CENTRAL UNIVERSITY "MARTA ABREU" OF LAS VILLAS FACULTY OF HUMANITIES DEPARTMENT OF ENGLISH LANGUAGE

ANALYSIS OF LEXICAL ERRORS IN ENGLISH-SPANISH TRANSLATIONS OF SCIENCE JOURNALISM TEXTS WRITTEN BY ADVANCED TRANSLATION STUDENTS

A Dissertation in partial fulfillment of the Baccalaureate Degree
in English Language Studies

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Firma del Responsable de Información Científico-Técnica "Translation is an arduous job that mortifies you, puts you in a state of despair at times, but also an enriching and indispensable work, that demands honesty and modesty".

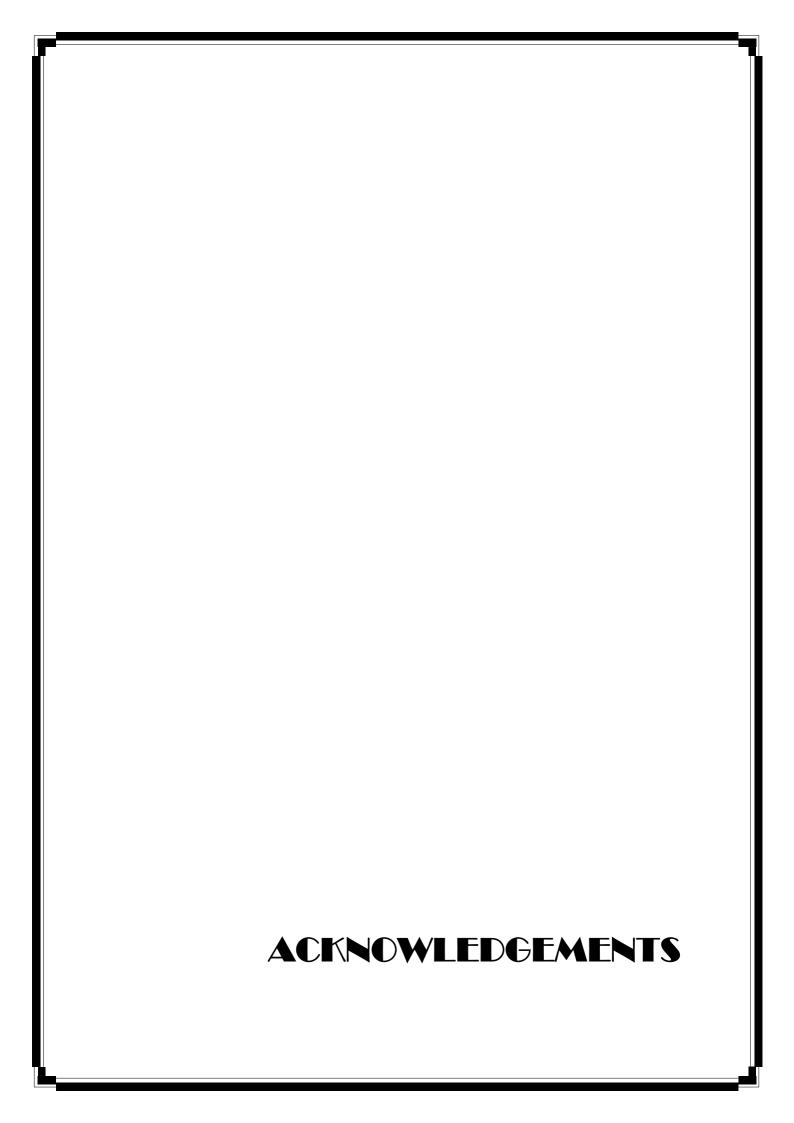
Jean Delisle

To our daughters Ale and Patry

To our parents

To our sisters Elizabeth and Marlys

To Tony



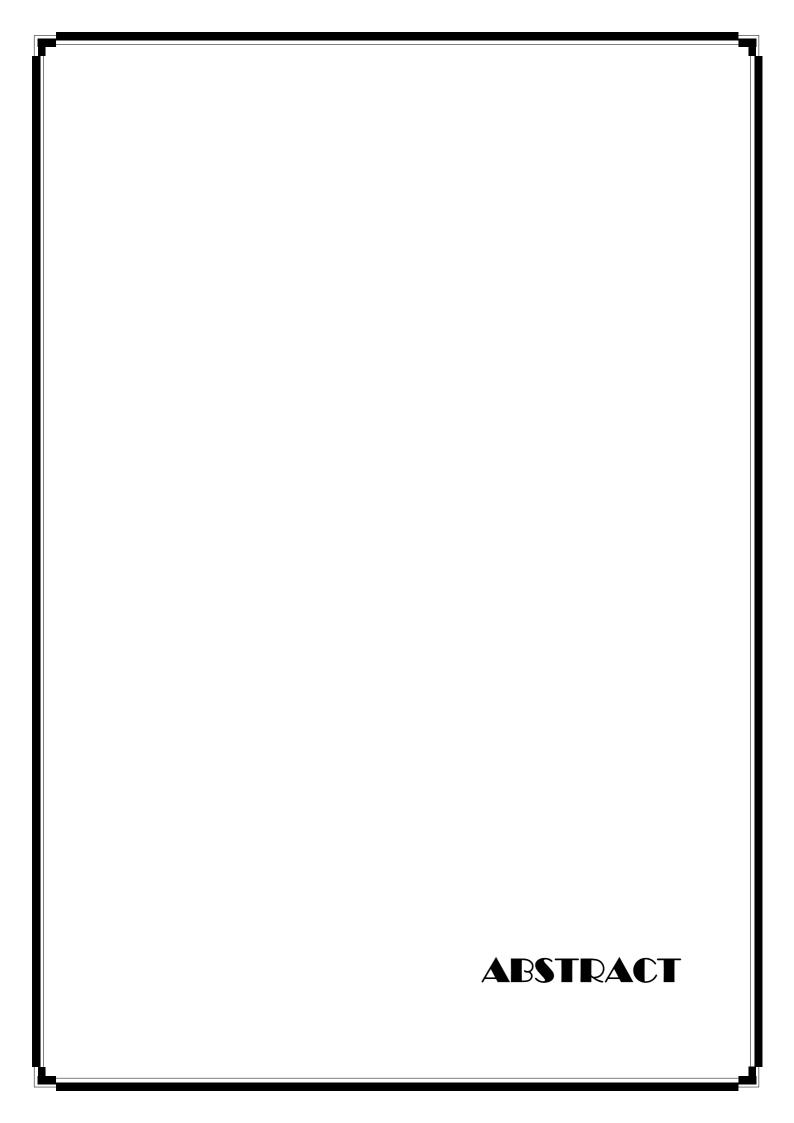
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ABSTRACT

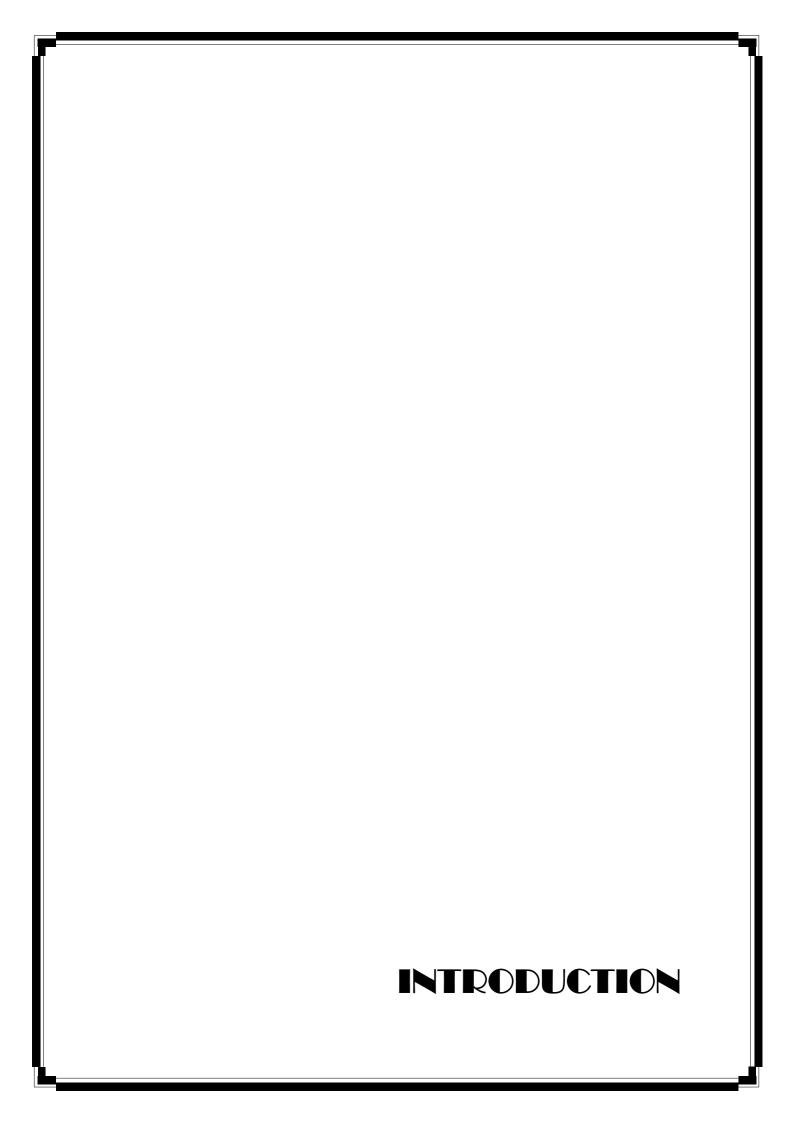
The general aim of the present research is to identify and classify the most frequent lexical translation errors present in Spanish target texts translated in the field of science journalism in English. Also the possible causes of these errors and their solutions are discussed.

