and B			Novels		
1.	S	96%	1.	S	82%
2.	E	92%	2.	G	76%
3.	G	81%	3.	E	71%

II. max p / 3-e = cell B

message-participant complexes / 3-entity complexes

For this cell too we predicted a ranking of Spanish : German : English, after taking into account the effect of inferential expertise. The relative ranking of English and German is again problematical. This time the two narratives do not agree with each other (cf. Tables 11a and 11b).

TABLE 11a

max p / 3-e : MAXIMUM MESSAGE PARTICIPANTS /
3-ENTITY COMPLEXES (IN 3-ENTITY
SITUATIONS)

Spanish

Subject	Narrative A		Narrative B	
	max p /3-e	%	max p /3-e	%
# 1	2/3	66.67	---	---
2	---	---	1/1	100.
3	1/1	100.	3/3	100.
4	1/1	100.	3/4	75.
5	2/4	50.	3/3	100.
6	2/2	100.	1/3	33.33
7	1/1	100.	1/1	100.
8	1/1	100.	1/1	100.
10	2/2	100.	2/2	100.
11	1/1	100.	1/3	33.33
	816.67		741.66	
	÷ 9		÷ 9	
	Avg. 90.74		Avg. 82.41	

TABLE 11a-Continued

German

Subject	Narrative A		Narrative B	
	<u>max p</u> <u>/3-e</u>	<u>%</u>	<u>max p</u> <u>/3-e</u>	<u>%</u>
# 1	0/4	---	1/5	20.
2	1/5	20.	3/8	37.5
3	0/6	---	2/4	50.
4	4/5	80.	2/6	33.33
5	2/5	40.	1/3	33.33
6	1/4	25.	2/4	50.
7	4/9	44.44	4/5	80.
8	2/7	28.57	4/8	50.
9	0/2	---	4/5	80.
10	1/2	50.	1/2	50.
		<u>288.01</u>		<u>484.16</u>
	Avg.	28.80	Avg.	48.42

English

Subject	Narrative A		Narrative B	
	<u>max p</u> <u>/3-e</u>	<u>%</u>	<u>max p</u> <u>/3-e</u>	<u>%</u>
#1	1/2	50.	0/1	---
2	1/2	50.	0/3	---
3	3/5	60.	3/3	100.
5	2/3	66.67	1/1	100.
6	1/1	100.	0/1	---
7	2/5	40.	0/1	---
8	2/2	100.	1/2	50.
9	2/5	40.	1/4	25.
11	1/2	50.	1/2	50.
13	1/2	50.	1/1	100.
		<u>606.67</u>		<u>425.</u>
	Avg.	60.67	Avg.	42.5

NOTE: Narrative B for English includes 3 narratives where only one 3-e situation and no max p occur = sparse data; similarly, Narrative A for German includes three narratives where no max p occur, a factor which strongly affects the percentage average.

Ranking of these data thus yields a non-uniform distribution in English and German for the two sets of narratives. (Cf. Table 11b.)

TABLE 11b

RANKING PRODUCED IN TABLE 11a

max p / 3-e	Narrative A	Narrative B
	1. S 91%	1. S 82%
	2. E 61%	2. G 48%
	3. G 29%	3. E 43%

Of the two sets of data, it is Narrative B that coincides in ranking of the languages with the data from the novels; the average narrative figures again diverge from those of the novels.

Average of Narratives A and B	Novels
1. S 87%	1. S 61%
2. E 51%	2. G 41%
3. G 39%	3. E 35%

III. P / e = cell C

grammatical participants / individual entities

For this cell we had predicted--directly from the factors of form, scope and implementation--the frequency ranking German : English : Spanish. Again the position of Spanish--now at the bottom--was clear in the novel data. However those of English and German were not unequivocally

assignable, although the tendency to English : German : Spanish overrode. In the narratives we find similar disagreement as to the relative places of English and German (cf. Tables 12a and 12b).

TABLE 12a

P / e : GRAMMATICAL PARTICIPANTS /
INDIVIDUAL ENTITIES (IN 3-ENTITY
SITUATIONS)

Spanish

Subject	Narrative A		Narrative B	
	<u>P/e</u>	<u>%</u>	<u>P/e</u>	<u>%</u>
# 1	2/8	25.	---	---
2	---	---	1/3	33.33
3	0/3	---	2/7	28.57
4	1/2	50.	3/11	27.27
5	3/12	25.	2/8	25.
6	2/6	33.33	2/8	25.
7	1/3	33.33	0/3	---
8	0/3	---	0/2	---
10	2/5	40.	1/6	16.67
11	1/2	50.	2/8	25.
		<u>256.66</u>		<u>180.84</u>
		÷ 9		÷ 9
	Avg.	28.52	Avg.	20.09

German

Subject	Narrative A		Narrative B	
	<u>P/e</u>	<u>%</u>	<u>P/e</u>	<u>%</u>
#1	8/15	53.33	12/18	66.67
2	7/14	50.	14/23	60.87
3	8/18	44.44	7/14	50.
4	13/15	86.67	7/12	58.33
5	8/18	44.44	7/9	77.78
6	9/12	75.	10/11	90.91
7	18/26	69.23	11/15	73.33
8	14/20	70.	13/18	72.22
9	3/6	50.	12/14	85.71
10	4/6	<u>66.67</u>	5/5	<u>100.</u>

TABLE 12a-Continued

609.78	735.82
Avg. 60.98	Avg. 73.58

English

Subject	Narrative A		Narrative B		
	<u>P/e</u>	<u>%</u>	<u>P/e</u>	<u>%</u>	
# 1	2/5	40.	2/3	66.67	(a)
2	5/6	83.33	2/8	25.	
3	7/9	77.78	9/9	100.	
5	4/5	80.	3/3	100.	
6	3/3	100.	2/3	66.67	
7	10/14	71.43	2/3	66.67	
8	3/5	60.	4/6	66.67	
9	7/14	50.	5/9	55.56	
11	2/5	40.	4/6	66.67	
13	4/6	66.67	3/3	100.	
		<u>669.21</u>		<u>713.91</u>	
	Avg.	66.92	Avg.	71.39	
		minus (a)	Avg.	76.55	

Again there is a non-uniform distribution for the two sets of narratives. (Cf. Table 12b.)

TABLE 12b

RANKING PRODUCED IN TABLE 12a

P/e	Narrative A		Narrative B	
1.	E	67%	1.	G 74%
2.	G	61%	2.	E 71%
3.	S	29%	3.	S 20%

Of these, it is Narrative A that correlates with most of the novel data. If we look closely at the individual

narratives in the English set for Narrative B, we see that the second narrator (a) falls very much out of line with the others. If we compute an average percentage without this one corpus, we get 76.55% for English in Narrative B, which puts it above German, and produces a uniform picture for this cell

Narrative B (adjusted)

1. E 77%
2. G 74%
3. S 20%

that also correlates with the ranking for the novels. However, the data from the novels were also non-uniform for this comparison; the ranking that appears in the matrix is based on the averaged figures.

Average of Narratives A and B			Novels		
1.	E	71% ¹⁷	1.	E	63%
2.	G	67%	2.	G	61%
3.	S	24%	3.	S	17%

IV. Max P / 3-e = cell D

grammatical participant complexes / 3-entity complexes

For this final cell the prediction based on the factors and giving special weight to implementation was Spanish : German : English. Again the position of Spanish was clear in the novels, but those of German and English were not unambiguous, although the tendency favored the

predicted ranking. The narratives support the high rank of Spanish, but uniformly differ from the novels with respect to English and German (cf. Tables 13a and 13b).

TABLE 13a

Max P / 3-e : MAXIMUM GRAMMATICAL SIGNALLING /
3-ENTITY COMPLEXES (IN 3-ENTITY
SITUATIONS)

Spanish

Subject	Narrative A		Narrative B	
	Max P /3-e	%	Max P /3-e	%
# 1	2/3	66.67	---	---
2	---	---	1/1	100.
3	0/1	---	2/3	66.67
4	1/1	100.	3/4	75.
5	2/4	50.	2/3	66.67
6	2/2	100.	1/3	33.33
7	1/1	100.	0/1	---
8	0/1	---	0/1	---
10	2/2	100.	1/2	50.
11	1/1	100.	2/3	66.67
		<u>616.67</u>		<u>458.34</u>
		÷9		÷9
	Avg.	68.52	Avg.	50.93

TABLE 13a-Continued

German

Subject	Narrative A		Narrative B	
	Max P /3-e	%	Max P /3-e	%
# 1	0/4	---	1/5	20.
2	1/5	20.	2/8	25.
3	0/6	---	1/4	25.
4	3/5	60.	0/6	---
5	0/5	---	1/3	33.33
6	1/4	25.	2/4	50.
7	3/9	33.33	1/5	20.
8	2/7	28.57	2/8	25
9	0/2	---	2/5	40.
10	0/2	---	1/2	50.
		166.90		288.33
	Avg.	16.69	Avg.	28.83

English

Subject	Narrative A		Narrative B	
	Max P /3-e	%	Max P /3-e	%
# 1	0/2	---	0/1	---
2	1/2	50.	0/3	---
3	1/5	20.	3/3	100.
5	1/3	33.33	1/1	100.
6	1/1	100.	0/1	---
7	1/5	20.	0/1	---
8	0/2	---	1/2	50.
9	1/5	20.	0/4	---
11	0/2	---	0/2	---
13	0/2	---	1/1	100.
		173.33		350.
	Avg.	17.33	Avg.	35.

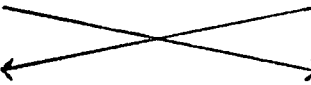
In this cell, then, the results for the two sets of narratives coincide (though the difference between English and German for Narrative A is insignificant):

TABLE 13b

RANKING PRODUCED IN TABLE 13a

Max P / 3-e	Narrative A	Narrative B
	1. S 69%	1. S 51%
	2. E 17.3%	2. E 35%
	3. G 16.7%	3. G 29%

but both differ from the novel data:

Average of Narratives A and B		Novels
1. S 60%		1. S 38%
2. E 26%		2. G 22%
3. G 23%		3. E 18%

in the same way as the data in cells A and B.

5.12 Matrix: novels + narratives--and discussion

Let us summarize these data by drawing up a new matrix including the data from both sources, the novels and the narratives. (Cf. Fig. 11.)

The differences are of two kinds: those in which the narratives agree with each other but differ from the novels and those in which the novels agree with one of the narratives. The differences all pertain to the figures for English and German. The position of Spanish is

	message participants (p)			grammatical signals (P)		
individual entities	p/e			P/e		
	Novels	Narr. A	Narr. B	Novels	Narr.A	Narr.B (adj.)
	S 82%	S 98%	S 93.4%	E 62%	E 67%	E 76%
	G 76%	E 92%	E 92.5%	G 61%	G 61%	G 74%
	E 71%	G 77%	G 86%	S 17%	S 29%	S 20%
	A			C		
entity complexes	max p / 3-e			Max P / 3-e		
	Novels	Narr. A	Narr. B	Novels	Narr.A	Narr.B
	S 61%	S 91%	S 82%	S 38%	S 69%	S 51%
	G 41%	E 61%	G 48%	G 22%	E 17.3%	E 35%
	E 35%	G 29%	E 43%	E 18%	G 16.7%	G 29%
	B			D		

Fig. 11. Results of the comparison of the exploitation of the Spts in 3-entity situations (novels + narratives).

unambiguous throughout. We can thus say that the narratives confirm the novel data for Spanish relative to the other two languages in each cell, while controlling for possible influence from the source languages. It may also be noted that Spanish is always either in first or last position.

Looking at the individual cells, we see that the ranking Spanish : German : English, which had been under-

standable for message participation (cells A and B) in terms of inferential expertise, is found in only one narrative set (Narrative B in cell B). While the position of Spanish as highest in message participants is not called into question by these narrative data, the relative positions of German and English vary. 'Why the English narrators have apparently produced more message participants than expected is not readily apparent, but it may be due to the sparsity of data from the narrators and perhaps to the nature of the narratives (in motivating few prepositional phrases).

Cell C contains the only set of uniform data, and this was achieved by eliminating one very deviant datum from the English data (even including that datum, the average narrative figures agree with the novel figures, cf. Note 17). The fact that elimination of a single datum could alter the positions of English and German for Narrative B is indicative of the statistical weakness of these data. Much more data would be required in order for the narratives to be the viable control for L_1 influence that we had intended.

Cell D contains uniformity among the narratives, differing, however, from the novels, and again it is the positions of English and German that have been reversed.

If we look to the ratio of P/p and of $\text{Max } P / \text{max } p$ to help clarify the relationship between German and English

in the narratives, we find that in three out of four instances German outstrips English:¹⁸

		<u>German</u>	<u>English</u>
P/p	Narrative A	79%	72%
	Narrative B	86%	76%
Max P / max p	Narrative A	56%	38%
	Narrative B	64%	67%

That is, German speakers refer to more message participants with grammatical signals than do English speakers. This means that there are fewer names and unmodified nouns in the German narratives than nouns or pronouns out of position for signalling in English. This is in opposition to the tendency exhibited by the novels, and is no doubt due to the nature of the narratives. Their shortness led in most cases to modified-noun references rather than to the assignment of names or the use of unmodified nouns. These data therefore provide no help in the solving of the German-English ranking uncertainty.

That English is generally elevated above expectation in the P and Max P per 3-entity contexts (Tables 12 and 13) means that the English narrators made less use of prepositional phrases than the novelists and translators. (Prepositional phrases are the difference between the environment for p and max p and that for e and 3-e.)

In determining speakers' "readiness" to engage in dealing with 3-entity situations for the novels, we found

(Table 9b) the following ranking:

<u>3-e / total occurrences</u>	Novels
	German 8%
	Spanish 7%
	English 6%

The narratives produce the following data:

TABLE 14a

3-e / TOTAL OCCURRENCES

Narrative A

S			G			E		
Subj.	3-e/ tot. occ.	%	Subj.	3-e/ tot. occ.	%	Subj.	3-e/ tot. occ.	%
# 1	3/12	25.	# 1	4/32	12.5	# 1	2/11	18.18
2	0/14	---	2	5/38	13.16	2	2/25	8.
3	1/11	9.09	3	6/31	19.35	3	5/24	20.83
4	1/16	6.25	4	5/29	17.24	5	3/16	18.75
5	4/24	16.67	5	5/27	18.52	6	1/17	5.88
6	2/16	12.5	6	4/25	16.	7	5/19	26.32
7	1/19	5.26	7	9/28	32.14	8	2/18	11.11
8	1/10	10.	8	7/28	25.	9	5/29	17.24
10	2/18	11.1	9	2/32	6.25	11	2/22	9.09
11	1/17	5.88	10	2/20	10.	13	2/11	18.18
		<u>101.76</u>			<u>170.16</u>			<u>153.58</u>
	Avg.	10.18		Avg.	17.02		Avg.	15.36

TABLE 14a-Continued

Narrative B

S			G			E		
Subj.	3-e/ tot. occ.	%	Subj.	3-e/ tot. occ.	%	Subj.	3-e/ tot. occ.	%
# 1	0/9	---	# 1	5/33	15.15	# 1	1/12	8.33
2	1/12	8.33	2	8/41	19.51	2	3/22	13.64
3	3/10	30.	3	4/25	16.	3	3/35	8.57
4	4/24	16.67	4	6/28	21.43	5	1/15	6.67
5	3/30	10.	5	3/25	12.	6	1/20	5.
6	3/19	15.79	6	4/19	21.05	7	1/20	5.
7	1/12	8.33	7	5/22	22.73	8	2/16	12.5
8	1/10	10.	8	8/48	16.67	9	4/55	7.27
10	2/13	15.38	9	5/57	8.77	11	2/21	9.52
11	3/31	9.68	10	2/22	9.09	13	1/14	7.14
		124.18			162.40			83.64
Avg.		12.42	Avg.		16.24	Avg.		8.36

Separately, these data produce two different rankings:

TABLE 14b

RANKING PRODUCED IN TABLE 14a

Narrative A		Narrative B	
German	17%	German	16%
English	15%	Spanish	12%
Spanish	10%	English	8%

It would seem that the Spanish speakers "forgot" to provide for their inferential expertise in Narrative A. The noticeable difference in the percentage figures, however, is the drop of English in Narrative B. Almost half the narrators did not express a minimum of two 3-entity scenes (the nobleman giving his messenger a letter + the messenger

giving the letter to the lady) in 3-entity terms.

If we combine the data from the two narratives, however, we find that the positions of Spanish and English become indistinguishable:¹⁹

Narratives A and B combined:

German	17%
Spanish	} 11%
English	

This leads one to expect additional data to provide a clearer picture here, possibly supporting the ranking found in the novel data (cf. also 5.15).

We see, then, that the narrative data strongly support the conclusions about Spanish reached via the novel data. They are inconclusive relative to the distinction between German and English. We should remember, however, that the novel data for English and German were not always uniform and that the rankings used in our matrix were those indicated by the strongest tendency. Obviously the relationship between German and English with respect to exploitation of the SPT is not fully clear, possibly because of the opposing effects of the factors form and scope. Additional data will have to be examined before the control of the narratives on the novel data is viable for this point. Furthermore, there is the possibility that failure of the narratives to support the novel data for English and German may well be indicative of an L_1 influence on the translations.

Part II - Extension of the General Hypothesis

5.13

We will now examine the novel data relative to the SPTs in order to test the extension of the General Hypothesis--repeated here for the reader's convenience:

Extension of the general hypothesis:

It is, therefore, further hypothesized that the dominating influence in the case of $L_1 \rightarrow L_2$ translation will be that of L_2 , and that the quantitative relationship between source and target languages can best be understood in the light of what is known about both L_1 and L_2 .

That is, we agree with Bausch (1963:8) when he says, "[die Uebersetzungen] bleiben an das System ihrer Sprachen gebunden,...ihre Formulierungen bilden eine Auswahl, ein Stück aktualisierte Languae. Zusätzlich jedoch bleibt der Uebersetzer abhängig von der bereits getroffenen Auswahl des Ausgangstextes einer anderen Sprache [L_1]." And, we would add, is dependent on the choices offered the L_1 writer by the grammatical systems of the source language.

5.14 "Norms" and translation data and the hierarchy of participant propensity

If we take the original (L_1) texts as a kind of intuited "norm" for the respective languages, then we might expect the translations (L_2 texts) to deviate from the

"norm" for the target language (the particular L_2 in its L_1 role) in the direction of the "norm" for the source language (the L_1 in each translation instance). We might expect a translation from German (L_1) into English (L_2) to deviate from the English L_1 "norm" in the direction of the L_1 "norm" for German. That is, we might expect a language to produce a higher than "normal" percentage of X as L_2 to a language higher up the scale of "norms" with respect to X and a lower than "normal" percentage as translation of a language lower down on the scale with respect to X. (The L_1 norms are the originals, i.e., García-Márquez in Spanish, Grass in German, Christie in English, cf. Appendix 1.)²⁰

If we examine the occurrences of

- I) p / e
- II) $\max p / 3-e$
- III) P / e
- IV) $\max P / 3-e$

for the originals and translations in light of these expectations, we get very mixed results. For comparisons I and II the results seem to be pretty random; for comparison III the expectations mostly fail; for comparison IV ($\max P / 3-e$) the predictions are mostly right.²¹ But the successful vs. non-successful predictions do not allow generalized statements such as "the comparisons involving Spanish usually fail."

A suggestion of a larger pattern in these successes and failures is to be seen by looking at them language by language and in terms of degree of exploitation of the SPt. English, for example, has more of everything (p, max p, P, Max P) as an L_2 . Its frequency of exploitation of the particular item under examination increases whenever English is the language being translated into--in comparison with the norm for the original L_1 English text.

As a language that hardly exploits its SPt natively, it nevertheless shows that it can--and does--exploit it when prompted to do so. This appears to support the complexity argument regarding the word-order signal. Speakers tend to steer away from it²² except when given strong morphological cues in the translation task or when given 3-p messages conceived of under the stimulus of more active SPts. The suggestion of these other SPts is so strong that the English translator can outproduce the English author in the one instance where English leads in the ranking to begin with: P/e.²³

Spanish also appears to produce higher percentages when it is an L_2 . It generally has more p as L_2 , it has considerably more max p as L_2 in both cases, and it has both more P and more Max P as an L_2 deriving from an English L_1 . This appears rather odd for a language already at the top in three out of four "norm" L_1 comparisons (it is at

the bottom only on P/e), but might point to a general translation tendency for greater semantic precision because the translator is more acutely aware of language.²⁴ On the other hand, the fact that Spanish does not increase its percentage of P/e when it is the translation target coming from German could be at least partly attributable to a lack of third person pronouns in the source text.

If, indeed, the greater semantic precision of English and Spanish as L₂ is a translation tendency, then it is a tendency in which German takes only limited part. German follows suit only with regard to grammatical participants, in both P/e comparisons and in Max P / 3-e derived from Spanish, increasing as L₂ its frequency of signalled participants over the German L₁ norm. It has fewer Max P (compared to the GG original) in translation of the English L₁ text--and it may well be that this is the one comparison of all according to this viewpoint where the direct influence of the particular L₁ is most acutely felt.

If, however, we examine the L₂ vs. L₁ relationships in light of source and target (original vs. translation of that original) rather than in light of participant percentage for a particular language as L₁ and L₂, the picture suddenly becomes clearer. That is, instead of asking: Does language A as L₁ exhibit more (or fewer

participants (P or p) than language A as L_2 ? we want to ask: Does language A as L_2 yield a larger percentage of participants than the source (language B as L_1)? This question, taken in combination with the hierarchies produced by the original (L_1) texts, puts the focus on relative degree of exploitation of the SPts and thus provides maximum insight into the effects of the grammatical systems across languages.

Let us look at the four relationships found in our matrix from this point of view and relate them to the hierarchies produced by the original L_1 texts (cf. underlined percentages in Tables 3a, 4a, 5a, 6a in Part I of this chapter). These hierarchies will be called the hierarchies of participant propensity.

I. p / e in L_1 and L_2

The original norms yield the following percentages for the ratio of individual message participants to individual entities:

Spanish L_1 (GM)	:	80%
German L_1 (GG)	:	77%
English L_1 (AC)	:	67%

We shall call this ranking of languages, which is repeated in the max $p / 3-e$ comparison below, the hierarchy of participant propensity for p / e :

- 1) Spanish
- 2) German
- 3) English

Now, instead of asking whether these languages produce different percentages of p / e as L_2 --which attributes the crucial weighting to the percentages for individual languages--let us see what percentages are produced and ask whether they can be explained with reference to the hierarchy of participant propensity--which places the weight on the rankings of the languages relative to each other.

For p / e, then, the L_2 data are:

Spanish L_2 = 84%	< English L_1 = 67%	+	17%
Spanish L_2 = 83%	< German L_1 = 77%	+	6%
German L_2 = 74%	< English L_1 = 67%	+	7%
German L_2 = 76%	< Spanish L_1 = 80%	-	4%
English L_2 = 72%	< German L_1 = 77%	-	5%
English L_2 = 73%	< Spanish L_1 = 80%	-	7%

We find that when an L_2 is the translation of a language lower on the participant propensity hierarchy it exhibits a participant ratio plus; when it is the translation of a language higher on the participant propensity hierarchy, it exhibits a participant ratio minus. Thus English, at the bottom, produces two minuses, Spanish, at the top, yields two pluses, and German, in the middle, exhibits a plus as L_2 to English and a minus as L_2 to Spanish. The details of this relationship will be examined in Chapter 6, where individual utterances are compared across languages (cf. 6.2-6.5).

II. $\max p / 3-e$ in L_1 and L_2

Again the hierarchy of participant propensity is

- 1) Spanish L_1 (GM) : 52%
- 2) German L_1 (GG) : 47%
- 3) English L_1 (AC) : 27%

and the translations exhibit the following $\max p / 3-e$ relationships:

Spanish L_2 = 65%	<	English L_1 = 27%	+	38%
Spanish L_2 = 66%	<	German L_1 = 47%	+	19%
German L_2 = 36%	<	English L_1 = 27%	+	9%
German L_2 = 41%	<	Spanish L_1 = 52%	-	11%
English L_2 = 43%	<	German L_1 = 47%	-	4%
English L_2 = 35%	<	Spanish L_1 = 52%	-	17%

The same distribution with respect to the hierarchy of participant propensity holds as in the previous comparison (again, cf. 6.2-6.5 for details): an L_2 that is the translation of a language lower on the participant propensity hierarchy exhibits a $\max p / 3-e$ plus; a language that is the translation of a language higher on the participant propensity hierarchy exhibits a $\max p / 3-e$ minus.

III. P / e in L_1 and L_2

Here in the comparison of individual grammatical participants per individual entities our original norms produce a different hierarchy:

- 1) English L_1 : 59%
- 2) German L_1 : 57%
- 3) Spanish L_1 : 16%

Spanish slips--because of the effects of the factor implementation--to the bottom of the scale (cf. sections III and V at 5.6). The distinction between English and German is small and only marginally significant according to a chi square test:

$$\chi^2 = 0.72, df = 1, p < .50$$

(It must be recalled that in this chi square test we are opposing not only two different languages but two different texts, in contrast to all our other chi square tests, which oppose languages per a single text in each comparison.)

The L_2 results for P / e are:

English L_2 = 65%	<	Spanish L_1 = 16%	+	49%
English L_2 = 64%	<	German L_1 = 57%	+	7%
German L_2 = 68%	<	Spanish L_1 = 16%	+	52%
German L_2 = 59%	<	English L_1 = 59%	G = E	
Spanish L_2 = 15%	<	German L_1 = 57%	-	42%
Spanish L_2 = 18%	<	English L_1 = 59%	-	41%

We find that the relationship between the L_2 results and the hierarchy produced by the original texts (L_1) holds here as well. Translation from a language lower on the hierarchy yields a P-ratio plus, translation from a language higher up on the hierarchy yields a P-ratio minus or equivalence, the latter surely due to the small difference between the German and English L_1 percentages.

IV. Max P / 3-e in L_1 and L_2

This comparison returns to the L_1 ranking we observed in comparisons I and II, that is:

- 1) Spanish L_1 : 36%
- 2) German L_1 : 23%
- 3) English L_1 : 13%

The reason for Spanish's lead position with respect to Max P is explained by the inequality of Max P among the languages: Max P = 1 for Spanish, while Max P = 3 for German and English (cf. section IV and V at 5.6) and creates special circumstances for this comparison.

The L_2 results for Max P / 3-e are:

Spanish L_2 = 44%	< English L_1 = 13%	+	31%
Spanish L_2 = 32%	< German L_1 = 23%	+	9%
German L_2 = 17%	< English L_1 = 13%	+	4%
German L_2 = 25%	< Spanish L_1 = 36%	-	9%
English L_2 = 25%	< German L_1 = 23%	+	2%
English L_2 = 16%	< Spanish L_1 = 36%	-	20%

Again the hierarchy produced by the L_1 texts is correlatable with the L_2 results--with a single exception:

English L_2 < German L_1 . It will be recalled, however, that the difference between German and English for the Grass text is least significant (according to a chi square test) of all the Max P / 3-e language comparisons (cf. p.155):

$$\chi^2 = 0.92, df = 1, p < .50$$

We find in each of these source-target comparisons that the hierarchy of participant propensity established for each matrix cell by ranking the percentages of the L_1 texts (cf. Tables 3a, 4a, 5a, 6a in Part I) exhibits a direct influence on the distribution of forms in the L_2 texts. Thus, while in the earlier percentage comparisons we could not find uniform data showing the effect of the source language on translation, the extension of the general hypothesis is confirmed inasmuch as the L_2 is the dominating influence in translation and the quantitative relationship between L_1 and L_2 is best understood in the light of what we know about both, in this case their ranking in the hierarchy of participant propensity (more about this relationship in Chapter 6).

5.15 Mention of three entities in L_1 and L_2

In 5.8 we examined the readiness of speakers to mention three entities at all and found that we needed to adjust our expectations to account for Spanish speakers' inferential expertise in order to explain the results. That expertise is especially apparent in the original Spanish text, where more entities per total occurrences appear than in the two Spanish translations. If we rank the L_1 texts for 3-e / total occurrences we find the following:

- 1) Spanish : 9%
- 2) German : 6%
- 3) English : 5%

Comparing L_1 percentages for a particular language with the L_2 percentages for that language, we find a uniform picture in accordance with this hierarchy:

TABLE 15

3-e / TOTAL OCCURRENCES IN L_1 AND L_2

Spanish L_1 : 9%

Spanish L_2 : 6% < German L_1

6% < English L_1

German L_1 : 6%

German L_2 : 6% < English L_1

11% < Spanish L_1

English L_1 : 5%

English L_2 : 5% < German L_1

9% < Spanish L_1

Where there is a significant distinction between languages--i.e., between Spanish and German or English--each L_2 moves (with respect to frequency of 3-entity situations) in the direction of (and in one instance beyond) the frequency exhibited by the source language. Consequently the English translation of the Spanish original text expresses a higher frequency of 3-entity occurrences than the English original, while the English translation of the German original exhibits a frequency equal to that of the English original.²⁵ Spanish, at the top of the scale of originals, reduces the frequency of 3-entity occurrences in

translations from German and English, in keeping with the lower L_1 percentages exhibited by these languages. And German--in the middle of the scale of originals--now increases and now maintains the frequency of its 3-entity situations, depending on whether the language of the source text is above it on that scale or essentially equivalent.

We thus find for this comparison (3-e / total occurrences) the uniformity in percentage figure relationships that we failed to find (cf. pp. 187-189) for the comparisons (p, max p, P, Max P) of our matrix, but the uniformity may well derive from the virtual equivalence of English and German in most of the percentages of entity mention. It will be recalled that our areas of disagreement in the earlier comparisons did concern German and English.

On the other hand, if we examine the 3-e / total occurrences figures in the source vs. target perspective we found most productive in our other L_1 vs. L_2 comparisons, we find:

Spanish L_2 = 6%	<	English L_1 = 5%	+	1%
Spanish L_2 = 6%	<	German L_1 = 6%	S =	G
German L_2 = 6%	<	English L_1 = 5%	+	1%
German L_2 = 11%	<	Spanish L_1 = 9%	+	2%
English L_2 = 5%	<	German L_1 = 6%	-	1%
English L_2 = 9%	<	Spanish L_1 = 9%	E =	S

For this comparison the correlation between the L_1 hierarchy and the L_2 results is not as consistent as in earlier comparisons, although only the + 2% for German $L_2 < \text{Spanish } L_1$ really contradicts our hierarchy expectations. It may be that just in this case of 3-e / total occurrences the source language influence is most pronounced, with little regard for the nature of the L_2 being shown (cf. the figures in Table 15, which appear to support such a conclusion).

This is quite plausible, since whether an entity is mentioned at all has little to do with the system specifying degree of participation. There is always an alternative to making use of the SPt, i.e., recourse to a prepositional phrase. When a speaker/writer has rejected this alternative, however--i.e., when he has entered the domain of message and grammatical participants--then the factors relative to the signals exhibit their effect on production, and it is here that our source-target comparisons were most fruitful.

The 3-e / total occurrences comparison thus reflects an interplay between the effect of inferential expertise (motivated by the restrictions on an SPt) and the absence of systemic influence (because we are dealing only with entities, not participants). The former explains the higher percentage exhibited by Spanish (9%) as against German and English (6% and 5% respectively). The latter

explains why the source-target relationships do not correlate as well as for the other (systemic) comparisons.

In essence, however, all of the phenomena discussed are dominated by the existence of the systems. Both inferential expertise and the participant propensity hierarchy are ultimately motivated by the nature of the SPts involved. A discussion of entities mentioned per total occurrences is a step removed, while a discussion of the occurrence of participants (P or p) bears a direct relationship to the SPts. The details of this relationship will be examined in Chapter 6.

Notes to Chapter 5

1. The plus features for scope and implementation are motivated by the fact that more frequent presence of Spt signals contributes to ease of communication; the plus feature for form is motivated by the fact that the morphological signals are perceptually less complex than word-order signals.
2. We shall use le and lo to stand for the set of them plus 'la and their plurals, les, los, las.
3. Cf. García 1975, Chapter VIII for a discussion of non-occurrence of le lo. (Cf. also 6.12 below.)
4. In narrative texts the possible effects of first and second person references are generally reduced.
5. When seen in terms of increasing degrees of semantic precision, the instances of 3-e, 3-p and Max P can be expected to yield a scale of decreasing numbers. In a given corpus, we would expect more 3-e situations to occur (being the most general and implied by the other two) than 3-p utterances, and more 3-p utterances (some semantic precision) than Max P (greatest semantic precision) utterances. This is the case for all texts and all languages. We give the figures for the Christie text as an example:

	<u>S</u>	<u>G</u>	<u>E</u>
3-e	494	544	422
3-p	320	311	263
Max P	219*	92	53

(*This figure is so high because in Spanish, Max P = 1.)

6. Included, however, as message participants are the personal-a phrases in Spanish and their English (to + name, personal designation or pronoun) and German (zur/zum...) counterparts, when non-locative (cf. also Chapter 4, Note 8.) These personal -a, -to, -zu phrases are included among message participants in all three languages in order to have a parallel treatment. However, an a-phrase in Spanish is much more of a participant than a to-phrase in English, than a zu-phrase in German. The Spanish speaker has no alternative; if he wants to mention the person at all (other than as a clitic pronoun) he must use the a. The English speaker can leave out the to and make the person a P, and the German speaker can and usually does simply use a name without a preposition (or a modified noun or pronoun) to refer to a person.

7. The distinction between English "He sent her candy" and "He sent her home" will serve again as example here.
8. With a morphological signal the hearer knows immediately on hearing it what its meaning is, whereas in a word-order signal he has to wait until all the information is in. On hearing a P2 in English, e.g., the listener at first doesn't know that it's a P2: it could be a P2/3. Only when a P3 follows (or does not follow--and that can't be decided before the end of the clause) can that issue be resolved. In addition, the hearer has to decide for both possible P2s and possible P3s whether they are indeed word-order signals of degree of participation at all, or whether they are simply uttered at that point in a necessarily linear (temporal) sequence (cf. examples in Note 7). In these examples the hearer perceives both home and candy in P3 position, but only the latter is in fact a P3 due to its lexical content and the fact that semantically candy can be a P3 to send.

There are of course instances in German and Spanish where the MID/LOW opposition is neutralized, yielding non-high: uns 'us' and te 'you, familiar singular' to give just one example of each. But the speakers of these languages know beforehand that these signals are non-distinct. English speakers do not know whether the distinction is being made until more of the utterance is available, and this results in greater perceptual complexity.

9. Zubin chose to consider nominative and accusative as separate signals despite their identity of form in the feminine and neuter, no doubt because of the distinction in the pronominal system and in the masculine and because a separation of entities at opposite ends of the scale of participation is relatively easy to infer.
10. In each of the GM and GG texts there were 5 instances, in the AC text there were 15. In all cases (except one --a relative clause) the nominative preceded the accusative. And all but one are unambiguously clear even without additional context. (The exception here is a two-identical-pronoun utterance:
 - i. Sie legte sie ihm in die Hände. (GM p.59)
 'She put it (the clock) in his hands.'
 And here the first sie could be accusative only if it were preposed for prominence (contrastive stress). The context does not provide motivation for such preposing.

11. Diver handout: "Inferential Expertise".
12. The text (GM) that deviates from the E : G : S order shown by the other two is the shortest of the three novels and so more data might even out this distinction. (The AC text, longest of the three, has English out in front, though nonsignificantly according to the chi square test.)
13. When we look at the difference between maximum message participants and maximum grammatical participants novel per novel, we find that, for the Grass text, though the actual percentages change from max p to Max P (being reduced by about half) for Spanish and German, the difference between Spanish and German is the same for max p in messages and Max P meanings. The following figures underlie the averaged figures on p. 154 and show that the Grass text behaves differently from the other two, Spanish failing to increase its lead over German in this text as we move from max p to Max P:

	<u>max p / 3-e</u>			<u>Max P / 3-e</u>		
	AC	GM	GG	AC	GM	GG
S:	65%	52%	66%	44%	37%	32%
G:	36%	41%	47%	17%	25%	23%

Difference: (ratio of Spanish to German)

1.81 1.27 1.40 2.59 1.48 1.39

This may well be due to the fact that the GG text is told largely in the first person, with frequent references to second persons, thus reducing the occurrence of third-person references, where the difference between max p and Max P makes itself known in Spanish.

14. The difference between this comparison (P/p) and that in Table 5a (P/e) lies in the exclusion here of entities referred to in prepositional phrases. We pointed out that English and German speakers fail to signal a degree of participation about equally, but that English speakers tend to do this by means of prepositional phrases. We see here that once the prepositional instances are left aside, it is the German speakers who signal less. This may be explained by their greater inferential expertise (cf. pp. 144-148).

15. Table 8 contains no figures for Spanish. The ratio of Max P to max p for Spanish would not provide material comparable to that for German and English because the single P that constitutes Max P in Spanish need not be a P contained in a max p (=3-p) utterance. A Max P utterance may be a 2-p utterance, e.g.

i. Después podemos venderlo a mejor precio.

e	e	e
p	p	-
-	p	-

(GM p.21)

'Then we can sell him for more.' (GM p.11)

At any rate, the purpose of the grammatical participant vs. message participant comparison is to try to help solve the English vs. German ranking problem.

16. The total occurrences given here are as they appeared in the translations. If we make additions for passages omitted in translation--and the why of these omissions would make another very interesting, linguocultural study--the occurrence figures would have to be adjusted as follows:

	S	G	E
AC:	+ 161 (8655)	+ 47 (8680)	----
GM:	----	+ 1 (2890)	+ 5 (3079)
GG:	+ 73 (5812)	----	+ 1 (5517)

17. This is based on the adjusted figures obtained by removing the one atypical datum from consideration in the English data: minus (a), speaker no. 2, for Narrative B. Including (a), the average would be 69%, still ahead of the average percentage for German: 67%.
18. The supporting data are:

P/p - Narrative A					
S		G		E	
2/7	28.57	8/10	80.	2/4	50.
---	---	7/10	70.	5/6	83.33
0/3	---	8/13	61.54	7/9	77.78
1/2	50.	13/14	92.86	4/5	80.
3/11	27.27	8/13	61.54	3/3	100.
2/6	33.33	9/9	100.	10/11	90.91
1/3	33.33	18/22	81.82	3/5	60.
0/3	---	14/16	87.5	7/11	63.64
2/5	40.	3/4	75.	2/4	50.
1/2	50.	4/5	80.	4/6	66.67
	262.5		790.26		722.33
	÷9				
Avg.	29.17%	Avg.	79.03%	Avg.	72.23%

P/p - Narrative B

S		G		E	
---	---	12/12	100.	2/3	66.67
1/3	33.33	14/18	77.78	2/6	33.33
2/7	28.57	7/12	58.33	9/9	100.
3/10	30.	7/10	70.	3/3	100.
2/8	25.	7/7	100.	2/3	66.67
2/6	33.33	10/10	100.	2/3	66.67
0/3	---	11/15	73.33	4/6	66.67
0/2	---	13/15	86.67	5/6	83.33
1/6	16.67	12/13	92.31	4/5	80.
2/6	33.33	5/5	100.	3/3	100.
	<u>200.23</u>		<u>858.42</u>		<u>763.34</u>
	$\div 9$				
Avg.	22.25%	Avg.	85.84%	Avg.	76.33%

Max P / max p - Narrative A

G		E	
---	---	0/1	---
1/1	100.	1/1	100.
---	---	1/3	33.33
3/4	75.	1/2	50.
0/2	---	1/1	100.
1/1	100.	1/2	50.
3/4	75.	0/2	---
2/2	100.	1/2	50.
---	---	0/1	---
0/1	---	0/1	---
	<u>450.</u>		<u>383.33</u>
	$\div 8$		
Avg.	56.25%	Avg.	38.33%

Max P / max p - Narrative B

G		E	
1/1	100.	---	---
2/3	66.67	---	---
1/2	50.	3/3	100.
0/2	---	1/1	100.
1/1	100.	---	---
2/2	100.	---	---
1/4	25.	1/1	100.
2/4	50.	0/1	---
2/4	50.	0/1	---
1/1	100.	1/1	100.
	<u>641.67</u>		<u>400.</u>
			$\div 6$
Avg.	64.17%	Avg.	66.67%

19. 3-e / total occurrences (each writer, combined narratives)

S:	3/21	14.29	G:	9/65	13.85
	1/26	3.85		13/79	16.46
	4/21	19.05		10/56	17.86
	5/40	12.5		11/57	19.30
	7/54	12.96		8/52	15.38
	5/35	14.29		8/44	18.18
	2/31	6.45		14/50	28.
	2/20	10.		15/76	19.74
	4/31	12.90		7/89	7.87
	4/48	8.33		4/42	9.52
		<u>114.62</u>			<u>166.16</u>
		= 11.46%			= 16.62%

E:	3/23	13.04
	5/47	10.64
	8/59	13.56
	4/31	12.90
	2/37	5.41
	6/39	15.38
	4/34	11.76
	9/84	10.71
	4/43	9.30
	3/25	12.
		<u>114.70</u>
		= 11.47%

20. This is, of course, ignoring the text variables:
Each novel is about a different context, is written
by a writer with a different style, etc.

We might try to generalize the "norms" by including the data from the narratives. This would produce new rankings for the individual message-participant comparisons (English ranking above German) thus resulting in different predictions. The results of these predictions come out percentage-wise just the same as the comparisons without the narrative data--only different predictions succeed or fail. As the particular successful or non-successful predictions turn out to be less interesting than the general behavior of a language as L_2 to a particular L_1 , this generalization here would produce no gain in insight.

21. The L_1 "norms" for each comparison are as follows:

<u>I. p/e</u>	<u>II. max p/3-e</u>	<u>III. P/e</u>	<u>IV. Max P /3-e</u>
S 80%	S 52%	E 59%	S 36%
G 77%	G 47%	G 57%	G 23%
E 67%	E 27%	S 16%	E 13%

The results of the comparisons, in which we expected the L_2 texts to deviate from the "norm" for that language in the direction of the L_1 "norm" for the source language, are:

I.	II.	III.	IV.
S: L_2 83% 84%	G E	S: L_2 65% 66%	E G
G: L_2 76% 74%	S E*	G: L_2 41% 36%	S E*
E: L_2 72% 73%	G* S*	E: L_2 35% 43%	S* G*
		S: L_2 15% 18%	G E*
		G: L_2 59% 68%	E* S
		E: L_2 64% 65%	G S
		S: L_2 32% 44%	G* E
		G: L_2 17% 25%	E* S*
		E: L_2 16% 25%	S* E*

Only the asterisked (*) comparisons meet the expectations of the hypothesis.

22. Kintsch (1977:355-356): "People generally use semantic comprehension strategies and pay relatively little attention to syntax if they can get by without it."
23. It is worthy of note that the ranking for all other comparisons in the "norm" cases (the L_1 texts) was S : G : E and just in this one case (P/e) English and Spanish have changed places. We have pointed out at 5.6 that the contexts in which a message participant is not also a grammatical participant in English require specialized communicative needs and these are not often met.
24. We might point out here that writers--and professional writers at that--are much more careful and aware of their linguistic production (they have more time to be) than are speakers, other things being equal.
25. There is actually a minimal rise in the English L_2 < German L_1 over the L_1 English text:
- English L_1 = 4.56%
English L_2 = 5.18%

Chapter 6

Detailed Comparison of Novels and Translations

6.0

In this chapter we shall take a look at individual 3-participant occurrences and their translations. In contrast with the overall quantitative data in Chapter 5, these data consist of individual utterances, namely occurrences which--in at least one of the languages in question --are rendered as 3-participant messages, and the specific translations of these utterances (whether as 3-participant messages or not) in the other languages. What we want to compare in each instance is an original and its translations. Our significant comparisons here are therefore always binary:

original -- translation_a

original -- translation_b

and constitute six pairs (English → Spanish, English → German, German → Spanish, German → English, Spanish → English, Spanish → German). The data are taken from the first two chapters of each novel and their translations.

6.1 Types of correlation between original and translation

Our binary language comparisons can yield three types of relevant correlation:

- a) cases where both original and translation have a 3-participant message
- b) cases where the original has a 3-participant message but the translation does not
- c) cases where the original does not have a 3-participant message, but the translation does.

Examples of each type (a, b and c) are given below for each original.

- a) both languages express 3-participant messages (in these particular examples both translations agree with the original, so that we can present a single 3-utterance comparison):

AC/

- (1) a. E: "And you can't give me any further in-
formation?" (p.8)
- b. E → G: "Und Sie können mir keine näheren Infor-
mationen geben?" (p.8)
- c. E → S: -¿No puede usted proporcionarme unos más
amplios informes? (p.10)

GM/

- (2) a. S: -Coronel, espérese y le presto un
paraguas. (p.13)
- b. S → G: "Warten Sie, Oberst, ich leihe Ihnen
einen Regenschirm." (p.12)
- c. S → E: "Colonel, wait, and I'll lend you an um-
brella!" (p.7)

GG/

- (3) a. G: ...zeigte er uns schon das Ding. (p.12)
- b. G → E: ...he showed us his find. (p.11)
- c. G → S: ...nos mostró ya su hallazgo. (p.18)

- b) the original expresses a 3-participant message, but the translation does not (here it was not possible to find an English original example where both translations failed to produce a 3-participant message; consequently two separate examples are given for the AC text, one for each translation):

AC/

- (4) a. E: ...the judge asked him: "----" (p.27)
 b. E → S: ...el juez preguntó: "----" (p.36)
- (5) a. E: General Macarthur said to him: "----"
 (p.18)
 b. E → G: "----?" forschte General Macarthur. (p.19)

In (4) him is not translated into Spanish; in (5) it is again the mid participant (him) that is omitted in the German translation.