This research provides empirical support for the teaching and learning of English-Spanish translation in the field of science journalism. This is the first time that the issue of translation error classification is tackled in our Department. Internationally, there has been a lot of research in the area of translation assessment in general but not in the field of science journalism. For this reason our research may contribute to the field.

From a theoretical perspective this dissertation contributes to the study of translation and to the research on this subject in Cuba. It presents a typology of lexical errors which will help to improve the practice and the teaching of this discipline in our country.

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INTRODUCTION

The practice of translation dates back to the beginnings of recorded history. This activity has played a key role in human communication and continues to be remarkably useful when establishing relationships between people that speak different languages. The translation process reveals a constant movement of ideas and cultures, which are constantly absorbing new influences because of the work of translators.

In Cuba the first translation dates from the 17th century and was made by the bishop Pedro Agustín Morell de Santa Cruz (1694-1768). Later in the 18th century during the occupation of Havana by British troops in 1762, the role of translators and interpreters grew in importance. With the foundation of "El Papel Periódico de La Habana" (1790) the translations from English to Spanish played a major role. The 19th century saw the process of industrialization and the cultural and social changes it brought about. It is widely considered an important period of the practice of translation and in our country it became one of the main means of connection to other cultures. It is valuable to point out that the translations were characterized by the predominant genius and structures of the source language and they were mainly related to teaching, drama and literature. The US intervention in Cuba in 1898 brought about a greater influence of English on Cuban society. With the establishment of the Republic in 1902, the influence of the United States on Cuban political, social and economic life increased and English became an important foreign language for the national bourgeoisie. Translation from English into Spanish however did not grow apace because most American cultural products were either consumed in

the original form by a restricted group of people (usually members of the bourgeoisie) or in translations to Spanish made in Mexico or Argentina, as was the case of the best known cartoons. So translation in the field of mass culture was rather limited. A similar situation prevailed in the fields of literary and scientific translation in which with few exceptions the translated works came from other Spanish speaking countries. It was not until the Triumph of the Revolution in 1959, that Cuban foreign policy, now independent of the United States, required the participation of Cuban delegates in many international events, and the celebration of many such events in our country. The need for translators for English and French, widespread colonial languages, increased with the important role played by Cuba in the movement of non-aligned countries. Translation from Russian, and other East European languages also grew as a result of Cuba's collaboration with the socialist countries of Europe and the USSR. The challenge was met by the creation of translation and interpretation schools, such as the "Máximo Gorky" and "Paul Lafargue" Institutes. At the University of Havana the study of foreign languages was a specialization of the School of Letters of the Faculty of Humanities, but in 1970 the School of Modern Languages was created as part of the Faculty of Humanities of the University of Havana. The Translation and Interpretation Department of this school was responsible for the teaching of these subjects for the language pairs formed by Spanish and English, French, Russian or German. In 1980, these two institutes were fused with the Faculty of English of the Higher Pedagogical Institute "Enrique José Varona" to create ISPLE (Higher Pedagogical Institute of Foreign Languages) which up to the late 90's was responsible for the formation of interpreters and translators. In 1976 the Faculty of Philology of the University of Havana was created and the Departments of French, Russian, German and English started to teach the Translation – Interpretation subjects, in from the corresponding languages into Spanish. This organization continued from 1980, when the Faculty of Foreign Languages was founded, to the present. Nine years afterwards in the Academic year 1989-1990 the Department of English of the Central University "Marta Abreu" of Las Villas (UCLV) started an English Language Course of Studies devoted to the formation of specialists in both English language teaching and translation and interpretation. The Course of Studies was extended to six years in 1998, when a second foreign language was introduced. At the UCLV French was chosen as the second language.