GM/

- (6) a. S: Le costó trabajo encontrarlo en el fondo
del baúl. (p.9)
 b. S → G: Es kostete Mühe, ihn in der Tiefe der
Truhe zu finden. (p.9)
 c. S → E: It took some effort to find it in the
bottom of the trunk. (p.5)

Both the English and the German translations omit the person whose effort was required in the search.

GG/

- (7) a. G: als wir ihm...Wunderdinge von dem ab-
gesoffenen Minensuchboot erzählten. (p.7)
 b. G → E: telling fantastic stories about the
sunken mine sweeper (p.8)

Neither the tellers nor the listener are identified in this English translation.

- c. G→S: contando maravillas del dragaminas hundido (p.11)

The Spanish translation parallels the English one, mentioning only the Wunderdinge.

- c) the original does not express a 3-participant message, but the translation does (separate examples necessary for the E and S originals):

AC/

- (8) a. E: A little shiver passed down Vera's back.¹
(p.23)

- b. E→G: Vera fühlte, wie ihr ein Schauer den Rücken hinunterlief. (p.24)

The translator created two participants, ihr (mid), and den Rücken (low).

- (9) a. E: I have received your name from the Skilled Women's Agency... (p.6)

- b. E→S: La agencia para colocaciones profesionales me propone su nombre... (p.8)

Here the translator created one additional participant, the original already having expressed two. Because of the difference in point of view caused by the change in the occurrence, a reorganization of participants took place, the E high participant becoming an S mid participant.

GM/

- (10) a. S: Mientras tanto, el administrador distribuyó el correo entre los destinatarios presentes (p.23)

S→E: Meanwhile the postmaster was handing out mail to those who were present. (p.12)

One message participant was created by the translator, making those present rankable with respect to the event, by virtue of the special status of the preposition to, while in Spanish they occur in a prepositional phrase that removes them from ranking and directly specifies (via the meaning of the preposition entre) the role they play in that event.

(11) a. S: Un hilo de sudor healdo resbaló por su columna vertebral. (p.27)

b. S→G: Ein Faden kalten Schweisses rann ihm das Rückgrat herunter. (p.25)

In this case the translator produced two message participants not ranked in the original message: one is referred to originally by a possessive adjective, the other in a prepositional phrase.

GG/

(12) a. G: Als aber Studienrat Brunies alle Schüler (low) unserer Klasse nach ihrem späteren Beruf fragte... (p.16)

b. G→E: But when Dr. Brunies,...asked the boys (mid) of our class what profession (low) they were planning to take... (p.19)

c. G→S: Pero cuando en una ocasion el profesor Brunies preguntó a todos los alumnos (mid) de nuestra clase la profesión (low) ... (p.25)

In the original the profession is mentioned in a prepositional phrase; in the translations it is a message participant.

6.2 Correlation data and the hierarchy of participant propensity

We can see from the above (and the counts in Chapter 5 had already indicated) that originals and translations do not always match when it comes to number of message participants. Sometimes participants get lost in the course of translation; other times they appear in the text as a result of the translation.

Considering that the SPTs under study differ in a number of ways having to do with form and value (cf. discussion in Chapter 5), we might have expected the a) cases (where original and translation agree on all three message participants) to be relatively few in number. That is, given the differences in the SPTs, a correlation at three points (all three participants) is less likely than a correlation at two or at one point. Such a three-point agreement would require, in addition to the correspondence of entities, a correspondence in the lexicon, at least of the word describing the event. Indeed, we can see in the examples given under a) above, that there is correspondence throughout the utterance:

AC/

(1 a-c) High: you - Sie - Vd. + verb ending -e

Mid: me - mir - me

Low: any further information - keine
näheren Informationen - unos más

amplios informes

Occurrence: can give - können geben - poder pro-
porcionar

(The same holds true for the examples from GM and from GG.)

We might also have expected that when it comes to loss or gain of participants in the translation process, loss is more likely than gain, as translation is a difficult process, involving the transfer of messages expressed in one grammatical framework (L_1) into another grammatical framework (L_2) in such a way as to convey to hearer/readers of L_2 the same message conveyed to hearer/readers of L_1 . We might therefore have expected that the translator, constrained by the grammar of the target language in ways that make an exact correlation impossible, would often tend to be less rather than more specific in his L_2 rendition of the source, possibly by omitting a participant.² The counts at 5.14, however, indicated that these expectations need to be viewed from a different perspective, namely that of the participant propensity hierarchy. The pertinent data as they pertain to message participants can be found in Table 16.

TABLE 16

CORRELATION OF 3-PARTICIPANT MESSAGES
BETWEEN ORIGINALS AND TRANSLATIONS

Source (L ₁) → ↓ Target (L ₂)	English	German	Spanish
English		N = 42	N = 38
a) 3 → 3		a) 15	a) 17
b) 3 → ~3		b) 21	b) 18
c) ~3 → 3		c) 6	c) 3
German	N = 17		N = 43
a) 3 → 3	a) 6		a) 20
b) 3 → ~3	b) 1		b) 15
c) ~3 → 3	c) 10		c) 8
Spanish	N = 38	N = 55	
a) 3 → 3	a) 6	a) 26	
b) 3 → ~3	b) 1	b) 10	
c) ~3 → 3	c) 31	c) 19	

The data in Table 16 confirm the first expectation: there are fewer 3-point correlations for all combinations of languages than correlations at fewer than three points. (Cf. Fig. 12.)

	Correlation at 3 points 3 $\rightarrow$ 3	Non-3-point correlation 3 $\rightarrow$ $\sim$ 3 + $\sim$ 3 $\rightarrow$ 3
E $\rightarrow$ G	6	11
E $\rightarrow$ S	6	32
G $\rightarrow$ E	15	27
G $\rightarrow$ S	26	29
S $\rightarrow$ E	17	21
S $\rightarrow$ G	20	23

Fig. 12

Each translator is faced at some points with a lack of one-to-one correspondence and solves the discrepancy by

- failing to rank certain entities as participants or by
- creating participants (choosing to express as a rankable participant an entity the author did not so express).

When we come to the second expectation, that loss of participants is more likely than gain, we find (and found in the overall counts at 5.14) the following:

There is a skewing with regard to whether the prediction holds or not, depending on whether the process from $L_1 \rightarrow L_2$ moves up or down the hierarchy of the languages with respect to message participants (per 3-entity occurrences). This hierarchy of participant propensity is in the message participant cases:

Spanish

German

English

The hierarchy was observed to hold for both p and max p:

- 1) in the overall quantifications of novels and translations (cf. Chapter 5, Fig. 10 and Fig. 11)
- 2) in the quantification of the independent originals (cf. 5.14, sections I and II)

and for max p

- 3) in Narrative B (cf. 5.11, section II; Chapter 5, Fig. 11)³

In Table 16 we see that if an L_1 higher up the hierarchy is translated into an L_2 farther down, there is greater loss of participants than gain. Conversely, if an L_1 farther down on the hierarchy is translated into an L_2 higher up, there is more gain of participants than loss:

	<u>Loss of participant</u>	<u>Gain of participant</u>
S $\longrightarrow$ E	18	3
G $\longrightarrow$ E	21	6
S $\longrightarrow$ G	15	8
E $\longrightarrow$ G	1	10
G $\longrightarrow$ S	10	19
E $\longrightarrow$ S	1	31

Fig. 13

Thus, when English, at the bottom of the hierarchy, is the source language, participants are much more frequently created than lost in the process of translation.⁴

When Spanish, at the top of the hierarchy, is the source, message participants are more frequently lost in translation. This corresponds to the high percentage of 3-p messages we found in Spanish overall and the lower percentages in English and German. The difference in loss going to English and loss going to German reflects the relative frequency of 3-p messages of these languages on the hierarchy.

For German, the language in the middle, the tendency depends on whether it is being translated into English, in which case more participants will be lost, or into Spanish, in which case more participants will be gained. The diagonal line in Table 16 thus serves as a dividing line between those $L_1 \rightarrow L_2$ cases in which there are more $3 \rightarrow \sim 3$ (above the line) and those in which there are more $\sim 3 \rightarrow 3$ (below the line), corresponding to the hierarchy observed in the several instances listed under 1) - 3) above.

The participant propensity hierarchy was discussed at 5.14. It is the reflection of frequency differences in participant mention and can be seen as the consequence of the several factors influencing exploitation of the Systems of Participation--form, scope and implementation--and the inferential expertise that is developed (or not) as a result of these factors. Although the hierarchy was established on the basis of the original novels, participants

in the translations are lost or gained in accordance with this hierarchy. The fact that this skewing is so pronounced in these two chapters of each novel can be seen as an indication that the tendencies under discussion are indeed very homogeneous and pervasive throughout each of the texts. Since the distribution is so homogeneous in such relatively unfavorable material (chosen more or less at random and in the different styles of different authors), it is likely that the skewing underlying the participant propensity hierarchy is very real and basic, valid for the languages themselves, and not an artifact of the particular corpus utilized in this study.

We shall now examine how creation vs. loss of a third participant is achieved in the various languages.

6.3 Participant gain

One Spanish usage that accounts for a considerable number of the participant creations in the Christie translation is the practice of expressing quotes with explicit mention of the addressee:

(13) a. "-----" le dijo.

Here the speaker (verb ending) is one message participant, the addressee (le) is a participant in the message that is grammatically signalled, and that which is said ("-----") is the third message participant. In both German and English, the addressee is usually omitted.

- (13) b. "-----" he said.
 c. "-----" sagte er.

This expression of addressee with decir 'say' extends beyond direct quotes to other uses, e.g., indirect quotes:

- (14) -Le digo que la tormenta esta en el aire.
 (AC p.20)
 '(I tell you) "There's a squall ahead."' (AC p.14)

and applies to other verbs of saying, e.g. preguntar 'ask':

- (15) Este le preguntó: "-----" (AC p.35)
 'Wargrave (asked him) said suddenly: "-----"
 (AC p.27)

or pedir 'ask':

- (16) si se le pidiera alguna cosa ilegal... (AC p.11)
 'If anything illegal is proposed (to you)
 (AC p.8)

This communicative practice possibly derives, among other reasons, from the fact that the Spanish speaker need not explicitly mention the entity most active in the message, the person doing the saying. He thus has the possibility of mentioning the addressee without raising the number of mentioned entities in his utterance above two. When the English or German speaker expresses the addressee, on the other hand, he usually presents a more complex perception task to the listener. The English and German listener has to process overt references to three expressed entities in addition to perceiving the content of the verb and deciding which of the three mentioned entities is in focus. The Spanish listener is faced with a somewhat less complex task: he has to process only two overt references

to entities and to identify the third entity--relatively obvious because it is the entity in focus--from the verb ending. Not surprisingly English and German speakers present their hearers with the more complex task less frequently.⁵

Even leaving this utterance type aside, the Spanish L₂ Christie corpus contains 23 instances of created message participants; 21 instances include a created mid participant, generally a clitic (18) and sometimes an a-phrase (3). Similar data emerge from a look at the Grass corpus. Here, although many of the total 3-p utterances are derived from 3-p messages in the original German, there is still a considerable number where the L₂ writers created participant rankings: 6 times in English, and again a higher number--19--in Spanish.

This text--due to the difference in narrative style between Grass and Christie⁶--contains none of the decir utterances discussed above (for the AC text). There is one instance of preguntar:

(17) a. -Pregúntaselo tú (GG p.34)

but here the addressee is not the entity created; the source language includes him as well. However, it does not mention what is to be asked.

(17) b. "Frag Du ihn..." (GG p.22)

The English translation adheres to the German model:

(17) c. "You ask him..." (GG p.26)

(The grammatical signals here are ihn = LOW; him = NON-HIGH.)

Of the remaining (18) created message participants in the Spanish translation of the Grass text, 11 are mid participants; two of these are a-phrases, the rest clitics.⁷ There is, then, a pronounced preference of Spanish speaker/writers for actually expressing mid-ranked participants,⁸ even when the original text does not do so, whether this propensity derives from the lesser complexity achieved by non-mention of the participant in focus or from a linguocultural inclination to mention people whenever they are involved in an event (and people tend to be high or mid participants) or from some as yet undiscovered factor.

In contrast to Spanish, English is seen to be participant shy. Not that an English translator doesn't ever create participants: there are 9 examples in these chapters of created English participants. Among them:
G → E (GG)

(18) a. ...ich lasse Mahlkes Haut feinkörnig bis
graupelig werden (p.6)

b. I make Mahlke's skin take on a texture... (p.6)
where the English is a composite verb plus a particle allowing the introduction of a third participant, excluded by the German composite-plus-quality combination.

- (19) a. ...sagte die rundumlaufende Plaketteninschrift aus, dass Mahlke das Porträt des Marschall Pilsudski an die Luft gebracht hatte. (p. 14)
- b. ...the circular inscription told us that Mahlke had brought to light the portrait of Marshal Pilsudski. (p. 17)

S → E (GM)

- (20) a. Mientras tanto, el administrador distribuyó el correo entre los destinatarios presentes. (p. 23)
- b. Meanwhile the postmaster was handing out mail to those who were present. (p. 12)
- (21) a. lo que permite publicar la censura (p. 24)
- b. which the censor lets them print (p. 13)

The translations into English exhibit the same property exhibited by the translations into Spanish: when participants are created, they tend to be mid participants. Mid participants thus appear to be the key to the question of SPT exploitation. In the above examples, only example (18b) shows the creation of a low, and this is a result of a lack of correlation in the lexicon: Whereas werden 'become' occurs with a quality, feinkörnig 'fine grained', that the Haut 'skin' acquires; take on is an activity that suggests a further participant, and texture is thus supplied by the English translator.

Another example of creation of a low participant occurs in the translation of the Grass text:

G → E (GG)

- (22) a. Beifall tat ihm gut. (p.20)
- b. Applause did him good. (p.23)

but this is due to the cognate item being viewed as a participant in the English utterance, and as a modifier of the occurrence in the German utterance.⁹

More common are situations like the following: in example (23b) below we see that although the new entity (her questions) is a low participant, what has happened is that its inclusion has led the translator to "promote" the low participant in the original utterance to a mid participant in English.

S → E (GM)

- (23) a. Los trastornos respiratorios la obligaban a preguntar afirmando. (p.7)
- b. Her disturbed breathing made her put her questions as assertions. (p.4)

In consequence an original 2-participant message in Spanish (high + low participants) has become a 3-participant message (high + mid + low participants) in English.

German, as we have seen in Table 16, occupies a middle position with respect to participant creation: it tends strongly to participant creation when translating from English (where there are fewer participants), but does this to a lesser extent, relying more on participant loss in the non-correlating instances, when translating from Spanish (where there are more participants).

Examples of created participants in German are:

E → G (AC)

- (24) a. The face reflected there was of a slightly military cast with a moustache. (p.14)

- b. Das Gesicht mit dem Schnurrbart gab ihm
ein soldatenhaftes Aussehen. (p.14)

Here two participants are created, mid and low.

- (25) a. Nodding his head in gentle approval of his
logic (p.6)

- b. Mit einem Kopfnicken zollte er seiner
logischen Denkart Beifall. (p. 6)

In effect, all three participants are created in this last example. The originally occurring participant, his head, is given in the German translation in a prepositional phrase.

In the following translations from Spanish, the German translator created one participant in the message:
S → G (GM)

- (26) a. Lo que me preocupa... (p.35)
'What bothers me...' (p.19)

- b. Was mir nur Sorgen macht... (p.33)
'what (makes) worries (for) me'

- (27) a. El calor de la tarde estimuló el dinamismo
de la mujer (p. 32)
'The afternoon heat stimulated the woman's
energy.' (p.17)

- b. Die Nachmittagshitze verlieh der Frau neuen
Arbeitseifer. (p.31)
'The afternoon heat lent the woman new work-
energy.'

The latter example is another instance of seeing an entity (die Frau, here in the dative) as a participant in the event or not (the Spanish simply expresses her as the possessor of energy--as does the actual English translation).

Again, as for Spanish and English, the translations

into German reveal a strong tendency to create mid participants. The few instances of created lows are either cases where both a mid and a low were created (as in example (24b)), or a matter of the non-specific verb machen 'make, do, cause' occurring in German as a translation of the more specific verb preocupar 'bother, preoccupy' in Spanish, and providing the specification, that which is being made or caused: Sorgen 'worries', as a message participant.

We thus see that in most of the cases discussed here, when participants are created, they tend to be mid participants, whether the language be Spanish, English or German. It appears that there is an implicational hierarchy of how participants are generally expressed: one participant is typically high and in focus; the second expressed participant is typically low;¹⁰ when three participants are expressed, mid is added. Such an implicational hierarchy of expression suggests that this is the way in which participants are cognitively ordered by the speaker. This is quite reasonable when we take into consideration the meanings of signalled participants in the SPTs, which carry over (in terms of the Extended Relevance Hypothesis) to participants in the message. That is, it is plausible that a speaker should think first and foremost of the entity contributing most to an activity, of the entity most active or potent in the occurrence. It is

also reasonable for a speaker to think of the extremes of the scale (high - low) when viewing the event in terms of two participants, the one contributing more than the other. In two-participant situations, all one would need is the opposition: high vs. non-high (and we find that this opposition is often the only one conveyed, even in Spanish and German, where a further specification of the non-high participant as mid or low is usual also in two-participant situations). Only when the event is viewed relative to three participants is a distinction among the non-high entities necessary, and this is when the mid participant enters the picture. A grammar that proposes absolute roles such as agent, instrument, etc. for its participants fails to capture this very interesting fact. The implicational hierarchy of expression of participants thus appears to be uniquely explainable by an approach that has scalar meanings for SPTs, the rankings of which reflect a plausible order of cognizance of entities in an event.

6.4 Extent of participant gain

In comparing the languages as to creation of participants in the message we may also ask: When in the course of translation 3-participant situations result from non-3-participant utterances, did the original express 1 participant or 2 participants, i.e., did the translator create one or two additional participants?

We see from Table 17 that a similar pattern holds here as in Table 16: in translating from English --i.e., going up the hierarchy discussed at 6.2--both one and two participants are created in the other languages, whereas translations into English never create more than one additional participant. The German translation from English--a move up the hierarchy--also includes more 2-p creations (4) than the German translation from Spanish--a move down--(where there is only one such case in these data). Thus, although the number of cases in which two participants are created are fewer overall than those in which only a single participant is created, we see a gradation in extent according to language. Spanish creates two additional participants 13 times (11 in translation from English, 2 in translation from German; and on three occasions Spanish creates three participants, the original English not containing an occurrence in which a mentioned entity could be a participant).¹¹ German creates two participants 5 times, and English not at all. These data are graphically presented in Table 17.

TABLE 17

3-p MESSAGES DERIVED FROM $\sim$ 3-p MESSAGES

Source (L_1) = $\sim$ 3-p ↓ Target (L_2) =3-p	English			German			Spanish		
	<0p	<1p	<2p	<0p	<1p	<2p	<0p	<1p	<2p
English				-	-	6	-	-	3
German							-	1	7
Spanish	3	11	17						
				-	2	17			

The data in Table 17 support and reinforce those in Table 16. Again the hierarchy of Spanish : German : English is observed, and the distribution of forms is in accordance with it. Above the diagonal line it is extremely rare (only one instance) for more than a single participant to be created in the course of translation (and then it is German and not English that creates the two). The $L_1 \rightarrow L_2$ relationships above the line all constitute a downward movement in the hierarchy. Below the line, however, we observe increased participant creation in all categories, in gradation from creation of one participant, to creation of two participants, to creation of three participants. The last process occurs in only one $L_1 \rightarrow L_2$ combination, namely from English to Spanish, the greatest distance along the hierarchy, the movement from a participant-shy language (English) to a participant-eager language (Spanish).

6.5 Participant loss

But what of participant loss? Table 18 shows the patterning of participant loss in the data; we will examine some of the occurrences in more detail below.

TABLE 18

~3-p MESSAGES DERIVED FROM 3-p MESSAGES

Source (L_1) → =3-p ↓ Target (L_2) = ~3-p	English		German		Spanish	
	>1p	>2p	>1p	>2p	>1p	>2p
English	/		4	15	-	18
German			/		-	15
Spanish	-	1			/	
	-	1	1	9		

In keeping with the hierarchy of participant propensity, we would expect Table 18 to be a mirror image of Table 17. And indeed it is. That is, where for Table 17 a higher position on the hierarchy means that the likelihood for participant creation is greater when translating into that language, for Table 18 a higher position on the hierarchy means that more participants will be lost in translation out of that language. This is in agreement with the global skewings of message participants observed in Chapter 5 (cf. especially 5.14, section I). There we established an overall quantification and a general distribution; here we

are establishing, by examination of the detailed, fine-grained correspondences, how that distribution is achieved.

We see that in these 3-participant situations the Spanish translations hardly reduce participants at all, and that when they do, they reduce only by one (i.e., from 3-p to 2-p), with a single exception. Spanish loses more participants when it is translated from German as L_1 than from English as L_1 , just as it creates more participants from English as L_1 than from German as L_1 . This follows again from the relative positions of the languages on the hierarchy, more gain and less loss occurring when the greatest distance on the hierarchy (from English at the bottom to Spanish at the top) is covered in the translation process.

A reduction from three to two participants is the rule for German and English as well, although the English translation from German (a short distance down on the hierarchy) does have four instances of one-participant translations of 3-p utterances. These single participants have varied rankings (high, mid, low) in the original:
High:

- (28) a. die einst dem Reck Halt und Sicherheit
 gegeben hatten (GG p.13)
- b. which had once served to hold the horizontal
 bar firmly in place (GG p.16)

Mid:

- (29) a. der dem rutschenden Kettchen Halt bot (GG p.10)
 b. the wildly agitated chain was held in place by
his protuberant occiput. (GG p.11)

Low:

- (30) a. zog es ihm den Anhänger aus dem Turnhemd
 (GG p.9)
 b. the medal tugged out of his gym suit (GG p.11)

What is most interesting about the examples of participant loss in all languages, however, is which participants get lost. Just as mid participants led in the creation of participants, so they are the ones that get omitted in reductions from 3-p utterances.¹²

AC/

- E→G (31) a. General Macarthur said to him: "-----"
 (p.18)
 b. "-----" forschte General Macarthur. (p.19)
 E→S (32) a. The judge asked him: "-----" (p.27)
 b. el juez preguntó: "-----" (p.36)

GG/

- G→E (33) a. Mahlke zeigte uns irgendein Scharnier. (p.9)
 b. he silently exhibited a hinge (to us) (p.10)
 G→S (34) a. Das soll mir mal einer nachmachen. (p.20)
 b. -A ver, pruébalo, tú- (p.31)
 'I dare one of you to try' (p.24)

GM/

- S→G (35) a. porque la llovizna le maltrató los párpados
 (p.15)

- b. weil der Rieselregen seine Lider mis-
handelte (p.14)
'because the drizzle hurt his eyelids'
(p.7)

- S→E (36) a. le puso una mano en el hombro (p.14)
b. The colonel...put a hand on her shoulder
(p.8)

We see that speakers of all three languages share a strategy, but that its effects are observable to different degrees. The strategy is: the mid participant is the one that makes or breaks a 3-participant event in translation. When there are only two participants in the message it is sufficient to distinguish high and low (or non-high); only the presence of a third participant on the scene makes a differentiation within the scale necessary, thus putting the SPt, whose function is ranking participants, in a position of being fully usable, with the resulting differences in degree of utilization, according to how exploitable the particular SPt is or how much inferential expertise the speakers of that language have developed.

That the mid participant should be the first to go and the last to appear in translation is understandable in light of its nature: it is neither high nor low, the polar values, but somewhere in between, making inference of the absolute nature of its involvement more difficult than is the case for the high and low entities. The tendency pointed out above is seen here in the study of

what happens to 3-participant events in translation. It is a tendency, not a rule, for there are some instances here--and certainly many more in purely 2-participant situations--where 2-participant events involve only high and mid, e.g.

S → G (GM)

- (37) a. le dio una palmadita en la espalda (p.32) = 3p
 b. Der Arzt klopfte ihm leicht auf den Rücken
 (p.30) = 2p
 'The doctor patted him on the shoulder.'

This is, like example (26), a case of non-specific vs. more specific verb, only here the more specific verb occurs in the translation into German, compensating, as it were, for the missing participant.

G → S (GG)

- (38) a. er hielt uns auffordernd...die Büchse hin
 (p.20) = 3p
 b. nos invitaba a probar de ella (p.31) = 2p
 'He invited us to try it;

G → E¹³ (GG)

- (39) a. Und dann zeigte Mahlke es uns (p.8) = 3p
 b. And then Mahlke showed us (p.9) = 2p

Here es 'it' is not translated into English (cf. 6.11-6.13 below for a discussion of pronouns in 3-entity situations).

S → E (GM)

- (40) a. Pueda ser que no le cuente la situación (p.9)
 = 3p
 b. Maybe he won't tell him about the situation
 (p.5) = 2p

Here the situation is expressed in a prepositional phrase in English, obviating ranking as a participant, because the preposition expresses directly the relationship of situation to the rest of the utterance.

In general, however, when a speaker perceives a potentially 3-p event as involving only two ranked participants, he tends to express them as the extremes of the system, high and low, whose inferences are easier. This results in a shift in value for the entities when the event goes from three to two message participants in the course of translation, e.g.

S → G (GM)

- (41) a. Pero la insistencia de los bronce rotos
le recordó el entierro (p.8) = 3p
- b. Doch die Beharrlichkeit der zersprungenen
 Bronzeglocken mahnten [SIC!] ihn (low) an
 die Beerdigung (p.7) = 2p
 'But the insistence of the cracked bells
 reminded him about the funeral' (p.4)

G → S (GG)

- (42) a. der dem rutschenden Kettchen Halt bot (p.10)
 = 3p
 'which gave the slipping chain support'
- b. que retenía en su lugar la cadenita (low)
 (p.15) = 2p
 'which held in (its) place the little chain'

In both of these examples a mid participant becomes a low or non-high participant as the perception of the event shifts from one involving three participants to one involving two. In the first instance a participant (low) in the message is removed from consideration as a rankable

participant by its occurrence in a prepositional phrase (el entierro 'the funeral' → an die Beerdigung 'about the funeral'). In the second, the low participant (Halt 'support') is changed into a locative phrase (en su lugar 'in its place'), again excluding it from being perceived as a participant. Thus, only two message participants remain and they can be expressed as the extremes of the scale.

These instances in which a low participant is removed from participant status and the L_1 mid participant slips to an L_2 low (or non-high) are the inverse of those in which an L_1 2-participant situation becomes an L_2 3-participant one, with the L_1 low participant "promoted" to L_2 mid because a new (L_2) low has entered the message. Both phenomena are corollaries of the strategy laid out on page 232: that when there are two participants, a two-way opposition--either high : non-high or high : low--is the norm; when there are three, it is the addition of the mid rank that defines the event and sometimes results in a reshuffling of the L_1 participants. An example of this reshuffling all through the scale is found in the translations of an originally (L_1) 2-participant event from the Christie text:

- (43) a. "I have received your name from the Skilled Women's Agency..." (AC p.6)

The Spanish translator, who saw this 3-entity event as a 3-participant event, promoted the women's agency from out

of its prepositional phrase into focus and consequently into participant status in the message, and high participant status at that.

- (43) b. La agencia para colocaciones profesionales
me propone su nombre... (AC p.8)

The role of the women's agency in conveying the name to the speaker (I) is, of course, more potent than that of the recipient of the event. This information was conveyed in English, a participant-shy language, with the help of the preposition from (whose meaning, when analysed, will have to cohere with such an interpretation). In Spanish, a participant-eager language, the information is conveyed via la agencia and me, the introduction of a new high message participant (agencia) resulting in the lowering--to mid, it is to be noted--of the I ($\rightarrow$ me). The name, which is non-high in the English version as a result of the two-way opposition, becomes a low in Spanish when all ranks in the scale are occupied.

The German translation of (43a), to complete the picture, also sees the event in terms of two participants with a prepositional phrase for the third entity, but by virtue of the passive verb the two participants have exchanged places:

- (43) c. Sie wurden mir vom Stellenvermittlungsbüro
genannt... (AC p.6)
'You were named (to me) by the employment
agency'

It is noteworthy that as the addressee becomes high participant, she is raised out of her position of modification

in your name (in which she appeared as a subsidiary to a non-high position entity) to full-fledged pronounhood: sie 'you'.

We thus see repeated instances in both directions of a two-value opposition (however realized) correlating with a three-value opposition to which the mid participant --added last and omitted first because of its complexity and the polar nature of two-valued oppositions--is the key.

6.6 "Datives of interest" as mid participants

There are other cases of participant gain or loss which do not alter the perception of the event. The event is seen as basically a 2-participant interaction and the third participant is an added entity whose role and relevance to the event can be inferred from its being ranked somewhere between the other two, i.e., its being seen to contribute less to the event than the high participant and more than the low participant. The inference proceeds from this grammatical information plus the lexical content of the verb and the participants. E.g. in

(44) a. le caliento el café (GM p.31)

b. I'll warm up the coffee (for you) (GM p.16)

the le, meaning MID participant, tells us that its referent contributes less to the occurrence than the first person high participant, but more than the inanimate entity subjected to the activity of warming up. This contribution

consists of being an interested party (here the potential beneficiary of the action), and thus providing the motivation for the event.

The referent of le is not the causer of the event (that would make him expressible as high participant)--in fact, the event never takes place because he declines the coffee--but plays a role referred to as "ethical dative" or "dative of interest" in traditional grammar (cf., e.g. Curme 1964:501-503).¹⁴

The English translation leaves him out of the event altogether, while the German translation parallels the Spanish original:

(44) c. Ich mache Ihnen den Kaffee heiss (GM p.29)
also expressing a dative of interest role via the MID participant.

In the following example,

(45) a. Le costó trabajo encontrarlo en el fondo
 del baúl (GM p.9)

b. It took some effort to find it in the bottom
 of the trunk (GM p.5)

the le is the affected party of the difficult search, but the relationship between searching and effort can be expressed without him, as evidenced by the English translation and also the German:

(45) c. Es kostete Mühe... (GM p.9)

Thus, only the Spanish original expresses the person's involvement.

Again, in the English translation

- (46) a. the drizzle hurt his eyelids (GM p.7)

we have a direct interaction involving only drizzle and eyelids, but the Spanish original expresses the dative of interest as well:

- (46) b. la llovizna le maltrató los párpados (GM p.15)
'the drizzle hurt him the eyelids'

These "ethical datives" and "datives of interest" tend to disappear in translation (Examples 47 a → b and 48 a → c), as they constitute "comment" on the basic activity.

- (47) a. zog es ihm den Anhänger aus dem Turnhemd
(GG p.9)

- b. the medal tugged out of his gym shirt
(GG p.11)

- c. la medalla se le salía de la camisa (GG p.15)

- (48) a. le puso una mano en el hombro (GM p.13)

- b. Der Oberst legte ihr eine Hand auf die Schulter (GM p.14)

- c. The colonel put a hand on her shoulder (GM p.8)

But there are also instances where the translator creates such a dative (Examples 49b, 50b, 51b).

- (49) a. Un hilo de sudor helado resbaló por su columna vertebral (GM p.27)
'A trickle [SIC!] of cold sweat slipped down his spine' (GM p.14)

- b. Ein Faden kalten Schweisses rann ihm das Rückgrat herunter (GM p.25)
'A thread of cold sweat ran down his spine (on him)'

- (50) a. His eyeballs ached (AC p.25)
 b. los ojos hacíanle daño (AC p.34)
- (51) a. wer blonde Haare hatte, bekam strohblondes Haar (GG p.10)
 'whoever had blond hair, got straw-blond hair'
 b. al que lo tenía rubio, el pelo se le volvía color de paja (GG p.16)
 'those of us who had blond hair were transformed into tow-heads' (GG p.12)

Such roles, materially or emotionally interested party, are expressed in our corpus by mid participants most frequently in Spanish, somewhat less so in German, and not at all in English, again in keeping with the participant propensity hierarchy. Table 19 summarizes the data for the two chapters.

TABLE 19

OCCURRENCES OF MID PARTICIPANTS INTERPRETED AS
 "ETHICAL DATIVES" AND "DATIVES OF INTEREST"
 IN 3-PARTICIPANT MESSAGES IN
 ORIGINALS + TRANSLATIONS

<u>S</u>	<u>G→S</u>	<u>E→S</u>	<u>G</u>	<u>S→G</u>	<u>E→G</u>	<u>E</u>	<u>S→E</u>	<u>G→E</u>
4	5	2	2	3	2	-	-	-
Totals:	<u>S</u>			<u>G</u>		<u>E</u>		
	11			7		-		

These datives thus account for a fair percentage of the mid message participants, at least in Spanish and German, in the investigated corpus.

6.7 Detailed reflection of overall quantification

The above comparisons based on individual utterance pairs reflect in detail the overall quantification observed in Chapter 5 in cells A and B of Figure 5. That is, they reflect the participant propensity hierarchy mentioned above. In this chapter we have seen more specifically what happens to message participants, with some matching, some participant loss and some participant gain, depending on source and target languages. And we have seen that the general patterning of message participants observable for the texts as a whole is clearly evident in the detailed comparisons of two chapters. Thus, when translating from a language lower on the hierarchy

Spanish

German

English

into one higher up one tends to gain participants, while when translating from a language higher up to one lower down one tends to lose participants. For all three languages the gained participants and lost participants generally tend to be mid participants. That is, translation alters a perceived 2-participant scene with the extremes (high-low) of the SPTs into a perceived 3-participant scene in which a mid rank is added. Conversely, where participants are lost, it is usually also the mid participant that is omitted in the translation.

These more specific comparisons thus show the effect of the factors (form, scope, implementation) discussed in Chapter 5. It is undoubtedly the inferential expertise that Spanish speakers have derived, ultimately from the negative effects on their SPt of the factors of scope and implementation, that prompts them to create message participants more freely than speakers of the other languages. And it is also likely that English translators' reluctance to create participants derives from a lack of inferential expertise as well as from the form factor, which prompts English speakers to rely on prepositional phrases for conveying participant roles in an event.

The above comparisons have been concerned with correlation of numbers of participants. We may also, however, investigate the cooccurrence of participants and the elements that define the events in which the participants are involved, namely the occurrences. This will be examined in the next section.

6.8 Occurrences (verbs)

The characteristic occurrence of 3-participant events is that of giving, an activity that of necessity involves three entities: a giver, a receiver, and the thing given.¹⁵ Give, geben, dar consequently occur with greatest frequency in all three languages in 3-participant

situations:¹⁶

give 9 geben 10 dar 12

These are, so to speak, the categorial verbs, followed by sets of similar but lexically more specific verbs.

pay	zahlen 'pay'	devolver 'entrust'
hand	überreichen 'hand over'	entregar 'hand over'
lend	leihen 'lend'	prestar 'lend'
give back	zurückgeben 'return'	devolver 'return'
send	schicken 'send'	echar 'throw'
show	zeigen 'show'	mostrar 'show'
offer	anbieten 'offer'	ofrecer 'offer'
bring	schenken 'give as a gift'	conferir 'confer'
provide with	nehmen 'take'	quitar 'take'
...	...	...

The above are just a small sampling of giving verbs (including, of course, the converse, taking) from among those occurring in these texts.

Joining these in 3-participant situations is a second set of occurrences categorizable as having to do with saying. This group is particularly well represented in Spanish, where, as has been pointed out above, direct or indirect speech often explicitly mentions the addressee, as in

(52) a. le dijo con acento digno y severo: "-----"
(AC p.20)

b. said Ø with immense dignity: "-----" (AC p.15)

c. sprach Ø mit ungeheurer Würde: "-----"
(AC p.15)

while it does so much less frequently in German and English, although a few instances do occur:

- (53) a. sage ich dir, du sollst mit Strümpfen
schlafen (GM p.7)
- b. I've been telling you to sleep with your
socks on (GM p.4)
- c. te estoy diciendo que duermas con las medias
puestas (GM p.7)

The numbers of the basic saying verbs in 3-entity situations in the examined chapters are:

say (to), tell 4 sagen, erzählen 5 decir 12

The discrepancy in numbers of say, tell, etc. across languages is due to the fact that the English and German texts often contain simply the quote without the verb denoting the saying activity:

- (54) "I don't know." (AC p.17)

while Spanish includes the verb of saying:

- (55) -no puedo decirle nada. (AC p.23)
'I can't tell you anything.'

These categorial verbs are again accompanied by other verbs of saying:

ask	fragen 'ask'	preguntar 'ask'
shout (to)	auszusprechen 'utter'	proponer 'propose'
		contar 'recount'
		testimoniar 'assure'
		gritar 'shout'
		negar 'deny'

(The greater variety of lexicon in Spanish will be

discussed below, at 6.9).

While the temptation is strong to characterize all the verbs occurring in 3-participant utterances as occurrences requiring two non-high or non-focus entities to complete the description of the event, it would be wrong to try to classify them as inevitably such or to exclude others generally not so classifiable. Take, e.g.

aussprechen 'utter'	heissmachen 'heat'
einbrocken 'dunk'	hinunterlaufen 'run down'
	-rennen
tun 'do'	machen 'do'

to list only a few from German. These would at first glance appear to suggest cooccurrence with a single non-focus entity. All occurred in our examined chapters with two non-focus entities. The same goes for Spanish negar 'to deny', calentar 'to warm up', recordar 'remember, remind':

- (56) um der Mutter des Toten sein Beileid auszusprechen (GM p.13)
'to give his condolences to the mother of the dead man' (GM p.7)
- (57) dass er ihm diese Suppe eingebrockt hatte?
(AC p.23)
'to let him in for this?' (AC p.22)
(literally: 'to have dunked pieces of something into this soup on him' - this is a German idiom)
- (58) ob wir ihm etwas getan haben (GM p.12)
'if we poured boiling water on him in this house' (GM p.12)
(literally: 'if we did something to him')¹⁷
- (59) ich mache Ihnen den Kaffee heiss (GM p.29)
'I'll warm up the coffee' (for you) (GM p.16)

- (60) Vera fühlte, wie ihr ein Schauer den Rücken
hinunterlief (AC p.24)
 'A little shiver passed down Vera's back.'
 (AC p.23)
 (literally: 'Vera felt, how a shiver ran down
 her back (on her)')
- (61) Was mir nur Sorgen macht (GM p.33)
 'What bothers me' (GM p.19)
 (literally: 'What makes worries for me')
- (62) y le caliente el café (GM p.31)
 (cf. Ex. 59 above)
- (63) Le niego rotundamente la oportunidad de
 envenenarme (GM p.31)
 'I absolutely refuse to give you the chance to
 poison me' (GM p.17)
 (literally: 'I absolutely deny you the
 opportunity to poison me.')
- (64) Pero la insistencia de los bronces rotos le
recordó el entierro. (GM p.8)
 'But the insistence of the cracked bells re-
 minded him about the funeral' (GM p.4)

In this last example, the original Spanish has recordar, the cooccurrence of which with one or with two non-focus entities results in a different translation of the occurrence into English: remember vs. remind.

- (65) Recordó el entierro.

would translate as 'He remembered the funeral'. This translation, of course, also reflects the difference in point of view resulting from he being mid participant in the citation (Ex. 64) and high in Ex. 65.

English examples of occurrences intuitively suggesting only one non-focus entity but occurring in the texts and translations with two are fewer; and with the exception of do, they all require to in order to express

the second (mid) non-focus entity.

(66) Applause did him good. (GG p.23)

(67) General Maxarthur said to him, "-----" (AC p.18)

(68) Meanwhile the postmaster was handing out mail
to those who were present. (GM p.12)

The verbs mentioned in (56) - (64), which we intuitively imagine (in isolation) to occur with a single non-focus entity, are perfectly interpretable when occurring with two, the presence of the second non-focus entity plausibly shifting or expanding the message through the addition of another participant rankable with respect to the activity of the verb. Thus we see that although verbs sometimes suggest a specific number of cooccurring entities --and the suggestion can be very strong¹⁸--this is nevertheless not an absolute property of the verb. It can be seen to vary with context and cooccurring entities. We therefore see that the interpretation of these events does not necessarily hinge on the verbs, or on a preconceived cooccurrence formula, but on the actually occurring entities and participants. The interpretation is thus influenced by the scalar meanings of the SPTs and the information these provide in each instance for getting at the role being played by each entity.

6.9 Lexical content of occurrences

A comparison of verbal lexicon is also of interest for 3-participant situations. In particular, we would like to know whether verbal lexicon occurring with three

participants is any more or less specific (i.e., semantically explicit) than lexicon occurring with fewer than three participants. One might perhaps expect less specification in the verb when there is more specification in the entities, especially if one of the entities can convey some of the semantic content that could be in the verb.

We can see that in some instances of translation there is a distinction:

L_1		L_2
say (3p)	→	forschen (2p) 'investigate'
hold out (2p)	→	geben (3p) 'give'
be (1p)	→	befehlen (2p) 'order'
have (2p)	→	ordenar (3p) 'order'
get (2p)	→	costar (3p) 'cost'
be (1p)	→	testimoniar (3p) 'assure'

However, the correlation of specificity with participant quantity does not follow from these examples. In the first two pairs the less specific verbs, say and geben 'give', occur with three participants, while the more specific forschen 'investigate' and hold out occur with two. The remaining English verbs above, however, are all rather nonspecific, and they occur with fewer participants than their more specific translations.

The one type of occurrence and entity combination that is related to specificity of verbal lexicon is the

general action verbs such as make and do which are specified by a following entity, e.g. make way vs. vorbeilassen, do a somersault vs. to somersault. A distinction between languages results when one language produces such a verb + entity utterance while the other employs a verb incorporating the content expressed in the first instance by the entity. An example of this type is succeed vis à vis esperar el éxito 'to await success' or Erfolg bringen 'bring success'. In this case, the Spanish and German versions yield additional participants.

Bausch (1963) discusses such cases in detail, providing English examples as well, and making the following distinctions:

- a. colorless verbs + semantic object (pp.39-72)
 - (69) a. Ever had a lift on one of these?
 - b. Sie haben noch nie auf solch einem Ding gesessen.
 - c. No ha montado Vd.
- b. verb + clarifying substantive (pp.72-77)
 - (70) a. Naturally I didn't move a muscle.
 - b. Ich zuckte natürlich nicht mit der Wimper.
- c. verb + (article) substantive (distributive) (pp.78-82)
 - (71) a. He blew his nose.
 - b. Er schneuzte sich.
 - c. Se sonó las narices.

Relatively few such contrasts occur in 3-participant

situations. The above examples, it will be noted, all involve a distinction between one participant and two participants. The AC text contains one example of English 1p → Spanish 3p:

- (72) a. His eyeballs ached. (AC p.25)
 b. Los ojos hacíanle daño. (AC p.34)

The motivation for the 2-participant rise lies on the one hand in this verbal decomposition and on the other in the Spanish strategy for not using possessives with body parts (as English does in his eyes); Spanish speakers prefer to mention involvement, in this case the involvement of le, rather than possession.

Other instances of the above opposition are:

- (73) a. Beifall gab demselben Hüpfer neuen Auftrieb.
 (GG p.20)
 'applause gave that same jumper new energy'
 b. applause started the selfsame mouse up again.
 (GG p.23)
- (74) a. Mahlke zog den Kasten mehrmals auf. (GG p.18)
 'Mahlke wound the box up several times'
 b. Mahlke le dio cuerda varias veces. (GG p.29)
 'Mahlke gave it spring several times.'
- (75) a. wenn er die silberne Jungfrau durch den sauren Turnhallenmief wirbelte. (GG p.19)
 'whirled the Virgin'
 b. y hacía dar vueltas a la Virgen (GM p.30)
 'made the Virgin do somersaults'
- (76) a. le dio una palmadita en la espalda (GM p.32)
 'he gave him a pat on the shoulder'
 b. der Arzt klopfte ihm auf den Rücken (GM p.30)
 'the doctor patted him on the back'

- (77) a. dar paso a los hombres (GM p.17)
'give way to the men'
- b. um die Sargträger vorbeizulassen (GM p.16)
'to let the coffinbearers go by'
- (78) a. lo que me preocupa (GM p.35)
'what bothers me'
- b. was mir nur Sorgen macht (GM p.33)
'what makes worries for me'

We thus find a total of eight occasions (Ex. 72-78 plus an additional aufziehen → dar cuerda) where this decomposition vs. incorporation accounts for a difference in participant number. In most of them Spanish decomposes,¹⁹ while English and German tend to incorporate, but the low numbers do not allow us to make generalizations.²⁰

However, the Spanish speakers' inclination to exploit the SPt and to rank participants in the message freely is coherent with this use of general verb + entity as opposed to specific verb minus an entity. And the reluctance of English speakers to express participants is coherent, in its turn, with the inclination to more specific verbs (and the chance thereby to avoid a participant). Aside from these examples, however, we cannot on the basis of these data find a correlation between specificity of the verb and lower number of participants, nor can we find a significant variety in the lexicon of the occurrences attributable to one language or another.

If we examine the overall distribution of verbal lexicon in the examples from these chapters, we find the

greatest diversity in Spanish. In 6.8 we observed a similar distribution for verbs of saying, where Spanish exhibited seven different items, vis à vis four each for English and German. This seemingly significant distinction is, however, traceable to the greater number of three-participant utterances occurring in Spanish. That is, there is a greater variety of lexicon in Spanish 3-participant utterances, but this variety follows from the greater number of 3-participant utterances in Spanish. A comparison of the lexicon in 3-participant utterances with translations of same (regardless whether 3-p or not) shows a similar variety of lexicon among the occurrences in all the languages.