The staff of the translation and interpretation subjects has accumulated considerable experience in the teaching of these subjects; two MA dissertations were devoted to problems in this field, as well as a PhD thesis. A Postgraduate Studies Diploma has been taught at the Department for the last 10 years and also research in the area of translation and interpretation has been renewed both by staff and by students' research groups.

Our research is motivated by the fact that 4th Year students majoring in English Language with a Second Foreign Language (French) committed lexical errors when translating science journalism texts from English into Spanish (as an academic activity in the subject Computer Assisted Translation). Therefore we consider that the identification, description, classification and explanation of these errors and their causes could be helpful to develop strategies and procedures to prevent or diminish their occurrence in the future.

This situation leads us to formulate the following **scientific problem**:

What types of lexical translation errors are present in English-Spanish target texts of science journalism written by advanced translation students?

Where we define lexical translation error as the lack of equivalence that results in a non-sense, a different sense or a counter sense being communicated as a result of misunderstanding a lexical unit in the source text, failing to use an appropriate lexical equivalent, or using a faulty lexical unit in the target text; and which can be solved by the omission, addition or substitution of a lexical unit in the target text. As for the term advanced students we will understand those who have taken the subject of translation for six semesters, (i.e. 352 hours, which accounts for 77% of the 544 hours devoted to this subject in the curriculum of the English Language major.

The **scientific object** of this research is the development of the lexical competence of the translator and it is carried out in the **field of action** of English-Spanish translation.

The **general aim** of the present research is:

To identify and classify the most frequent lexical translation errors present in English-Spanish target texts of science journalism as well as to determine their causes and to propose solutions.

To fulfill the previously stated objective the following **scientific tasks** were carried out:

- 1. Writing up the research design.
- 2. Analyzing the available bibliography on this subject to determine the level of knowledge and the current trends concerning the research topic.

- 3. Designing and applying a survey to find out students' level of knowledge about translation errors.
- 4. Analyzing the lexical translation errors present in English-Spanish target texts of science journalism.
- 5. Identifying the possible causes of these errors.
- 6. Designing a proposal of strategies to prevent the errors.

The methods, techniques and procedures used to accomplish this research are the following:

- Analysis and synthesis
- Induction and deduction.
- Comparison of the original texts and their translations.
- Classification of errors.

Scientific novelty

This research provides empirical support for the teaching and learning of English-Spanish translation in the field of science journalism. This is the first time that the issue of translation error classification is tackled in our Department. Internationally, there has been a lot of research in the area of translation assessment in general but not in the field of science journalism. For this reason our research may contribute to the field.

Theoretical contribution

From a theoretical perspective this dissertation contributes to the study of translation and to the research on this subject in Cuba. It presents a typology of

lexical errors which will help to improve the practice and the teaching of this discipline in our country.

Practical importance

From a practical point of view the present research is important for the practice of translation because we propose some useful strategies to improve the quality of English-Spanish translations of science journalism texts as well as some recommendations for the analysis of lexical errors. We will endorse S.Pit Corder's reflections on the value of error analysis (1973: 265):

"The most obvious practical use of the analysis of errors is to the teacher. Errors provide feedback; they tell the teacher something about the effectiveness of his teaching materials and techniques, and show him what parts of the syllabus he has been following have been inadequately learned or taught and need further attention. They enable him to decide whether he can move on to the next item on the syllabus or whether he must devote more time to the item he has been working on. This is the day-to-day value of errors. But in terms of broader planning and with a new group of learners they provide the information for designing a remedial syllabus or a program of re-teaching".