6.10 Non-finite verbs

The occurrences we have discussed so far have been mostly finite verbs, events occurring with high participants plus mid and/or low participants. There is, however, another group of verbs--the non-finites--worth discussing with respect to participation. The most noteworthy feature of non-finite verbs seen from a participant point of view is their ability--even their overwhelming tendency--to dispense with the high participant. That is, they behave like the finite verbs with respect to mid and low participants, but generally omit the would-be high participant.

This omission--like most acceptable omissions in a communicative exchange--occurs when the identity of the

unmentioned entity is obvious. In the following examples it is perfectly clear from the preceding context who is doing the showing. It is consequently unnecessary for the writer to repeat that entity in connection with the occurrence zeigen (show, mostrar):

- (79) a. Wir lachten auch nie, wenn er Mal um Mal blau und bibbernd in den Kahn stieg, etwas hochholte um uns hochgeholtes Zeug zeigen zu können. (GG p.19)
- b. And we never laughed when Mahlke, time and time again, climbed blue and shivering onto the barge, bringing up something or other in order to show us what he had brought up. (GG p.28)
- c. Tampoco nos reíamos nunca cuando él, amoratado y tiritando, se encaramaba al bote llevando algo que había ido a buscar con el exclusivo objeto de poder mostrárnoslo. (GG p.31)

The actor is also obvious in bringing up (79b), llevando (79c) and for hochholte (79a) as well, which, though a finite verb, lacks explicit mention of the participant in focus because it occurs in sequence with a preceding occurrence, which allows us to identify the high participant in hochholte.

A look at the overall distribution of non-finites in Spanish, German and English reveals that both Spanish and English tend to favor non-finites, while German exhibits a pronounced reluctance towards expressing occurrences in non-finite terms. Table 20 presents the overall data:

TABLE 20

PERCENTAGE OF NON-FINITES
PER TOTAL OCCURRENCES
OF ENTIRE NOVELS

	<u>S</u>	<u>G</u>	<u>E</u> (without imperative)	<u>E</u> (including imperative)
AC:	13.30	5.33	<u>10.10</u>	<u>10.78</u>
GM:	<u>15.27</u>	8.79	14.51	16.17
GG:	14.46	<u>5.98</u>	14.97	16.04
Avg.	14.34	6.70	13.19	14.33

We might expect on the basis of these data that in our detailed comparisons of individual utterances for two chapters we will sometimes find correlation across languages and that in those cases where we do not find agreement as to non-finiteness of an utterance between source and target language, the disparity will be as follows: non-finite occurrences in both Spanish and English will tend to correlate with finite occurrences in German.

There are twelve instances where both original and translation express the event by means of a non-finite verb (cf. Table 21):

TABLE 21

NON-FINITE VERBS OCCURRING IN BOTH SOURCE
AND TARGET LANGUAGE IN THESE TWO CHAPTERS

E → G	1	E → S	2	G → E	1
S → G	4	G → S	1	S → E	4

This is in accordance with what we would expect from the data in Table 20, i.e., that there will be some cases in which the languages agree.

We also expect a number of cases of disagreement, however, and these are summarized in Table 22:

TABLE 22

NON-CORRELATION OF VERBS AS TO FINITENESS
ACROSS LANGUAGES IN THESE TWO CHAPTERS

E non-finite $\rightarrow$ G finite²¹ : 2

E non-finite $\rightarrow$ S finite : 1

G finite $\rightarrow$ E non-finite²² : 5

G finite $\rightarrow$ S non-finite : 4

(S $\rightarrow$ G and S $\rightarrow$ E : there were no
non-correlations in these chapters.)

We see that, as predicted above, the non-finite verbs tend to occur in English and Spanish (with one exception where an English non-finite $\rightarrow$ Spanish finite) and the finite verbs tend to occur in German. There are no instances in these two chapters where a Spanish non-finite is translated into a finite verb or a Spanish finite verb is translated into a non-finite; i.e., there are no non-correlations with Spanish as source language. However, we would expect --on the basis of the overall quantification of non-finites seen in Table 20--that the distribution in Spanish will resemble that in English, i.e., that from S $\rightarrow$ E there will be correlation and that from S $\rightarrow$ G there will be Spanish

non-finites that turn up as German finites. That the latter does not occur in Table 22 is due in part to the sparsity of data in these two chapters and in part to the fact that the Spanish non-finites occurring in these chapters are all instances of 'in order to', translated into German as um + infinitive, a message that also German speakers express with non-finites. E.g.

- (80) a. a llevar la carta clandestina a los
compañeros de Agustín. (GM p.32)
- b. um den Geheimbrief Agustíns Kameraden zu
bringen. (GM p.31)
- c. to take the clandestine letter to Agustin's
companions. (GM p.17)

Why should Spanish and English favor non-finites and German be disinclined toward them? (This disinclination is seen in Table 20 and in the $G \rightarrow E$ and $G \rightarrow S$ figures in Table 22.)

Because their signal for FOCUS is in the verb ending, Spanish speakers have developed expertise in inferring the generally obvious high participant. For English, we feel the explanation again lies in the communicative complexity of the word-order signal and in the consequent desirability of reducing this complexity by omitting reference to one of the participants, the high participant being the one most likely to be obvious. German's disinclination, on the other hand, perhaps stems from the ease of signalling high participants morphologically.

Are these instances of non-finites--occurring without an expressed high participant--to be regarded as sacrifices of participants for the sake of easier communication? We think not. It is more a matter of getting rid of excess baggage, just as one avoids repeating a constant high participant in a series, e.g. he in (81).

- (81) Then he took the rooster into the kitchen,
 tied it to a leg of the stove,
 changed the water in the can, and
 put a handful of corn next to it.
 (GM p.4)

In four of the nine instances of finite → non-finite in Table 22, a normal 3-participant event becomes in the course of translation an event with one participant understood and two expressed, and yet one still infers a 3-participant situation:²³

- (82) a. es...gab Dir ein Ziel (GG p.24)
 ↓
 'it provided you with a goal; (GG p.29)
 b. proporcionándote a tí un objetivo (GG p.37)
- (83) a. Mahlke...liess dem Ding die schwärzliche
 ↓
 Patina (GG p.14)
 b. prefirio dejarle su patina (GG p.22)
 'he preferred (to leave the thing) the
 black patina' (GG p.18)

Here the Spanish translation has made two occurrences out of one.

- (84) a. Mahlke...zeigte uns, wie man mit Schaum löscht
 ↓
 (GG p.8)
 b. to show us how you extinguish with foam
 (GG p.9)

- (85) a. nachdem er ihn vor mir aufgezogen hatte
 (GG p.9)
 ↓
 b. haberle dado cuerda (GG p.28)²⁴
 'after winding it in my presence' (GG p.21)
 (literally: 'having given it spring')

As a matter of fact, as shown by the hiatus (...) in the above citations, the mention of most of the high participants in question in the original German is contextually removed from the actual occurrence that gets translated as a non-finite. This means that the finite verb as well already has an understood high participant, one carried forward from an earlier event. So, e.g., the hiatus (...) in Ex. 84 stands for "bewies es uns, löschte mit Schaum", constituting an entire utterance that looks like this:

- (86) Mahlke bewies es uns, löschte mit Schaum,
 zeigte uns, wie man mit Schaum löscht. (GG p.8)
 'Mahlke proved it, squirting streams of foam to
 show us how you extinguish with foam.' (GG p.9)

We can conclude, therefore, that the instances of non-finite verbs with two non-focus participants are situations communicatively equivalent to those finite verbs whose high participants are carried forward or omitted²⁵ and are therefore also understood as 3-participant events by both the speaker/writer and the hearer/reader. They have therefore been included as such in our 3-participant data.

6.11 Pronouns

Having talked (at 6.8 and 6.9) about specificity of lexicon in the occurrences, let us now turn to specificity in the entities. We suggested at 6.9 that we might plausibly expect less specification in the verb when there is more specification in the entities, but found this systematically so only when the entity was a noun conveying some of the content that would otherwise be conveyed by the verb, e.g. achieve success vs. succeed. What we suggest here is that among the entities the specificity question rests on an opposition of nouns to pronouns. Nouns express a lexical content that helps identify the referent, pronouns lead the hearer to an identification via a number of grammatical clues. The former is a direct, the latter a more indirect way of getting to one's goal. On the basis of these properties, we can correlate nouns with greater specificity, pronouns with less.

We want to explore the following two questions:

- 1) Is an event with a high number of participants more prone to pronominal expression of these participants? (i.e., will some of the entity references be less specific when there are more of them?)
- 2) Do the languages in the study behave differently in this regard? (We found in Chapter 3 that they do behave differently with respect to pronouns vs. nouns and demonstratives overall. It is plausible that the

differences will also occur in a context in which the incidence of entities is increased.)

From the data in Chapter 3 (Table 2) we can see that the overall distribution of personal pronouns per total mentioned entities²⁶ is as follows:

TABLE 23a

PRONOUNS / TOTAL ENTITIES (3rd PERSON ONLY)
(ONE CHAPTER OF EACH TEXT, ALL OCCURRENCES)

Spanish	198 / 2388 = 8% pronouns / total entities
German	356 / 2399 = 15% pronouns / total entities
English	471 / 2422 = 19% pronouns / total entities

A detailed look at 3-participant situations in two chapters of all texts yields the following distribution data for personal pronouns:

TABLE 23b

PRONOUNS / TOTAL ENTITIES (3rd PERSON ONLY)
(TWO CHAPTERS OF EACH TEXT,
3-p OCCURRENCES ONLY)

Spanish	67 / 306 = 22% pronouns / total entities in 3-p
German	55 / 179 = 31% pronouns / total entities in 3-p
English	33 / 105 = 32% pronouns / total entities in 3-p

We see that in all cases the percentage of pronouns rises--dramatically so in the case of Spanish, where it almost triples.

To what can we attribute these increases? In the first place, we have different contexts of investigation:

the percentages in the a) tables pertain to all kinds of occurrences; the b) percentages pertain to actual 3-p utterances.²⁷ That is, in the latter case we are concerned with participant-oriented contexts, contexts in which a ranking of entities is of particular interest. Such participant-oriented contexts, because they involve a larger number of entities, are more likely to refer to some entities either mentioned before or obvious from the context. Entities of this sort are readily referred to by means of pronouns, which make it clear to the hearer/reader that we are dealing with a known or obvious entity.

Another reason for the pronoun richness is that in cases where more entities are being talked about we need the grammatical information inherent in pronominal reference to determine not only who's who but what role each entity plays in the event. We have seen that nouns needn't exhibit case morphology in German--and in Spanish and English they in fact never do--nor need they be in a position that signals a degree of participation in English. If the nouns can fail to provide information important in determining participant roles, then it is likely that speaker/writers will rely on pronouns to convey the necessary facts whenever possible.

And we see that they do so especially in 3-p situations: an event with a higher number of participants is more prone to express these participants pronominally

(the rise = 14% for Spanish, 16% for German, 13% for English).

In order to answer our second question, we must look for differential behavior in the different languages. We have seen that Spanish shows a tremendous upsurge in pronouns from Table 23a to 23b, whereas German and English exhibit less of a difference. In order to understand these facts more clearly, we will examine the distribution of subcategories of personal pronouns: focus and non-focus pronouns (or high and non-high message participants).

Focus pronouns

From the data in Chapter 3 (Table 2) we can see that the overall distribution of focus personal pronouns per total mentioned focus entities is as follows:

TABLE 24a

FOCUS PRONOUNS / TOTAL FOCUS ENTITIES (3rd PERSON ONLY)
(ONE CHAPTER OF EACH TEXT, ALL OCCURRENCES)

Spanish	38/525 = 7%	focus pronouns / total focus entities
German	288/801 = 36%	focus pronouns / total focus entities
English	367/812 = 45%	focus pronouns / total focus entities

A detailed comparison of focus pronouns to total focus entities in 3-participant situations yields the following distribution:

TABLE 24b

FOCUS PRONOUNS / TOTAL FOCUS ENTITIES (3rd PERSON ONLY)
(TWO CHAPTERS OF EACH TEXT, 3-p OCCURRENCES ONLY)

	S				G				E			
	Pers. Pro.	Nouns + Dem.	% Pers. Pro.		Pers. Pro.	Nouns + Dem.	% Pers. Pro.		Pers. Pro.	Nouns + Dem.	% Pers. Pro.	
AC	1	18 + 6	4		4	4 + 4	33		1	2 + 0	33	
GM	0	14 + 2	0		5	10 + 2	29		2	9 + 0	18	
GG	1	16 + 8	4		8	11 + 8	30		7	5 + 3	47	
Tot.	2	64	3		17	39	30		10	19	34	

The percentage distributions for 3-participant situations are thus:

Spanish $2/66 = 3\%$ focus pronouns / total focus entities
in 3-p

German $17/56 = 30\%$ focus pronouns / total focus entities
in 3-p

English $10/29 = 34\%$ focus pronouns / total focus entities
in 3-p

Although we observed an overall rise in pronoun percentages going from all occurrences to 3-p situations (Table 23a → 23b), we see here that focus pronouns did not contribute to this rise. As a matter of fact focus pronouns fall for all the languages going from Table 24a to 24b. Why this should be so is not obvious from the focus pronoun distribution or the nature of focus pronouns alone. When we take into

account the tremendous rise in non-focus pronouns that must counteract the focus pronoun drop in order to give us the general increase we observed in Table 23b, however, then we are on the way to an explanation.

For despite the fact that we expect pronouns to be more frequent in 3-p situations, we do not expect all references to entities to be pronouns. That would be too much complexity at once. The pronouns provide grammatical information that helps a) determine the referent and b) infer his role in the event. If we had to determine each referent as it comes up in an utterance, we would have a great deal of difficulty following the discourse. Imagine a text full of utterances like

(87) Er zeigte es uns. 'He showed it to us.'

We therefore expect an interspersion of nouns and pronouns for a balanced communicative event. So, if there are a great many more pronouns appearing as references to non-focus entities in 3-p situations--and we will see that there are--then we can plausibly expect the number of focus pronouns to go down. And we saw in Table 24b that they do.

Non-focus pronouns

We have now been led to expect an increase in the non-focus pronoun frequency from all-occurrence contexts to 3-p contexts. And we also expect to find among the non-focus pronouns the clue to differential interlinguistic distribution. First the percentages derived from the

figures in Chapter 3 (Table 2):

TABLE 25a

NON-FOCUS PRONOUNS / TOTAL NON-FOCUS ENTITIES
(3rd PERSON ONLY; ONE CHAPTER OF EACH TEXT
ALL OCCURRENCES)

Spanish	160/1863 = 9%	non-focus pronouns / total non-focus entities
German	68/1598 = 4%	non-focus pronouns / total non-focus entities
English	104/1610 = 6%	non-focus pronouns / total non-focus entities

The detailed comparison of the two chapters of each novel, concentrating on 3-participant situations (as in the b tables above), yields the data in Table 25b.

TABLE 25b

NON-FOCUS PRONOUNS / TOTAL NON-FOCUS ENTITIES
(3rd PERSON ONLY; TWO CHAPTERS OF EACH TEXT
3-p OCCURRENCES ONLY)

	S				G				E			
	Pers. Pro.	Nouns + Dem.	% Pers. Pro.		Pers. Pro.	Nouns + Dem.	% Pers. Pro.		Pers. Pro.	Nouns + Dem.	% Pers. Pro.	
AC	24	30 + 1	44		8	13 + 3	33		3	3 + 1	43	
GM	23	29 + 1	43		15	26 + 2	35		11	17 + 1	38	
GG	18	48 + 4	26		15	42 + 1	26		9	28 + 1	24	
Tot.	65	113	37		38	87	30		23	51	31	

The percentage distribution for 3-p situations is:

Spanish 65/178 = 37% non-focus pronouns / total non-focus entities

German 38/125 = 30% non-focus pronouns / total non-focus entities

English 23/ 74 = 31% non-focus pronouns / total non-focus entities

showing a tremendous rise for all languages, but greatest for Spanish, not surprising, given the popularity of le as the expression of MID participant in Spanish.

We mentioned above that speaker/writers are likely to rely on pronouns to convey grammatical information that nouns sometimes fail to convey. This is particularly expectable for Spanish where, for example, the information regarding degree of participation can be provided only by pronouns. While German and English pronouns are included among the signals of the SPt, as well as of other grammatical systems, in Spanish the clitics constitute the whole of grammatical signalling in a number of systems, including the SPt. We would therefore expect the scope restriction in Spanish to prompt Spanish speakers to exploit pronouns to a greater extent in situations with more participants. However, the fact that the entity in focus is so often left unmentioned in Spanish contributes to the lack of focus pronouns we have seen in Table 24a and 24b. Therefore, pronoun exploitation in Spanish concentrates on the non-focus entities, where we have seen a pronounced percentage

rise (28%) in Table 25b.

In English (non-focus pronouns rise 25%) and German (26%) the rises, though also high, fall behind that of the non-focus pronouns in Spanish. Both English and German have other means of conveying the degree of participation: position of or morphology on nouns. (The morphology on English pronouns--the distinction between I : me, he : him, etc.--constitutes redundant information, consistent with the word-order signal. A fronted him, just like a fronted name or noun, lets the hearer know by virtue of its position before the high participant, that its referent is non-high; the oblique morphology is redundantly consistent therewith.)

We thus see that 3-participant contexts include more pronouns and that the extent of pronoun exploitation varies across languages, plausible explanations for both facts being found in the nature of the SPTs as well as in communicative strategies such as reducing the number of focus pronouns as the number of non-focus pronouns goes up.

6.12 Pronoun Cooccurrence

If pronouns are especially likely to occur in 3-participant situations because of the likelihood that at least one of the three entities will be obvious or have been previously mentioned, then we can also entertain the possibility that pronoun combinations will most likely occur here. And indeed we do find examples of cooccurring

pronouns in our data:

Spanish (3 pronouns)

- (88) Nosotros se lo agradecíamos sin aceptar (GG p.31)
'We thanked him without accepting'

German (3 pronouns)

- (89) Jetzt zeige ich es Euch bald von der anderen Seite. (GG p.11)
'Now I'll show it to you from the other side'

English (2 pronouns)

- (90) And you can't give me any further information?
(AC p.8)

These examples contain the highest number of occurring pronouns for each language. We note that although both Spanish and German have 3-pronoun examples, the maximum occurring for English is two. These were HIGH + MID or LOW (never both). It is not usual in English--at least in writing--for both P2 and P3 to be a pronoun. (Ex. 89 could have been expressed in colloquial American English as

- (91) Now I'll show you it from the other side.

--see discussion below--but such a piling on of pronouns is rare in written form.) English speakers tend to avoid the double complexity of two non-focus pronouns plus the word-order signal (derived from the factor form).

The distinctiveness of the positions P2 and P3 and their different meanings are, however, not to be denied for American English speakers. If an utterance like (92a), which appears in the English translation as (92b), were

translated as (92c),

- (92) a. y me los devuelve mañana (GM p.25)
- b. you can...return them [the newspapers]
tomorrow (GM p.13)
- c. you can...return me them tomorrow

the participant rankings could be uniformly interpreted on the basis of the signalling order P2 + P3. It is clear to every English speaker which is the mid and which the low participant. In this example, animacy may be contributing to the certainty, but the interpreting works just as well with two animate entities:

- (93) I sent him her.

Here, too, it is clear, via the meanings of P2 and P3, that him is the receiver, despite the fact that an English speaker would almost never utter this sentence. Almost, but not never, for when the context is appropriate much is possible. And contexts for such sequences do occur. Cf. Bolinger (1967:204), who presents the example of two players choosing up sides for a game:

- (94) I'll give you him, if you'll give me her.

Perfectly acceptable, even in writing, however, is the utterance

- (95) I gave him my daughter (to wife).

We would expect that the same scene, given an appropriate context, e.g. one that had primarily concerned the daughter, then introduced the bridegroom, could be represented by the

non-occurring

(96) I gave the man her.

That is, even if writers tend to avoid expressions with two non-focus pronouns, we would still expect them to be able to refer to either non-focus entity pronominally. However, this appears not to happen if the P1 V P2 P3 signalling order is to be preserved. (That is, (95) is o.k., but not (96).) In the given example (and without preposing for emphasis) the daughter is referred to with a pronoun only if the man or him is expressed in a prepositional phrase following her, thus leaving her in position directly after the verb (= P2/3):

(97) I gave her to him (to the man)

The general non-occurrence in English of two non-focus pronouns in the expression of a single event is a local or ad hoc limitation on what would otherwise be possible with the English SPt, derivable in part from the factor form: Although the English System of Participation was assigned a + in implementation at 5.2 because of the possibility of signalling degree of participation for three entities per utterance, this signalling power, when exercised, gives rise to a perceptual complexity (because of the word-order nature of the signal) not present, for example, in German, where case morphology distinguishes the mid from the low participant. Pronouns also are perceptually complex forms, since they provide the hearer

with clues for finding the referent rather than mentioning him directly. English speakers, not surprisingly, indulge in this double complication extremely infrequently. The limitation of a single non-focus pronoun to the position directly after the verb can also be seen to follow from the complexity of word-order signalling: when word order is the primary clue to meaning, it behooves one to express the items being related via this signal as closely together as possible, unless another communicative purpose is served by having an item appear in proximity to some other. In (98), for example,

(98) I entrusted to my brother her whom I loved.

the prepositional phrase is allowed to occur between verb and pronominal P2/3 because of the perceptual advantage in having her close to the verb love as well as to entrust.

This superseding of normal signalling because of a stronger communicative need also explains (99), where the mid message participant appears preposed to P1.

(99) Him I gave her.

though this sequencing occurs only seldom because the communicative purpose served by preposing for prominence is called for only very rarely.

Prior to an analysis of the pronouns in English, a matter beyond the scope of this study, and with no actual instance of two non-focus pronouns occurring in our corpus, we can only conjecture as to the reasons for English

speakers' reported behavior. It appears that American English speakers avoid referring to an entity pronominally as P3 (signalled low participant), especially if it is animate (cf. non-occurrence of (96)), unless for a specific communicative purpose as in (100), which is explained in a similar manner to (98):

(100) I gave the man her whom I loved.

It appears to be all right under normal conditions to express either the mid or the low participant in the message pronominally and as a signal of the SPt under the following conditions:

- 1) If the pronoun participant is signalled as MID (=P2), the low participant is a noun (=P3), e.g.

(101) He showed us his find. (GG p.14)

- 2) If the low message participant is a pronoun, it is signalled as NON-HIGH (=P2/3), generally appearing after the verb, and the remaining message participant is not signalled to have a particular degree of participation, but is expressed preposed out of position or in a prepositional phrase (in which case it may be preposed to P1 or postposed to P2/3, e.g.

(102) a. To him I gave my heart.

b. He held it out to us. (GG p.24)

The strategy behind this behavior is either

- a) Given that the low message participant contributes least to the activity described by the verb, and given

that pronouns refer to entities that are obvious or already mentioned, i.e., have achieved a certain prominence in the discourse, in situations in which a low participant is to be referred to pronominally, bring that participant closer to the verb in order to make the relationship clear immediately, unless you have a good communicative reason for not doing so, and express the mid participant in some alternative way that does not signal degree of participation.

or

- b) Given that the meanings of the SPt rank participants on a scale of contribution to the event, and given that pronouns refer to entities that can be readily identified, and given also that the 3-participant event constitutes a difficult communicative task when relying on word-order signals, refer pronominally only to those entities (high and mid) making a more significant contribution. This restriction is lifted when one chooses to signal only two of the mentioned participants, because then the communicative task is simplified.

It is likely, however, that both a) and b) are reflexes of a more comprehensive strategy, also occurring in German (see below): If a low message participant is to be referred to pronominally, there is a conflict: an entity playing a less significant role in the event (contributing least or least potent) is nevertheless sufficiently prominent in the

whether MID is a pronoun or not, thereby warning the hearer that an unusual situation must be faced, i.e., that an entity playing a relatively insignificant role in the event is nevertheless prominent enough to merit pronominal reference. In addition, this shift from the "normal" word order in German serves to bring the LOW participant closer to the verb, thus underlining the polar relationships (HIGH + V + LOW) as was done in English in the situation with a low participant pronoun. The appearance of the accusative pronoun before a dative thus signals a more difficult inference to the German hearer and at the same time provides an aid in that inference.

Spanish speakers do not make use of a change in word order when both non-focus participants are pronouns, which derives from the fact that the SPt signal LOW in combination with a pronoun does not give rise to unusual complexity. In Spanish the only way to signal LOW is with a pronoun. Spanish speakers nevertheless do avoid the most natural expression of two non-focus third person pronouns, i.e., le lo. The reasons for this are detailed in García 1975:410-416, but in summary they may be given as

- 1) inferential complexity (deriving from the number of participants, the presence of perceptually complex le plus immediate juxtaposition of le with another clitic)

and

- 2) overkill (the meaning of le being unnecessarily explicit).

The Spanish hearer is used to inferring the degree of participation of the non-signalled participants and so prefers the practised inference of MID participant from se in the presence of a signalled LOW (an additional non-focus participant cannot be anything but a mid participant in this case) rather than to be led into believing that an unusually complex inference was required (which is what the presence of le would have indicated).

We thus have opposite strategies in Spanish vis à vis English and German. In the former, two SPt signals are avoided because they would point to a non-existent complex inference, and a less explicit pronoun is used instead of the le (when the mid participant is first or second person, the pronoun is already less explicit, not being a member of the SPt). In the latter languages we have strategies that do point to a difficult inference when two non-focus entities are to be pronominally referred to: in German there is a shift in word order, moving the low pronoun ahead of the mid; in English the expression of both non-focus entities as pronouns tends to be avoided, most generally via the prepositional phrase or by non-mention of one of the participants.

The above discussion pertains to American English (although our English original text was written by a

British English speaker) which retains for the pronouns the signals of the SPt. There appear to be differences between the two varieties of English when it comes to double non-focus pronoun production. These differences are not reflected in our data--i.e., the English corpus does not contain any double non-focus pronouns nor any pronoun utterances that would not also occur in American English--but we discuss them here for the sake of completeness and because they are suggestive of a dialectal difference between British and American English that has to do with the implementation factor, the form factor, and ultimately even with the signals and meanings of the SPt.

Although a number of British English speakers have assured us that it is possible in their speech to say

(106) I gave it you.

the grammar books are surprisingly silent on the subject of two non-high (non-focus) pronouns. And the few references we have found contradict each other. Curme (1922: 97-98) described the order dative pronoun + accusative pronoun as "rather uncommon" since the word order "dative of a personal pronoun after accusative of a personal pronoun has become fixed here [U.S.A.] now usually with the modern dative form [to + pronoun] ". England, says Curme, very often still has the "simple dative":

(107) Show it me.

Lamprecht (1970:340) describes the British English

preference as indirect object before direct object, also for pronouns:

(108) I'll show you it.

(109) He gave me it.

(110) My father bought me them.

citing F. T. Wood in English Language Teaching XIV (1960: 85). Wood, in answer to a reader's query to the Question Box, wrote:

(111) "I'll show it you.

is heard in some parts of the country, but I do not think many speakers of Standard English would use it." After ascribing formal correctness to

(112) I'll show it to you.

he stated his certainty that most English people would say (in the context mentioned by the reader: teacher in classroom) (113).

(113) I'll show you it.

Obviously the order of two non-high pronouns is not a point well established among English grammarians.²⁸ It strikes us that the few examples we could find in print all involve one animate and one inanimate pronoun, i.e., are cases where it is clear from animacy factors who is mid and what is low in the event of giving, showing, buying, etc.²⁹

It may well be that in these colloquial utterances British English speakers (and--if we are to believe

Galinsky--American English speakers as well) run the interpretation on inference alone, and that in the event that there are two non-high pronouns, one animate and one inanimate, the SPt is suspended, the order then not being a signal of degree of participation.³⁰ This would allow both Wood's

(114) If you're interested, I'll show it you.

and

(115) Bring me it. (with bring stressed)

both of which he deemed natural in appropriate contexts, and both of which yield only a single, obvious interpretation as to the relative degree of participation of the non-high participants.

6.13 Effects of form, scope and implementation--and discourse factors--on pronouns in translation

In the previous section we saw that particular strategies based in part on the factors form, scope and implementation result in different cooccurrence likelihoods for English, Spanish and German pronouns. This, of course, has an effect on how pronouns are translated as well.

In particular, the fact that two non-focus pronouns almost never cooccur in written English (in our data there are no such examples) affects translation of certain instances of non-focus pronouns occurring in German and Spanish. E.g.

- (116) a. y me los devuelve mañana. (GM p.25)
 'and-(to)me-them-return-tomorrow'

actually gets translated as

- (116) b. and return them tomorrow. (GM p.13)

with the me being sacrificed.

The same occurs in translation from German to English, where examples are found in our corpus that sacrifice now the mid and now the low participant in translation, depending on discourse factors. The following translations occurred on the same page, not far apart:

- (117) a. Und dann zeigte Mahlke es uns. (GG p.8)

↓

- b. And then Mahlke showed us. (GG p.9)

- (118) a. Mahlke bewies es uns. (GG p.8)

↓

- b. Mahlke proved it. (GG p.9)

In (117b) the low participant is sacrificed. One participant had to go in English and since es in this example does not really have a reference in the world (although in the same utterance in isolation it may well refer to a specific object, here it does not), it is easily dispensed with by the English translator.

A few lines farther along, Grass wrote (118a). Here the referent of es exists, although it does not have physical substance. It is that "the thing still worked" and that is what Mahlke proved. In this case, the English translation did not sacrifice the low participant, but deleted reference to uns 'us', producing (118b). This

sacrifice was perhaps made easier by the preceding us in (120 b) and an occurring us farther on in the utterance:

- (119) Mahlke proved it, squirting streams of foam
to show us how you extinguish with foam.

although that us has another pronoun uns in the original as its source.

In addition to the relative substantiality of the pronoun referent, we would argue, discourse factors also play a role in deciding which participant is to be sacrificed. We present the entire passage in which the above examples appeared, so that the feel of the context can demonstrate the naturalness of the omission of the mid participant in English, since the translator could after all have written: Mahlke proved it to us. The text reads as follows:

- (120) a. Und dann zeigte Mahlke es uns. Er tauchte
mehrmals kurz nacheinander mit seinem
Schraubenzieher und brachte hoch, was sich
nach zwei- oder dreimaligem Tauchen ab-
schrauben liess: Deckel, Verschalungsteile,
ein Stück von der Lichtmaschine, fand unten
ein Seil, seilte mit dem brüchigen Drussel
einen waschechten Minimax aus dem Vorschiff
hoch; und das Ding--deutsches Fabrikat übrige-
gens--war noch brauchbar; Mahlke bewies es
uns, löschte mit Schaum, zeigte uns, wie man
mit Schaum löscht, löschte mit Schaum die
glasgrüne See--und stand vom ersten Tag an
ganz gross da. (GG p.8)

And in English:

- b. And then Mahlke showed us. He dived several times in quick succession with his screw-driver and brought up whatever he was able to unscrew: lids, pieces of sheathing, a part of the generator; he found a rope, and with the help of the broken-down winch hoisted up a genuine fire extinguisher from the fo'c'sle. The thing--made in Germany, I might add--still worked; Mahlke proved it, squirting streams of foam to show us how you extinguish with foam, extinguishing the glass-green sea--from the very first day he was an ace. (GG p.9)

In order to maintain the feel of the original, the translator needed to convey emphasis on the verb in both (117) and (118): zeigen and beweisen are the crux of those utterances. The author saw and expressed both (117) and (118) as 3-participant utterances with pronominal non-high participants. This the English translator could have done --given the general non-occurrence of two non-focus pronouns--only by expressing one of the pronouns (mid) in a prepositional phrase: to us. To us is however not identical with a signalled MID pronoun like us in

(121) He showed us the trick.

It contains the preposition to, which contributes its meaning (whatever that turns out to be) to the utterance as well. The occurrence of a prepositional phrase in either (117) or (118) would have contributed to the message a kind of emphasis, contrast or importance of us in the context--which is not there in the German text.³¹

The translator therefore had to sacrifice one of the pronouns in each utterance. That he chose a different

one in each instance can be attributed to discourse factors and to the chosen verbs. In the first example (117), the English verb chosen, show, would have allowed either it or us as its P 2/3. The translator chose us, setting us up as observers of the entire following scene, all of which constitutes the es 'it' of (117):

(117) Und dann zeigte Mahlke es uns.

Because us is set up as observer in this early utterance, it may be omitted later on, when the translator is faced with a similar choice between two non-high participants expressed as pronouns.

In the second instance the choice of prove, the obvious translation of beweisen, precludes the occurrence of us as its P 2/3. Here, in effect, the translator had no choice. He could, of course, have chosen a different verb (although only demonstrate and show come to mind--the former has the same restriction as prove, and the latter was used just a few lines before), or he could have written

(122) He proved it to us.

But that would have added undue weight to the us--as though doubt had been expressed. Neither alternative is ideal. The best results are obtained when the mid pronoun is omitted. And the fact that the translator can leave it out here without losing the flavor of the original is due to his having set up the scene in (117b) where he included us as observer, a scene element the reader is aware of all

through this passage.

Other ways of dealing with the question of avoiding two non-focus pronouns include

- a) realizing one as a noun, demonstrative, or non-personal pronoun
- b) expressing one in a prepositional phrase, or
- c) increasing the number of occurrences, thus allowing wider distribution of the participants.

The following example makes use of a) and c):

- (123) a. Jetzt zeige ich es Euch bald von der anderen
HIGH LOW mid
Seite. (GG p.11)
- b. I'll soon have something more to show you.
P1 P 2/3 P 2/3
(GG p.13)

That is, English has two occurrences: have + show, whereas German expresses only zeigen 'show'. By increasing the occurrences, the translator makes it possible to hang two participants (ich → I and es → something more) on one verb and the remaining participant (Euch → you) on the other.³²

We thus see the effects of the factors characterizing the SPTs in ways that sometimes extend beyond those systems and that are influenced by other considerations, e.g., discourse and number of occurrences, as well.³³ There is, therefore, an interaction to be seen among grammatical facts, discourse considerations and communicative strategies in the various aspects of originals and trans-

lations we have examined in this chapter. But most of the comparisons clearly reflect the role played in the interaction by the characteristics of the signal side of the signal-meaning combinations that make up the SPts.

Where restrictions are placed on the language user by a grammatical system (e.g. the restriction of implementation on Spanish speakers or that of word order on English speakers), he finds alternative ways of reaching the communicative goal, developing language-specific strategies of inference and communication.

Notes to Chapter 6

1. Whether Vera's back is to be considered a message participant will depend on whether passed down is to be considered an occurrence or not. We have not had to make such a general decision, as very few such cases occurred in 3-participant utterances. One instance that did occur, also with low frequency, and which we evaluated ad hoc as an occurrence (and not as occurrence + preposition), was provide with, as in
 - i. It provided you, Joachim Mahlke, with a goal in life. (GG p.29)
2. Loss of a participant by translation of an original message participant into a prepositional phrase can, of course, convey more specific information (via the meaning of the preposition) about the relationship of the entity and the verb than did the participant ranking. These cases, however, constitute a very small percentage of participant loss. There was a total of 7 (out of 66 cases of 3p → ~3p) in our data:
 - i.a) no le cuente la situación (GM p.9)
 - b) he won't tell him about the situation (GM p.5)
 - ii.a) Pero la insistencia de los bronces rotos le recordó el entierro. (GM p.8)
 - b) But the insistence of the cracked bells reminded him about the funeral. (GM p.4)
 - c) Doch die Beharrlichkeit der zersprungenen Bronzeglocken mahnten (SIC) ihn an die Beerdigung. (GM p.7)
 - iii.a) Du hast ihm doch damals die Katze... (GG p.22)
 - b) You're the one that stuck the cat on him (GG p.26)
 - iv.a) Frösteln...nahm seiner Haut die Glätte (GG p.6)
 - b) shivers...took the smoothness from his skin (GG p.6)
 - v.a) qué le han visto a ese gallo tan feo (GM p.20)
 - b) what they see in such an ugly rooster (GM p.10)
 - c) was sie an dem hässlichen Hahn finden (GM p.18)

some of which may be instances of verbs whose meaning does not typically suggest a 3-p involvement (e.g. see). In addition, two prepositional phrases resulted from an active → passive translation:

 - vi.a) Sein Vater hatte ihm den...Vogel hinterlassen (GG p.17)

b) The owl had been left him by his father
(GG p.21)

c) El ave...era regalo de su padre (GG p.27)
The great majority of the instances of 3p → ~3p
are, however, instances of a decrease in specificity.

3. Three of the German narrations for Narrative A contained no instances of max p, a factor that may have contributed--along with a relatively low incidence of 3-entity situations in the English narratives (29 vs. 49 for German)--to the non-conformity of Narrative A to this hierarchy.
4. Only 7 out of 48 potential 3-p messages in the AC chapters, for example, occur in the English original. The total of 48 is a combination of 38 (E→S) utterances and 17 (E→G) utterances (cf. Table 16; for E→G, N=17; for E→S, N=38), of which 7 overlap. That is, there are 48 utterances which convey 3-p messages in at least one of the languages, 7 of these convey 3-p messages in both the languages into which English is translated. The 7 3-p messages in English consist of 5 instances where all three languages have 3-p + one instance of E 3-p → G 3-p and one instance of E 3-p → S 3-p. In all other cases, the L₂ writers created 3-p messages, and the Spanish writer did so extensively, 31 times compared to 10 for German. Note also that there is not a single utterance conveying a 3-p message in English that doesn't also convey a 3-p message in at least one of the translation targets as well. This, too, fits in well with the hierarchy discussed in the text.
5. Since German and English speaker/writers so often omit the addressee, its presence can be used to convey additional messages (in addition to mid participant), e.g. emphasis or contrastive stress (when spoken). Spanish speaker/writers can convey these messages, e.g. by adding a prepositional a-phrase to the clitic le:
i. le dijo a él 'he said it to him'
a possibility not available to speakers of English and German. I.e., the latter do not reinforce or further specify a pronominal mid participant by adding a simple to or zu phrase. This may be part of the reason speakers of German and English have developed the habit of not mentioning the addressee in obvious instances: that way they can reserve mention of a mid participant for conveying additional messages.
6. The Grass text contains fewer direct quotes; most of the interpersonal action is incorporated into the narrative.

7. The expressed mid participant is in Spanish also often a "dative of interest", found less frequently in German and not at all in our data in English. Cf. discussion at 6.6.
8. It would be interesting to know whether, when increasing from a 1-p situation in the original to a 2-p situation in the Spanish translation, this tendency for creating mid participants is upheld. We suspect not, for in 2-p cases it is reasonable for the speaker to think of the extremes of the scale, cf. pp. 225-226 below.
9. The difference in interpretation of the messages here results from the coexistence in English of good and well and the coexistence in German of Gutes and gut, the latter being the modifiers respectively, while the former are more prone to entity status. This difference in interpretation is also supported by the behavior of good and gut in other utterances:
 - i. He tried always to do good.
Er versuchte, immer Gutes zu tun.
 - ii. Er tanzt gut. He dances well.
 - iii. He tried always to dance well.
 - iv. For the good of mankind...
10. These generalizations apply only to the languages in which these participants are distinct--in English, participants become distinct only by the appearance of additional p. (A single p is nondistinct as to high/mid/low; when there are 2-p, the non-high participant is nondistinct as to mid/low in English.) However, here too it is generally the mid participant that is added in the case of $\sim 3\text{-p} \rightarrow 3\text{-p}$, and that then provides the distinction between mid and low.
11. The three examples are:
 - i. Old military gentleman--real Army look about him.
→ Al viejo militar se le notaba en seguida la carrera. (AC p.28)
 - ii. Just a list of the ladies and gentlemen... →
Solo me han dado una lista de las personas... (AC p.31)
 - iii. ...together with their recommendation. → y me la recomienda calurosamente. (AC p.8)
12. In translation into English, of course, all 2-participant utterances become non-specific as to mid/low. However, even here it is the mid participant in the original languages that usually fails to be mentioned in the translation.

13. Again, we point out that the 2-participant events in English involve high and non-high, but we can easily assign mid roles on the basis of the parallel with the source language (we can do so also on the basis of the kind of entity that we could add to make a 3-participant event).
14. Curme defines (pp.501-502) "dative of interest" as denoting "the person to whose advantage or disadvantage the action results," calling this a material advantage or disadvantage, in contrast to the emotional interest indicated by the "ethical dative".
15. Although the activity of giving implies these three entities, the speaker may still choose to omit one or another of them:
 - i. We gave at the office.
 - ii. Gave him a dime.
16. Because our comparisons are binary--original : translation a and original : translation b--we have two sets of figures for each original. That is, different utterances can be involved depending on which language is the target, as a result of our stipulation that either original or target must have a 3-p utterance.

An example should make this clear. The English utterance

i. He had said it in a casual way. (AC p.8)
 itself a 2-p (he, it) utterance, is not included in the English → German set of examples, because the German translation has only a 1-p utterance:

ii. Dies war so beiläufig gesagt worden... (AC p.8)
 This pair is consequently outside our E → G data base because neither the original nor the translation had a 3-p utterance. The Spanish translation of (i), however, is a 3-p utterance:

iii. "-----" le había dicho entonces con gesto indiferente. (AC p.10)

and consequently the E → S pair (i. → iii.) is included in the data base for those two languages. The he, it show up in the English data (relative to the Spanish translation) and le shows up in the Spanish data. The he, it are not included in the English data relative to the German translation and neither is dies included in the German data. Our totals represent the combined figures.

17. The actual English translation is a more literal translation of the Spanish original.

18. E.g. On the basis of its lexical content--the activity it describes--we feel that the German hinhalten is more of a giving (3-p) verb than its Spanish translation invitar in the following pair:
- i. Er hielt uns auffordernd die Büchse hin.
(GG p.20)
'he held out the can to us, offering (it)'
 - ii. nos invitaba a probar de ella (GG p.20)
'he invited us to taste of it'
- Consequently we would expect it to occur with three participants while we are not surprised to find invitar occurring with two.
19. There is in fact some question as to whether some of these entities are still separable from the occurrence: dar vuelta, for example, or dar cuerda, or whether these oughtn't to be considered an occurrence only (rather than occurrence + entity).
20. Cf. examples from Bausch above. Curme (1922:22) suggests "a marked tendency in English to clothe the chief idea of the predicate in the form of a noun," but his examples again involve two rather than three participants
- i. We had a quiet smoke
instead of
 - ii. We smoked quietly.
21. In both instances, two occurrences in English occur as a single occurrence in German:
- i. They wouldn't thank you
for telling them so. (AC p.12)
 - ii. Wenn man ihnen das sagen wollte! (AC p.12)
 - iii. I shall be glad
to pay you the salary (AC p.6)
 - iv. Ich werde Ihnen gerne das verlangte Salär
zahlen. (AC p.6)
22. Includes two cases where one occurrence in German → two occurrences in English:
- i. Jetzt zeige ich es Euch bald von der anderen Seite. (GG p.11)
 - ii. I'll soon have something more
to show you. (GG p.13)
 - iii. die einst dem Reck Halt und Sicherheit gegeben
hatten. (GG p.13)
 - iv. which had formerly served
to hold the horizontal bar firmly in place.
(GG p.16)

23. These are all instances originating in German. The remaining 5 utterances (from among the total of 9 resulting from 4 G $\rightarrow$ S plus 5 G $\rightarrow$ E) are cases of a 3-p occurrence going to a non-finite event with only a single non-focus participant, e.g.
 - i. als wir ihm Wunderdinge von dem abgesoffenen Minensuchboot erzählten (GG p.7)
 - ii. telling fantastic stories about the sunken mine sweeper (GG p.8)
 - iii. contando maravillas del dragaminas hundido (GG p.11).
24. This is the only instance of a non-finite 3-p situation derived from a 2-participant original (cf. also Note 19).
25. Here recall such examples from Chapter 3 as
 - i. [^]Blickte den Oberst an.
'Looked at the colonel.'
26. The figures in this section are limited to third person reference since it is for the third person that the choice between pronoun and noun is pertinent.
27. The 3-p occurrences were determined for each language separately. We therefore do not adhere in this comparison to the binary relationship of original : translation a, etc. that we described above.
28. Galinsky (1952) even contradicts himself, indicating in otherwise identical charts on pp. 176 and 296 that it is acceptable American English to say
 - i. Give me it. (though this occurs more rarely than Give it to me) = p.176
 - and that it is acceptable American English to say
 - ii. Give it me. (though this occurs more rarely than Give it to me) = p.296.
29. The animacy-inanimacy point is also made by Littlejohn (1969:71-72, 205) and Fries (discussed in Littlejohn 1969:92).
30. This would presuppose the development of an inferential expertise like that developed by Spanish speakers. One way in which such inferential expertise could be developed would be the spread of nondiscriminating word order, such as was suggested in the text. If both it you and you it occurred regularly, for example, as the order of two non-focus pronouns, the English speaker would no longer be able to rely on word order to signal meanings. He would have to use a to-phrase when it was necessary to disambiguate and otherwise

infer the roles of the entities from animacy vs. inanimacy. If such a development should take place, we would predict a change in distribution of English message participants upwards in percentages in the direction of where Spanish lies now.

31. Lamprecht (1970:339) also points to the "stärkere Betonung" of the "indirect object" (mid participant) that results from positioning it in a to-phrase after the "direct object" (low participant). This is reminiscent of C. T. Onions' idea of "phonetic value, the lighter of the two usually coming first" (cited in Littlejohn 1969:71).
32. It is surely not insignificant that the latter is a non-finite verb. After all, it was needed to take care of only a single participant.
33. This strategy of occurrence multiplication in order to reduce the number of participants expressed with any one particular occurrence may well account for--at least a part of--the excess occurrences over the original text in the English translations:

GG/	German	:	5032 occurrences
	English	:	5516 occurrences
GM/	Spanish	:	3052 occurrences
	English	:	3074 occurrences

The difference is particularly pronounced, we see, in the translation from German, a language capable of expressing 3-P, which Spanish, of course, is not.