Then the results of this research will be a helpful tool for translation teachers and professionals to solve practical and training problems.

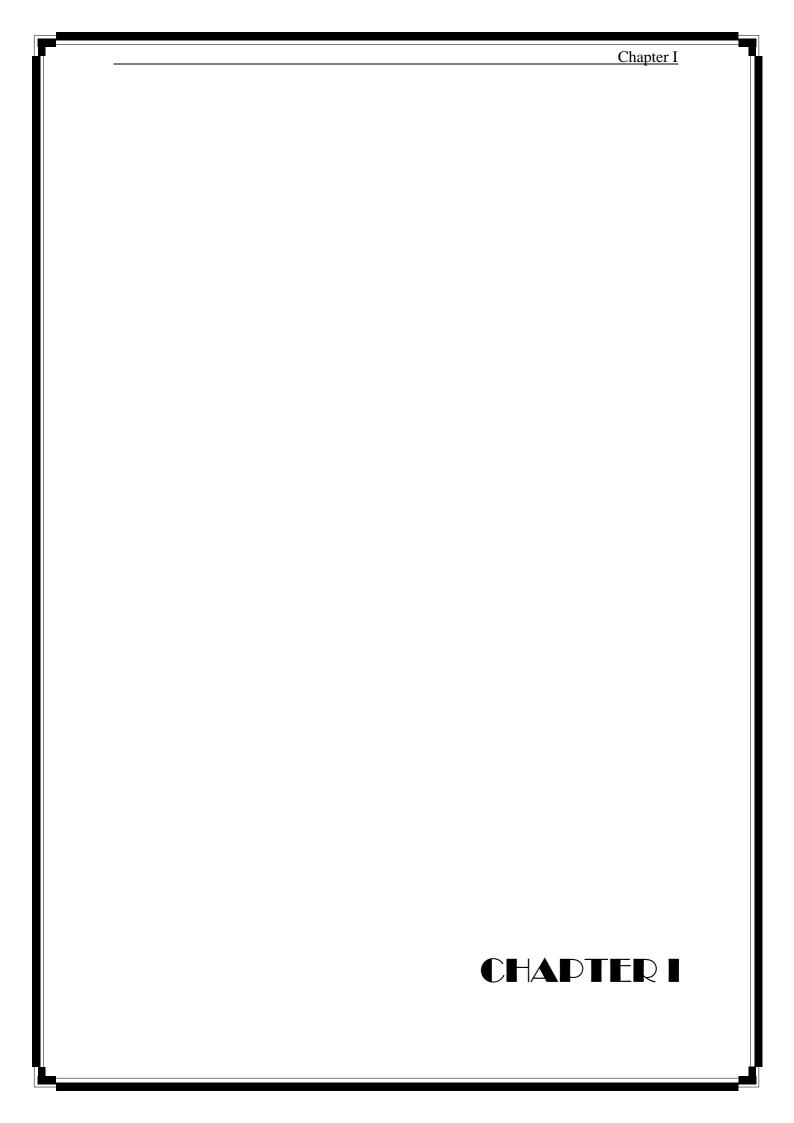
Structure of the Dissertation

This dissertation is divided into an Introduction, three Chapters, Conclusions, Recommendations, Bibliographical References and Appendices.

Chapter I: Translation and equivalence. In this chapter we study the concepts of translation and equivalence proposed by several scholars as well as the evolution of translation studies and the current trends in translation research. Furthermore we analyze text typologies specifically with some considerations about register, discourse and genre and we focus our attention on the characteristics of science journalism texts.

Chapter II: Analysis of lexical errors. This chapter presents the research methodology used, the stages in its application and the results obtained.

Chapter III: Proposal of strategies for the development of the bilingual lexical competence of the translator. In this chapter the theoretical criteria on translation strategies are presented. Based on the analysis of lexical translation error we identify the possible causes of these errors and we propose some strategies for the development of the bilingual lexical competence of the translator.



CHAPTER I. CHAPTER I. TRANSLATION AND EQUIVALENCE

1.1 The study of translation

The study of translation in the last 60 years includes several approaches with different emphases and with varied connections with other disciplines and scholarly traditions. Hurtado Albir (2001) classifies contemporary translation theories according to five main theoretical approaches:

- 1) Linguistic approaches: those based on the application of language models that do not consider the text and which comprise the studies of contrastive linguistics, contrastive stylistics as well as semantic and semiotic approaches.
- 2) **Textual approaches**: they include all those studies in which the text is the main category of analysis and the most important translation object.
- 3) **Communicative and socio-cultural approaches**: they emphasize the communicative function of translation in the context in which it takes place.
- 4) **Psycholinguistic approaches**: they concentrate on the analysis of mental processes as they occur in the translator's mind, mainly using the Thinking Aloud Protocol (TAP).
- 5) **Hermeneutical and Philosophical approaches**: these deal with the problems of interpretation and the problems of truth in relation to translation.

In the English-speaking world, the discipline that is concerned with the study of translation is now generally known as 'translation studies', thanks to the US scholar James S. Holmes. In a paper he delivered in 1972, Holmes describes

the then emerging discipline related to "the complex of problems clustered round the phenomenon of translating and translations" (Holmes 1988b/2000: 173). In 1988, Mary Snell-Hornby, in the first edition of her *Translation Studies:* An Integrated Approach, wrote about the necessity of considering translation studies as an independent discipline. Later in 1995, Snell-Hornby refers to "the breathtaking development of translation studies as an independent discipline' and the 'prolific international discussion" on the subject.

Mona Baker, in her introduction to *The Routledge Encyclopedia of Translation* (1997), talks enthusiastically of the huge value of the "exciting new discipline, perhaps the discipline of the 1990s". Now, in the twenty-first century, the discipline continues to develop.

"Translation Studies is now understood to refer to the academic discipline concerned with the study of translation at large, including literary and non-literary translation, various forms of oral interpreting as well as for dubbing and subtitling."

Mona Baker (1997: 277).

But her definition includes some other interesting aspects that are essential for the conception of our work. She states that translation studies also includes a group of research and pedagogical activities, such as the training of translators and the development of theoretical frameworks and criteria for translation assessment.

Some other major translators, from their own linguistic point of view, have decided to name this academic subject differently. For example the Frenchman Antoine Berman wrote in 1985:

"The awareness of translation experiences, as distinct from all objectifying knowledge not within its framework (as dealt with by linguistics, compared literature, poetics) is what I call traductologie".

Germans prefer to call this discipline *Übersetzungwissenschaft*, namely "translation science", making a special emphasis on the scientific character of their endeavor. In Italy many terms are used: "traduttologia, scienza della traduzione." And in Spanish we know it as "estudios de la traducción" or "traductología".

Nowadays the study of this discipline has become of major interest not only to those specialized in the field of linguistics but also the least experienced who are on the process of learning the abilities of interpreting and translating. Thus, the increase of new courses on this subject can be noticed everywhere i.e. in the U.K in the academic year 1999/2000, there were at least twenty postgraduate translation courses and several 'Centres of Translation'. Caminade and Pym (1995) list at least 250 university-level bodies in over sixty countries offering four-year undergraduate degrees and/or postgraduate courses in translation. These courses, which attract thousands of students, are mainly oriented towards training future professional commercial translators and interpreters and serve as highly valued qualifications for the translating and interpreting professions.

From being a little-established field a relatively short time ago, translation studies has now become one of the most active and dynamic new areas of research including an exciting mix of approaches and perspectives.

1.2 The concept of translation

The term translation was introduced into the English language around 1340 and was either derived from a similar word in Old French or adapted from the Latin term *translationem*, meaning "a transporting".

Translation may be used to refer to the discipline, to the text in another language that has been translated from some original, or to the act of producing the translation, the process of translating:

"The process of translation between two different written languages involves the translator changing an original written text (the source text or ST) in the original verbal language (the source language or SL) into a written text (the target text or TT) in a different verbal language (the target language or TL)" (Munday, 2001).

The Russian linguist Roman Jakobson in his paper "On linguistic aspects of translation", Jakobson (1959/2000:114) considers three different kinds of translation:

1 intralingual translation, or 'rewording': 'an interpretation of verbal signs by means of other signs of the same language'.

2 interlingual translation, or 'translation proper': 'an interpretation of verbal signs by means of some other language'.

3 intersemiotic translation, or 'transmutation': 'an interpretation of verbal signs by means of signs of non-verbal sign systems'.

Another interesting view on translation is that of the translation scholar George Steiner, whose study *After Babel* is one of the definitive texts on translation.