Something akin to this strategy in reverse (i.e., a German tendency to reduce occurrences because of the readiness to hang more Ps on each) may also account for the decrease in occurrences in the German translation of the English original.

AC/	English	:	9259 occurrences
	German	:	8680 occurrences.

(Cf. also Notes 21 and 22.)

Chapter 7

Possible Extensions

7.0

One of the features of many an empirical study--and this one is no exception--is that one encounters new problems and raises new questions along the way. Before we present the conclusions reached in our investigation, we would like to present briefly some of the ideas suggested by our work but not explored in it. We will divide these into three categories:

- 1) ideas pertaining to the grammatical systems under study
- 2) ideas pertaining to translation, and
- 3) ideas pertaining to language learning and pedagogy of the SPTs.

7.1 To the SPTs

In our study we excluded double mention of a single participant--the participant seen in more than one role--even if that double mention produced a situation in which three distinct roles were suggested, because we had limited our investigation to 3-entity situations. It is of course possible that double mention plays a role in interlanguage differences having to do with the SPTs.

In 4.5 the distinction between an event involving three participants and one involving three roles is brought up. Because of the nature of the SPTs, there is an interlanguage difference here. That is, the forms the languages use to refer to double-mentioned entities differ in their relatedness to participation. In Spanish, se (for third person) is non-distinct with respect to focus and participation; me and te (first and second person), indicating non-focus, imply non-high. In German, sich (though appearing by virtue of its form to be an accusative and thus equalling low) is also non-distinct as to non-high degree of participation:

- (1) Ich kaufte mir das Buch.
Dat.
'I bought myself the book.'
- (2) Er kaufte sich das Buch.
'He bought himself the book.'
- (3) Ich widmete mich meinem Studium.
Acc.
'I devoted myself to my studies.'
- (4) Er widmete sich seinem Studium.
'He devoted himself to his studies.'

English, however, because of its word-order signal, is in a different situation. In

- (5) I bought myself the book.

and

- (6) I bought the book myself.

there is clearly a difference in the role myself plays in each example. The hearer must infer whether myself

constitutes an SPt signal in the utterance or not. In (5) myself can be interpreted as a mid participant in order to get the benefactive of "dative of interest" role across. It is in P2 position and that interpretation establishes a coherent bond between meaning and message.

Not so in (6), however. Here myself is in P3 position, but can in no way be interpreted as low participant relative to the act of buying and the (in that case) P2 (mid) book. This is a case of book equalling P 2/3; myself does not signal a degree of participation. It reinforces--emphasizes--the high participant. Why myself works this way is not clear. It is at any rate not explainable from the signals and meanings of the English SPt alone.

The major potential extension of the interlinguistic study of the SPts is, however, the examination of the three languages with respect to 2-entity and 1-entity situations, as well as 2-p and 1-p in the message and 2-P and 1-P in grammatical signalling. Because it is primarily in fewer than 3-p situations that the SPts can be exploited for commenting on the scene--in 3-p situations they are primarily used for ranking entities--this is an area where a great deal of variety in interpretation is possible. Having found such interesting diversity in the 3-e cases--the diversity being nevertheless congruent with the SPts and certain communicative strategies--we can expect an

investigation of the non-maximum situations to provide additional insights into the fine-grained interaction between the SPTs and such strategies.¹

We discussed at 6.8 through 6.10 some of the interaction of the SPTs with the Systems of Occurrence (verbs), in particular the question of specificity (in the verb or in the entities) and that of whether there is a skewing with respect to finiteness in the verb and particular SPTs.

The data presented there suggest that this is an area worthy of further exploration: to what extent do strategies deriving from the SPTs interact with strategies emerging from the verb systems? We have seen, e.g.

(Chapter 1, Note 16) that German speakers are disinclined to use the "gerund" -end, even in translation of English -ing. Their ways of handling this translation task--and apparently a number of other non-finite instances in the source languages--is to use a finite verb. Perhaps because German is "good at" handling participants?

English speakers, on the other hand, try to maximize participles and gerunds among non-finites and tend to use more non-finites than German overall. Because of their desire to reduce participant numbers? Spanish speakers are partial to non-finites, and especially to infinitives. Why? A glance at the data in Appendix 3 will show that these tendencies are consistent from text

to text. How are they related to the characteristics of the SPts and the strategies derived therefrom?

In addition to the relative frequency of expressing events in finite or non-finite terms from language to language--and the implications thereof for the participant systems--there is another quantitative question that comes to mind relative to the verbs and the SPts: To what extent do occurrences appear as participants in other occurrences?

- (7) Doing the jitterbug gave him a headache.
- (8) Her disturbed breathing made her put her questions as assertions. (GM p.4)²
- (9) Have a doctor examine you. (GM p.10)
- (10) You'll tell them to take it away. (GM p.30)
- (11) Painting the house gave him a feeling of satisfaction.

To the extent that a language has the means of converting an occurrence into an entity and that occurrence can still have entities attached to it (e.g. jitterbug, questions, you, it, the house in the above examples), one can break up an event into a number of linked occurrences. This would mean that not all the entities need be seen as involved in the same event, and this might well constitute a perceptual simplification in the conveying of messages. Cf. Ex. (12) in which an original Spanish single (3-p) occurrence negar 'deny' was expressed as a double occurrence (2-p + infinitive with 2-p) in English:

- (12) a. Le niego rotundamente la oportunidad
(de envenenarme) (GM p.31)
- b. I absolutely refuse to give you the chance
(to poison me) (GM p.17)

That is, whereas in Spanish I (verb ending), you (le) and the chance (la oportunidad) are all seen as involved in the event of denying (and were counted as one 3-p utterance), in English we have two events refuse + give that take care of the three entities between them:

refuse : I + to give you the chance

give : you + the chance

Thus by having events participate in other events we can multiply the number of occurrences and simplify the communicative load of each one. It may even be the case that if events are being made into participants (in other events) they themselves will have relatively fewer involved participants.

Another question to be solved--for English at least, but possibly also for the other languages--is how to treat utterances like the following:

(13) But I wouldn't trust him a yard. (AC p.85)

(14) Ich führte ihn ein paar Schritte weiter.
(GG p.184)

(15) It took him 8 years. (GM p.22)

In the current study we have ruled out temporal and locative phrases from consideration as participants--and this seems justified in light of the nature (their contribution

to the message) of the phrases that appeared in 3-entity situations (cf. 13-15 for typical examples), despite their deceptive appearance (P3 position or accusative morphology). However, there are cases where temporal or locative expressions must be seen as contributing to the message, as in

- (16) The judge gave him 3 years.
- (17) That caper earned me 6 months.
- (18) \$10,000 will buy you 2 weeks.
- (19) Give him an inch and...

In situations involving fewer participants, the issue is the same:

- (20) Take 5 (minutes).
- (21) I lost a year of my life.
- (22) She lost 2 inches off her waist.

These are cases in which the hearer must decide, on the basis of lexical content whether or not the referent of the expression is an entity participating in the event. Precisely this decision: participant or not, is in some cases crucial to the interpretation of an utterance. We recall Jespersen's example (1924:103) of the joke based on the ambiguity of:

- (23) Job cursed the day that he was born.

Whether the day that he was born is a participant in the act of cursing or not is relatively easy to establish if one has heard (23) spoken. The presence or absence of a

pause following cursed will disambiguate the status of day: without a pause, day is a participant; with a pause, it is a temporal modifier. In writing, however, there are no pauses--they too must be inferred. (Another possible extension: Are there differences in distribution depending on whether the languages are being spoken and heard or written and read? We saw that this is apparently so for pronoun usage--does it extend to other areas relative to the SPTs?)

The difficulty involved in deciding whether elements of an utterance are to be taken (or not) as references to participants in an event is particularly acute with the English SPT. We broached this subject in our discussion of the increased communicative complexity of the word-order signal vis à vis the morphological signals, where we pointed out that the English listener must--before he begins to interpret the roles of entities in an utterance--make certain judgments about whether a particular entity is a participant in the message and consequently whether its placement is a grammatical signal or not.

This is a basic problem in English and in any language that operates with word-order signals. Since the stream of speech or writing is necessarily temporal or linear, it is quite possible for the linear sequencing not to be signalling a particular meaning--there may simply

not happen to be any other way of placing the items.

That is, whereas in German it is perfectly obvious when one has a signalled dative, for example--and indisputable once one has accepted the SPt as a grammatical system in German that that dative is a signal of MID participation--in English even acceptance of the SPt with its word-order signals does not automatically guarantee recognition of a particular instance of an entity's occurring as a particular signal in the SPt.

However, the design of language is such that intelligent inference is required in its use. The precise nature of that inference varies from situation to situation and from language to language, but the contribution of the human factor can be seen in all language use.

7.2 To translation

The detailed examination of these nine texts revealed a number of interesting facts having to do with translation in addition to those we discussed in the preceding chapters. First, those related to our study directly:

One of the prime questions has to do with the translatability of the lexicon. We pointed out (at 6.2) that for 3-participant correlations to exist between languages there must also be a match of lexical reference, not only to the entities, but to the verbs as well. We saw a number of cases in which this verbal lexicon match

was not present--e.g. cases like succeed vs. esperar el éxito--and saw that this had implications for the participant counts.

In lexicon matchability there is, then, an as yet unexplored question directly related to our study: We have found that the different distributions (seen in overall quantification and in individual comparisons) can be explained from the nature of the SPTs and certain communicative strategies, but we do not know, for example, to what extent the differences in distribution are also motivated by non-translatability of the lexicon or by the existence of as yet unexplored strategies in the source language.

The biggest open question with regard to translation is one we could not control for: the difference between a good and a bad translation. We do not know whether the success of relating our comparisons to the SPTs is dependent on having a quality translation available. We would have to find a modern author who had been translated into the same target language by two different translators (one good, the other bad) in order to be able to determine the effects of this factor.

Translation ideas that are not necessarily dependent on (or related to) the SPTs also came up in the course of this study and will be mentioned here briefly. The first thing that was noticeable was that the texts were not

always entirely parallel. That is, the translator sometimes left out occurrences, sometimes added them--not always for determinable reasons.³ This can lead, of course, to a plus or minus in the totals obtained for a text--a fact we have noted in our data chapters and in Appendix 3.

Some of the omissions (or additions) are, however, motivated in an obvious way, and these would be fertile ground for a separate study. The cases we have in mind are those in which there appears in the original an expression that has multiple connotations which are not reproducible with the same lexical item in the translation language (L_2). The prime example of this in the studied texts appears in the English original, the Agatha Christie novel:

This murder mystery is developed around a nursery rhyme (whence the title) that contains a verse having to do with a red herring: "a red herring swallowed one and then there were three" (AC p.24). Now a red herring in English is not only a type of fish; the term is used to convey the message "something that draws attention from the matter or issue at hand (from the use of red herring to distract hunting dogs from the scent)" (American Heritage Dictionary). This double-entendre, however, works only in English. As a great deal of the deciphering of the murder plot has to do with this double connotation of red

herring, the translator is faced with a dilemma. How is it solved? Both the German and the Spanish translator simply omit the passages having to do with the elaboration of this "clue" and how it could have contributed to solving the mystery. There is no getting around a translation of the nursery rhyme, however. That is done by the Spanish translator without mention of the red herring or any fish: "uno de ellos se ahogó" 'one of them drowned' (AC p.33), while in the German translation the herring becomes a shark:

Vier kleine Negerlein
Sahen einen Hai
Einen schlang der Fisch hinab
Da waren's nur noch Drei.

'Four little niggers / saw a shark / one was swallowed
by the fish / and then there were only three.'

But in both cases the translations have lost the play on words intended by Agatha Christie, and which is so important in the development of the story.⁴

Dealing with such idiosyncracies of the languages--and the sociocultural extensions thereof, as e.g. when the Jewish character in the Christie novel who makes all the arrangements, financial and otherwise, for the murderer turns up in the German translation as a Japanese--is the test of the translator's ingenuity. The problem--and the solution--is sometimes motivated by linguistic factors, sometimes by sociocultural ones: the red-herring issue is linguistically derived and solved (by omission); the Jew --

Japanese switch is socioculturally motivated. An interaction of both types of factor can be seen in the following: Vera and Lombard are the last two alive on the island, each is convinced the other is the murderer. In the German translation, Lombard, who is in possession of the only gun, begins at this point to address Vera with the familiar pronoun du 'you'. A page later, when Vera has cleverly gained possession of the gun, Lombard switches back to the polite pronoun Sie 'you'. This exploitation of the familiar pronoun : polite pronoun opposition is not in the original--English does not have the linguistic apparatus for it--but ingeniously reflects the transition of power from Lombard to Vera at that point. The translator has here linguistically reinforced a turn in the narrative by being sensitive to and putting to use the grammatical means at his disposal in the L₂, which are, of course, ultimately derived from the factors of social interaction in German-speaking society.

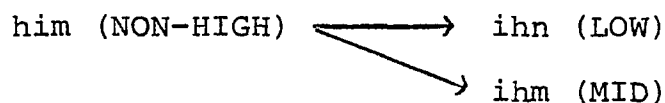
7.3 To language learning and pedagogy of the SPTs

Perhaps one of the most interesting potential extensions of this study is its application to language learning and pedagogy. To the former: here we would need first to observe the production of entity references, message participants and grammatical participants by language learners. This might be done in direct relation to our study by asking language learners to translate passages

of our novel originals and to write narratives based on the same picture sequences as used here. The data thus obtained would provide us with a measure of non-fluent bilingual exploitation of the SPTs. (As a matter of fact, we could also contrast professional vs. non-professional translation in this way.)

What such an investigation might very well show is whether language learners operate with SPTs resembling the one in the target language or more like the one in the source language. Since the meanings are the same for the signals of the L_1 and L_2 systems (with the exception of Spanish, where there is no signal meaning HIGH), the question of acquisition here has to do with a learning of the distributional tendencies of the L_2 . This is a process that implies acquisition of the communicative strategies of target language speakers.

Also part of the learning process would be the development of an awareness of a value difference between MID : LOW and NON-HIGH, whether this difference is systematically motivated for a particular utterance or determined by the scene being described. The English native speaker learning German, for example, has to acquire sensitivity to the different translation equivalents:



and their meanings to be able to correctly express the

following in German:

- (24) a. I'm helping him (NON-HIGH).
 b. Ich helfe ihm (MID).
 (25) a. I'm washing him (NON-HIGH).
 b. Ich wasche ihn (LOW).
 (26) a. I'm washing him (MID) his car (LOW).
 b. Ich wasche ihm (MID) sein Auto (LOW).

So, too, the English speaker learning Spanish must acquire the feel for a system providing for--even forcing--a choice between MID and LOW, especially in 2-entity situations. This necessary choice between MID and LOW signals produces distinct utterances, as in (27) and (28):

- (27) a. Le (MID) sirve.
 b. $\left\{ \begin{array}{c} \text{It} \\ \text{He} \end{array} \right\}$ (HIGH) serves $\left\{ \begin{array}{c} \text{him} \\ \text{her} \end{array} \right\}$ (NON-HIGH).
 (28) a. Lo (LOW) sirve.
 b. He (HIGH) serves him (NON-HIGH).

differing as to whether the entity in focus, signalled by the verb ending, is understood to be animate (28), or understood as either animate or inanimate (27). These messages are conveyable in English not via different NON-HIGH participants, but by expressing a different HIGH/FOCUS entity.

In language pedagogy, these difficulties are still treated in very traditional ways or even ignored. For Spanish, e.g., Bull suggests, although "the speaker of

English must learn to supply more information in Spanish than in English and, as a result, he must learn to react to more symbols and differentiators," (Bull 1965:128), "that to avoid unnecessary confusion the beginning student be taught the classical distinctions, namely to use lo and la for direct object and le for everything else" (1965: 263).

For German, where the problem can be described in terms similar to those Bull uses for Spanish (the English speaker must learn in certain cases to supply more information in German than in English), the teaching of different case uses is typically handled via valences of the verb, e.g.: "The verb in the predicate determines the form which the object of the sentence must take" (Lederer 1969:519), or "Die Verben werden jeweils in der Grundform sowie mit ihren obligatorischen und fakultativen Ergänzungen gebraucht" (Adler/Steffens 1978:16).⁵

The pedagogical references do in any case not go beyond rules of occurrence, such as: "When both a direct object (accusative) and an indirect object (dative) occur in the predicate, the word order is as follows:

- 1) a pronoun object precedes a noun object⁶
- 2) if both objects are pronouns, the direct object precedes
- 3) if both objects are nouns, the indirect object precedes" (DuVal et al 1975:197).

We have seen, however, that if we consider such "rules" of occurrence in the light of the meanings of the SPT--in this case MID vs. LOW--and from the orientation of a linguistic framework based on the communicative and human factors (cf. 1.3), then we can discover strategies that shed light on the reasons behind such "rules" (cf. 6.12). In the present instance it is the inferential difficulty posed by an entity's being prominent enough in the discourse to warrant pronominal reference and yet contributing so little to the occurrence as to be ranked as low participant that is communicated from speaker/writer to hearer/reader by the departure from the more usual word order just in case there is an accusative pronoun mentioned. This raises the question of whether in the pedagogical framework one ought not to take into account such considerations, namely provide the learner not only with "rules" but also with the motivation for them--to help him understand the reasons behind particular language usage. The development of teaching materials along these lines is therefore another attractive possible extension of this study.

Notes to Chapter 7

1. An extension of the investigation to 2-e and 2-p situations would also have to treat the question of "passives", an issue not discussed here because of our restriction to 3-e situations. In those few instances of "passive" 3-e situations occurring in our data, one of the entities is, of course, always removed to a prepositional phrase.
2. Examples 8 and 9 are composites (defined at 4.2).
3. And sometimes the determinable reasons lie outside the strict linguistic domain. As when the translation of Katz und Maus published in Spain (but not the Mexican edition supervised by the same translator) leaves out passages having to do with urination contests and the like.
4. The German translator even lets a character refer to Hai 'shark' at one point as though it was capable of the double-entendre: "Einen Hai--das ist der springende Punkt. Armstrong ist nicht tot...." (AC p.155) 'A shark--that's the point. Armstrong isn't dead.'
5. A glance at a variety of German grammars for foreigners finds this approach repeated over and over: Sprachkurs Deutsch 1, p. 207 + p. 215: "Das Verb dirigiert den Satz." Grammatik der modernen deutschen Umgangssprache, p.62: "Verben können einen bestimmten Kasus...fordern." Cf. also Engel and Schumacher 1976.
6. This rule is given regardless of case and fails to capture the fact that the dative-pronoun-first order is the usual order for any dative-accusative cooccurrence, while the accusative-pronoun-first order is a deviation from the usual sequencing.

Chapter 8

Summary and Conclusions

We set out in this study to compare and contrast Systems of Participation across languages. Our specific aim was to see whether we could explain the distribution of signals of the SPts in the writing produced by speakers of English, German and Spanish in original texts and translations from the nature of the systems at their disposal and from communicative strategies developed by the speakers of the several languages.

In the elaboration of our problem, we posed a general hypothesis and extensions of that hypothesis, which predicted primarily two things: that the interlanguage differences in the distribution of the signals of the Systems of Participation would be explainable in terms of biases deriving from those systems, and that, although the overriding influence on a translation would be from the target language, the influence of the source language and the effects of the systems in L_1 and L_2 on the process would not go unrecognized. We have seen in our data chapters that both of these predictions hold, but discovered along the way that they involved many more fine-grained

distinctions and sometimes a different perspective than we had expected.

We found, for example, that for these SPts, similar if not the same as to both semantic substance and values, the signal side of the signal-meaning correspondence plays a significant role in accounting for differences in distribution across languages. The difference in positive terms, leading to different communicative strategies as well as to differential (quantitative) reliance on the signals and meanings of the SPts to convey participant roles, was thus seen to be an important consideration in comparing the systems in English, German and Spanish.

We furthermore found that we had to deal not only with the signals and meanings directly, but also with extensions derived from these meanings to situations in which the signals were not expressed. So, in addition to signalled participants, we had to concern ourselves also with participation in the message--and ultimately, in order to be able to judge the extent to which participation was communicated in the different languages, we were concerned with entities recognized on the scene as well.

The distribution of participants in the message in 3-entity scenes varies from language to language according to different parameters than does the distribution of grammatical signals of degree of participation. Whereas

the former distribution yielded Spanish as a participant-eager language and English as participant-shy, with German in the middle, the latter distribution showed English (and German) in the lead, with Spanish falling far behind.

When we asked the question in terms of maximum exploitation of the signals of the SPt (that is, exploiting the given SPt to the fullest extent allowed by the system) then Spanish moved back into the lead. This latter fact, of course, follows from severe limitations in the signalling power of the Spanish SPt.

We isolated the factors of form, scope and implementation as significant in the distribution of the signals of the different systems. It was in terms of these factors that we could distinctively and coherently describe the differences in the SPts: these factors can therefore be seen as contributing substantially to the explanation of the distribution differences that were observable.

To the above-mentioned factors must be added the communicative strategies developed by speakers of the several languages, most significantly the strategy of extending the relevance of the meanings of the SPts to situations in which the signals were not present. This extended relevance led, especially among Spanish speakers, to the development of inferential expertise. An equally significant strategy applied by speakers of English is the exploitation of prepositional phrases in order to express directly the relationship to the event of the

entity occurring with the preposition. The former strategy explains why Spanish figures high in the message participant hierarchy; the latter why English figures low in that hierarchy (prepositional phrases generally being excluded from consideration as contributing to participation).

As to the question of influence of source and target languages, we discovered that the translators were indeed guided more by the target than by the source. This influence of the L_2 language on translation was so strong that the expected secondary effect of the L_1 on the translations--that the L_1 would pull the L_2 percentages in the direction of those of the L_1 --was not generally found in our investigation. However, we did discover that there is a direct relationship between source and target: depending on whether the source language was higher or lower on the hierarchy of participant propensity than the target, there was more participant loss or gain in the process of translation. That is, participants tend to be lost in translation from participant-eager languages to participant-shy languages, while they tend to be created in translating from participant-shy to participant-eager languages, the relative positions of the languages on this hierarchy thus reflecting the "promotion" of entities to message participants. It was in this regard, too, that we saw the advantages for a grammar with scalar case meanings:

by recognizing the pivotal role of the mid participant and relating it to speakers' perception of events, we can capture the correlation between the meanings of the system and participant loss or gain in a way that no grammar with absolute meanings can.

An analysis with relative values for the members of the system (SPt) was also found to suggest a possible explanation for a peculiarity of German word order that is generally viewed as an arbitrary "rule"--the routine deviation from the usual (though not binding) dative-accusative order for two non-high participants when the low participant is afforded pronominal mention. The explanation suggested for this phenomenon is a communicative one and can be understood in terms of a conflict-producing inferential difficulty and the resolution of that conflict.

Other detailed observations of biases in favor of particular usages can also be related to the nature of the SPts and to practices derived therefrom on the part of the speakers of the different languages. The problems faced when the communicative task is a difficult one and the solutions devised in order to simplify that task can all be seen to be enmeshed with the factors of form, scope and implementation and the communicative strategies these factors have led the speakers of English, German and Spanish to develop.

In sum, then, we have examined the Systems of Participation of three languages, observed how speakers exploit them in originals and translations, and established that differences in exploitation can be traced to the nature of the systems and to communicative strategies motivated by the nature of the systems. Our work thus lends support, interlinguistically, to the particular analyses. Having taken into account new data, we have been able to relate the role of the SPts in the use of the three languages as source and target in translation to the signals and meanings--and their effects--of the individual Systems of Participation.

Appendix 1 Texts and Translations / Picture sequence sources

A. The novel data are from:

AC = Christie, Agatha. Ten Little Niggers. London: Collins, 1939; Fontana Books, 1963.

_____. Zehn kleine Negerlein. Translated. Bern: Scherz, 16th printing, 1977.

_____. Diez Negritos. Translated by Orestes Llorens. Barcelona: Editorial Molino, 1975.

GM = García Márquez, Gabriel. El coronel no tiene quien le escriba. Colombia: Aguirre Editor, 1961; Barcelona: Plaza y Janes, S. A. Editores, 1976.

_____. Der Oberst hat niemand, der ihm schreibt. Translated by Curt Meyer-Clason. Köln: Verlag Kiepenheuer & Witsch, 1976.

_____. No one writes to the Colonel. Translated by J. S. Bernstein. New York: Harper & Row, 1968; London: Jonathan Cape Ltd., 1971.

GG = Grass, Günter. Danziger Trilogie. Vol. 2: Katz und Maus. Neuwied: Hermann Luchterhand Verlag, 1961, 1974.

_____. Cat and Mouse. Translated by Ralph Manheim. New York: Harcourt, Brace & World, Inc. and London: Martin Secker & Warburg, 1963; Harmondsworth: Penguin Books, Ltd., 1966, reprinted 1976.

_____. El gato y el raton. Translated by Carlos Gerhard. Mexico: Editorial Joaquín Mortiz, 1964; Barcelona: Barral Editores, S. A., 1972.

B. Sources of the picture sequences:

Plauen, E. O. Vater und Sohn. Band 2. Konstanz: Südverlag GmbH, 1949; Ravensburg: Otto Maier Verlag, 1977.

Sempé. Volltreffer. Zürich: Diogenes Verlag AG, 1959; Zürich: Diogenes Taschenbuch, 1975.

Appendix 2 Native speaker narrative task

Questionnaire:

Name (optional) _____

Age _____

Sex _____

Place where you spent your childhood _____

Place where you live now _____

since _____

Native language _____

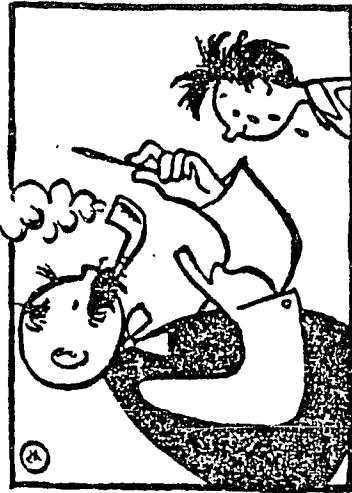
Other languages you know:

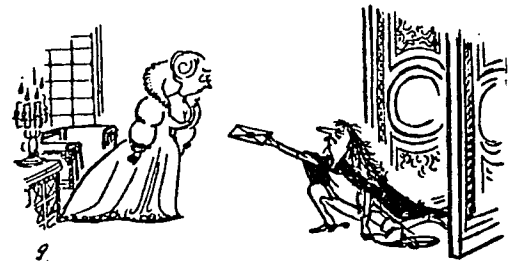
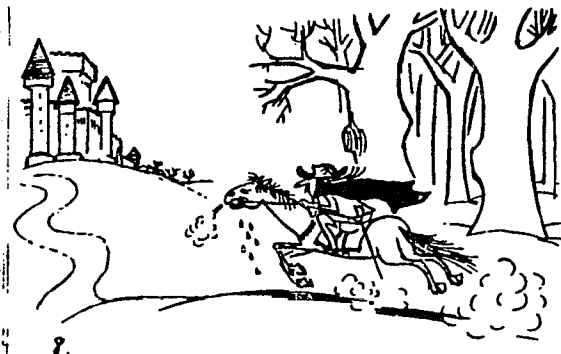
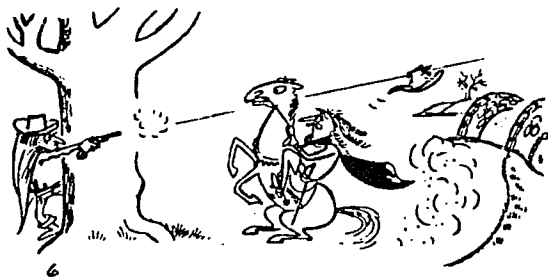
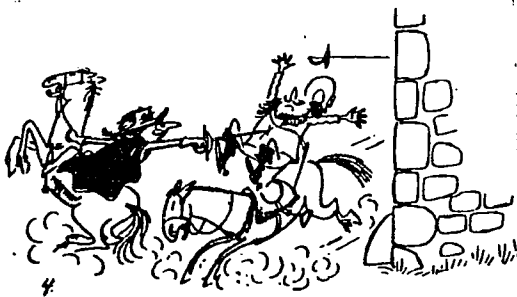
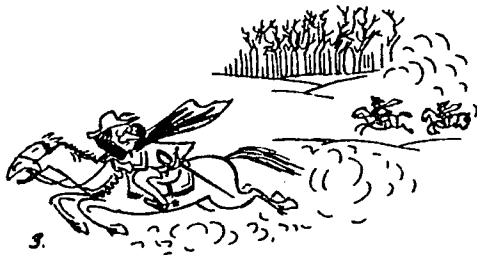
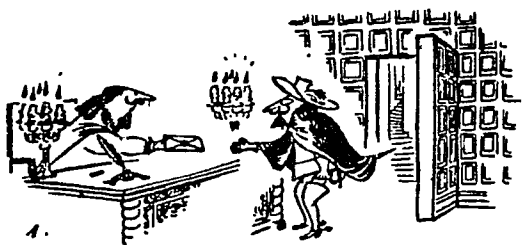
Language	Age when you began to acquire it	Degree of proficiency
_____	_____	_____ good
		_____ average
		_____ superficial
_____	_____	_____ good
		_____ average
		_____ superficial
_____	_____	_____ good
		_____ average
		_____ superficial

Please narrate in your own words and as you understand them the stories told by the two picture series. The object of the study is to determine if different people "see" the same series of graphic representations in the

same way. Please describe them in the amount of detail you judge necessary, keeping, however, to the story line as it is presented in the pictures. The task takes approximately half an hour (for the two stories). Many thanks for your valuable assistance.

Picture sequences: Cf. pages 320 and 321.





Appendix 3 Overall quantification base for novels and translations

	S	G	E
AC/			
total			
occurrences	8494 (8655) ^x	8633 (8680) ^x	9259
finite verbs	7364	8127	8230
non-finites			
(infinitives,			
gerunds, past			
participles,			
composites)	1130	506	966
imperatives ^{xx}	--	--	63
3-e	494	544	422
3-p	320	196	115
Max P			
(S=1			
G,E=3)	219	92	53
GM/			
total			
occurrences	3052	2889 (2890) ^x	3074 (3077) ^x
finite verbs	2569	2609	2548
non-finites			
(as above)	483	280	475
imperatives ^{xx}	--	--	51
3-e	275	311	263
3-p	143	128	92
Max P			
(as above)	100	78	41
GG/			
total			
occurrences	5739 (5812)	5032	5516 ^{xxx}
finite verbs	4820	4637	4586
non-finites			
(as above)	919	395	871
imperatives ^{xx}	--	--	59
3-e	336	324	286
3-p	222	153	123
Max P			
(as above)	108	73	74

x Adjusted totals. Translation deficit (omitted occurrences) added in.

xx Included as finites in Spanish and German.

xxx No translation deficit.

Appendix 4CHI SQUARE TABLES
(for data in Chapter 5) χ^2 for Table 3a - AC:P / e

	# of -P	(Exp. Val.)	# of +P	(Exp. Val.)	Total # of ent.
S	1213	(811.04)	269	(670.96)	1482
G	676	(893.13)	956	(738.87)	1632
E	<u>508</u>	(692.83)	<u>758</u>	(573.17)	<u>1266</u>
	2397		1983		4380

-P	+P	
199.22	240.81	
52.79	63.81	
49.31	<u>59.60</u>	df = 2
	665.54	p < .001

G	676	(666.77)	956	(965.23)	1632
E	<u>508</u>	(517.23)	<u>758</u>	(748.77)	<u>1266</u>
	1184		1714		2898

-P	+P	
0.128	0.088	
0.165	<u>0.114</u>	df = 1
	0.50	p < .50

S	1213	(899.00)	269	(583.00)	1482
G	<u>676</u>	(990.00)	<u>956</u>	(642.00)	<u>1632</u>
	1889		1225		3114

-P	+P	
109.67	169.12	
99.59	<u>153.58</u>	df = 1
	531.96	p < .001

χ^2 for Table 3a - AC (con't.): P / e

	# of -P	(Exp. Val.)	# of +P	(Exp. Val.)	Total # of ent.
S	1213	(928.14)	269	(553.86)	1482
E	<u>508</u>	(792.86)	<u>758</u>	(473.14)	<u>1266</u>
	1721		1027		2748
		-P		+P	
		87.06		146.51	
		102.34		<u>171.50</u>	df = 1
				507.41	p < .001

χ^2 for Table 3a - GM: P / e

	# of -P	(Exp. Val.)	# of +P	(Exp. Val.)	Total # of ent.
S	696	(412.66)	129	(412.34)	825
G	302	(466.68)	631	(466.32)	933
E	<u>276</u>	(394.65)	<u>513</u>	(394.35)	<u>789</u>
	1274		1273		2547
		-P		+P	
		194.55		194.70	
		58.11		58.16	
		35.67		<u>35.70</u>	df = 2
				576.89	p < .001
G	302	(313.17)	631	(619.83)	933
E	<u>276</u>	(264.83)	<u>513</u>	(524.17)	<u>789</u>
	578		1144		1722
		-P		+P	
		.40		.20	
		.47		<u>.24</u>	df = 1
				1.31	p < .30

χ^2 for Table 3a - GM (con't.): P / e

	# of -P	(Exp. Val.)	# of +P	(Exp. Val.)	Total # of ent.
S	696	(468.34)	129	(356.66)	825
G	<u>302</u>	(529.66)	<u>631</u>	(403.34)	<u>933</u>
	998		760		1758
		-P		+P	
		110.67		145.32	
		97.85		<u>128.50</u>	df = 1
				482.34	p < .001
S	696	(496.84)	129	(328.16)	825
E	<u>276</u>	(475.16)	<u>513</u>	(313.84)	<u>789</u>
	972		642		1614
		-P		+P	
		79.83		120.87	
		83.48		<u>126.39</u>	df = 1
				410.57	p < .001

χ^2 for Table 3a - GG: P / e

	# of -P	(Exp. Val.)	# of +P	(Exp. Val.)	Total # of ent.
S	859	(562.96)	149	(445.04)	1008
G	415	(542.85)	557	(429.15)	972
E	<u>311</u>	(479.19)	<u>547</u>	(378.81)	<u>858</u>
	1585		1253		2838
		-P		+P	
		155.68		196.93	
		30.11		38.09	
		59.03		<u>74.68</u>	df = 2
				554.52	p < .001

χ^2 for Table 3a - GG (con't.): P / e

	# of -P	(Exp. Val.)	# of +P	(Exp. Val.)	Total # of ent.
G	415	(385.61)	557	(586.39)	972
E	<u>311</u>	(340.39)	<u>547</u>	(517.61)	<u>858</u>
	726		1104		1830

-P	+P	
2.24	1.47	
2.54	<u>1.67</u>	df = 1
	7.92	p < .01

S	859	(648.58)	149	(359.42)	1008
G	<u>415</u>	(625.42)	<u>557</u>	(346.58)	<u>972</u>
	1274		706		1980

-P	+P	
68.27	123.19	
70.79	<u>127.75</u>	df = 1
	390	p < .001

S	859	(632.03)	149	(375.97)	1008
E	<u>311</u>	(537.97)	<u>547</u>	(320.03)	<u>858</u>
	1170		696		1866

-P	+P	
81.51	137.02	
95.76	<u>160.97</u>	df = 1
	475.26	p < .001

χ^2 for Table 4a - AC:

Max P / 3-e

	# of non-Max P	(Exp. Val.)	# of Max P	(Exp. Val.)	Total # of 3-e
S	275	(370.84)	219	(123.16)	494
G	452	(408.37)	92	(135.63)	544
E	<u>369</u>	(316.79)	<u>53</u>	(105.21)	<u>422</u>
	1096		364		1460

-Max P

+Max P

24.77

66.80

4.66

14.04

8.60

25.91

df = 2

144.78

p < .001

G	452	(462.34)	92	(81.66)	544
E	<u>369</u>	(358.66)	<u>53</u>	(63.34)	<u>422</u>
	821		145		966

-Max P

+Max P

.23

1.31

.30

1.69

df = 1

3.53

p < .10

S	275	(345.99)	219	(148.01)	494
G	<u>452</u>	(381.01)	<u>92</u>	(162.99)	<u>544</u>
	727		311		1038

-Max P

+Max P

14.57

34.05

13.23

30.92

df = 1

92.77

p < .001

S	275	(347.31)	219	(146.69)	494
E	<u>369</u>	(296.69)	<u>53</u>	(125.31)	<u>422</u>
	644		272		916

-Max P

+Max P

15.05

35.64

17.62

41.73

df = 1

110.04

p < .001

χ^2 for Table 4a - GM:

Max P / 3-e

	# of non-Max P	(Exp. Val.)	# of Max P	(Exp. Val.)	Total # of 3-e
S	175	(204.06)	100	(70.94)	275
G	233	(230.78)	78	(80.22)	311
E	<u>222</u>	(195.16)	<u>41</u>	(67.84)	<u>263</u>
	630		219		849

-Max P

+Max P

4.14

11.90

.02

.06

3.69

10.62

df = 2

30.43

p < .001

G	233	(246.52)	78	(64.48)	311
E	<u>222</u>	(208.48)	<u>41</u>	(54.52)	<u>263</u>
	455		119		574

-Max P

+Max P

.74

2.83

.88

3.35

df = 1

7.8

p < .01

S	175	(191.47)	100	(83.53)	275
G	<u>233</u>	(216.53)	<u>78</u>	(94.47)	<u>311</u>
	408		178		586

-Max P

+Max P

1.42

3.25

1.25

2.87

df = 1

8.79

p < .01

S	175	(202.93)	100	(72.07)	275
E	<u>222</u>	(194.07)	<u>41</u>	(68.93)	<u>263</u>
	397		141		538

-Max P

+Max P

3.84

10.82

4.02

11.32

df = 1

30

p < .001

χ^2 for Table 4a - GG:

Max P / 3-e

	# of non-Max P	(Exp. Val.)	# of Max P	(Exp. Val.)	Total # of 3-e
S	228	(245.43)	108	(90.57)	336
G	251	(236.66)	73	(87.34)	324
E	<u>212</u>	(208.91)	<u>74</u>	(77.09)	<u>286</u>
	691		255		946

-Max P

+Max P

1.24

3.35

.86

2.35

.05

.12

df = 2

7.97

p < .02

G	251	(245.92)	73	(78.08)	324
E	<u>212</u>	(217.08)	<u>74</u>	(68.92)	<u>286</u>
	463		147		610

-Max P

+Max P

.10

.33

.12

.37

df = 1

0.92

p < .50

S	228	(243.85)	108	(92.15)	336
G	<u>251</u>	(235.15)	<u>73</u>	(88.85)	<u>324</u>
	479		181		660

-Max P

+Max P

1.03

2.73

1.06

2.82

df = 1

7.64

p < .01

S	228	(237.68)	108	(98.32)	336
E	<u>212</u>	(202.32)	<u>74</u>	(83.68)	<u>286</u>
	440		182		622

-Max P

+Max P

.39

.95

.46

1.12

df = 1

2.92

p < .10

χ^2 for Table 5 - AC:P / p

	# of non P	(Exp. Val.)	# of P	(Exp. Val.)	Total p
S	978	(503.47)	269	(743.53)	1247
G	254	(488.53)	956	(721.47)	1210
E	<u>104</u>	(343.99)	<u>748</u>	(508.01)	<u>852</u>
	1336		1973		3309

-P+P

447.25
112.59
167.43

302.85
76.24
113.37
1219.73

df = 2
p < .001

G	254	(210.08)	956	(999.92)	1210
E	<u>104</u>	(147.92)	<u>748</u>	(704.08)	<u>852</u>
	358		1704		2062

-P+P

9.18
13.04

1.93
2.74
26.89

df = 1
p < .001

S	978	(625.28)	269	(621.72)	1247
G	<u>254</u>	(606.72)	<u>956</u>	(603.28)	<u>1210</u>
	1232		1225		2457

-P+P

198.97
205.06

200.11
206.22
810.36

df = 1
p < .001

S	978	(642.81)	269	(604.19)	1247
E	<u>104</u>	(439.19)	<u>748</u>	(412.81)	<u>852</u>
	1082		1017		2099

-P+P

174.78
255.82

185.96
272.16
888.72

df = 1
p < .001

χ^2 for Table 5 - GM:P / p

	# of non P	(Exp. Val.)	# of P	(Exp. Val.)	Total p
S	532	(228.82)	129	(432.18)	661
G	81	(246.48)	631	(465.52)	712
E	<u>61</u>	(198.70)	<u>513</u>	(375.30)	<u>574</u>
	674		1273		1947

-P

+P

401.70
111.10
95.43

212.68
58.82
50.52
930.25

df = 2
p < .001

G	81	(78.62)	631	(633.38)	712
E	<u>61</u>	(63.38)	<u>513</u>	(510.62)	<u>574</u>
	142		1144		1286

-P

+P

.07
.09

.01
.01
.18

df = 1
p < .70

S	532	(295.12)	129	(365.88)	661
G	<u>81</u>	(317.88)	<u>631</u>	(394.12)	<u>712</u>
	613		760		1373

-P

+P

190.13
176.52

153.36
142.37
662.38

df = 1
p < .001

S	532	(317.39)	129	(343.61)	661
E	<u>61</u>	(275.61)	<u>513</u>	(298.39)	<u>574</u>
	593		642		1235

-P

+P

145.11
167.11

134.04
154.35
600.61

df = 1
p < .001

χ^2 for Table 5 - GG:P / p

	# of non P	(Exp. Val.)	# of P	(Exp. Val.)	Total p
S	685	(360.72)	149	(473.28)	834
G	195	(325.25)	557	(426.75)	752
E	<u>75</u>	(269.03)	<u>547</u>	(352.97)	<u>622</u>
	955		1253		2208
		-P		+P	
		291.52		222.19	
		52.16		39.75	
		139.94		<u>106.66</u>	df = 2
				852.22	p < .001
G	195	(147.77)	557	(604.23)	752
E	<u>75</u>	(122.23)	<u>547</u>	(499.77)	<u>622</u>
	270		1104		1374
		-P		+P	
		15.10		3.69	
		17.53		<u>4.46</u>	df = 1
				40.78	p < .001
S	685	(462.75)	149	(371.25)	834
G	<u>195</u>	(417.25)	<u>557</u>	(334.75)	<u>752</u>
	880		706		1586
		-P		+P	
		106.74		133.05	
		118.38		<u>147.56</u>	df = 1
				505.73	p < .001
S	685	(435.33)	149	(398.67)	834
E	<u>75</u>	(324.67)	<u>547</u>	(297.33)	<u>622</u>
	760		696		1456
		-P		+P	
		143.19		156.36	
		192.00		<u>209.65</u>	df = 1
				701.20	p < .001

χ^2 for Table 6Max P / max p

	# of non-Max P	(Exp. Val.)	# of Max P	(Exp. Val.)	Total # of max p
AC/					
G	104	(104.62)	92	(91.38)	196
E	<u>62</u>	(61.38)	<u>53</u>	(53.62)	<u>115</u>
	166		145		311
		-Max P		+Max P	
		.0037		.0042	
		.0063		<u>.0072</u>	df = 1
				.0214	p < .99
GM/					
G	50	(58.76)	78	(69.24)	128
E	<u>51</u>	(42.24)	<u>41</u>	(49.76)	<u>92</u>
	101		119		220
		-Max P		+Max P	
		1.31		1.11	
		1.82		<u>1.54</u>	df = 1
				5.78	p < .02
GG/					
G	80	(71.51)	73	(81.49)	153
E	<u>49</u>	(57.49)	<u>74</u>	(65.51)	<u>123</u>
	129		147		276
		-Max P		+Max P	
		1.01		.88	
		1.25		<u>1.10</u>	df = 1
				4.24	p < .05

χ^2 for Table 7a

	# of non 3-ent. sit.	(Exp. Val.)	# of 3-ent. sit.	(Exp. Val.)	Total occ.
AC/					
S	8000	(8024.01)	494	(469.99)	8494
G	8089	(8155.32)	544	(477.68)	8633
E	<u>8837</u>	(8746.68)	<u>422</u>	(512.32)	<u>9259</u>
	24926		1460		26386

-3-e	+3-e	
.07	1.23	
.54	9.21	
.93	<u>15.92</u>	df = 2
	27.9	p < .001

GM/					
S	2777	(2764.57)	275	(287.43)	3052
G	2578	(2616.92)	311	(272.08)	2889
E	<u>2811</u>	(2784.50)	<u>263</u>	(289.50)	<u>3074</u>
	8166		849		9015

-3-e	+3-e	
.06	.54	
.58	5.57	
.25	<u>2.43</u>	df = 2
	9.43	p < .01

GG/					
S	5403	(5405.66)	336	(333.34)	5739
G	4708	(4739.72)	324	(292.27)	5032
E	<u>5230</u>	(5195.61)	<u>286</u>	(320.39)	<u>5516</u>
	15341		946		16287

-3-e	+3-e	
.001	.021	
.212	3.443	
.228	<u>3.691</u>	df = 2
	7.60	p < .05

Chi square values for comparison of EL_1 to GL_1 (p.)

	No. of non P	(Exp. Val.)	No. of P	(Exp. Val.)	Total e
E (AC)	518	(527.78)	748	(738.22)	1266
G (GG)	<u>415</u>	(405.22)	<u>557</u>	(566.78)	<u>972</u>
	933		1305		2238

-P	+P	
.18	.13	
.24	<u>.17</u>	df = 1
	.72	p < .50

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