Steiner thinks that translation is central and vital to our most basic experiences and he writes:

"Translation is formally and pragmatically implicit in every act of communication... To understand is to decipher. To hear significance is to translate. Thus the essential structure and executive means and problems of the act of translation are fully present in acts of speech, of writing, of pictorial encoding in any given language". (Steiner, 1998:xii)

Steiner describes the translation of a written text from one language to another as a sequential process of decoding and re-encoding, a process of reading and re-writing. He also explains how theories of translation identify three different methods: firstly, "strict literalism, the word-by-word matching of the interlingual dictionary"; the second method is translation "by means of faithful or autonomous restatement in which the translator closely reproduces the original but composes a text which is natural to his own tongue"; and finally, free imitation or "interpretive parallel" (Steiner, 1998:266).

Justa Holz-Mänttär conceived translation primarily as a "process of intercultural communication whose end-product is a text which is capable of functioning appropriately in specific situations and contexts of use" (Justa Holz -Mänttär, 1984).

According to Hartman and Stork (1972: 713) "translation is the replacement of a representation of a text in one language by a representation of an equivalent text in a second language".

Roger T. Bell (1991:5) adopts the definition presented by J. Dubois in his Dictionnaire de Linguistique of 1973: "Traduire c'est énoncer dans une autre langage (ou langue cible) c'est qui a été énoncé dans une autre langue source, en conservant les équivalences sémantiques et stylistiques".

1.3 The concept of equivalence in translation history

The notion of equivalence has been of paramount importance for the study of translation.

In the second half of the 20th century translation gained in importance worldwide thus the concept of equivalence was developed as a useful tool for the study of this discipline. Some scholars proposed different definitions of the term. For example Nida's (1964) 'formal equivalence' and 'dynamic equivalence' sought to distinguish between the aim to achieve equivalence of form between source and target texts and the aim to achieve equivalence of effect on the target language reader. So Nida's concept considered dynamic equivalence more important than formal correspondence; this dynamic equivalence was achieved if the impact of the translation produced the appropriate response from the receptor in the target language.

This concept was also a key element in Catford's *Linguistics and Translation*, 1951. "Catford's theoretical framework carefully eschewed Nida's somewhat cavalier treatment of a concept of crucial importance to the development of automated translation, and Catford's shifts bear real similarity to notions of complex transfer in *machine translation (MT)*, where formal correspondence continues to hold pride of place" (Kenny, 1998: 78).

In addition to Nida and Catford, other translation theorists in the 1950s and 1960s tried to define the concept of equivalence and its place in translation theory. In their detailed, contrastive analysis of English and French, Vinay and Darbelnet (1958/1977) proposed a set of procedures for the translator to use in order to explain the need for 'indirect' translation involving instances when equivalence in the target language cannot be established. One of these procedures was for example, "chasse-croise", i.e. when translating "Bleriot flew across the Channel' into 'Bleriot traversa la Manche en avion" (Vinay Darbelnet, 1958 /1977: 105). While in English, motion and manner are both contained in the verb 'flew', in translation into French the two features cannot be expressed through the use of one verb. Instead the notion of 'motion' is conveyed through the verb traversa (crossed) and that of 'manner' expressed separately, in 'en avion' (by plane).

Werner Koller (1972/1979) draws a distinction between a number of different equivalence types and favours the approach to the problem of accounting for the lack of equivalence between source and target text in translation. "While connotative equivalence entails a choice between synonymous expressions, text-normative equivalence concerns the usage norms for a given text type, pragmatic equivalence involves the receiver to whom the translation is directed and formal equivalence concerns formal-aesthetic features such as word play" (Koller,1989).

During the 1980's several authors revolutionized the translation theories and then as a discipline it reached a major significance and the concept of equivalence was differently discussed. For Reiss and Vermeer, (1984) translating is an action carried out in order to achieve a purpose (*Skopos*). This

purpose is highly variable (it may or may not involve equivalence to a source) and is negotiated with several number of social actors.

Peter Newmark (1981:39) distinguishes between semantic translation: which he points out "relays as closely as the structures of the target language will allow the exact contextual meaning of the source text and communicative translation as equivalence of effect". For example:

"French 'Defense de marcher stir la gazon' in semantic translation into English results 'Walking on the turf is forbidden', in communicative translation it is normally rendered as the more familiar 'Keep off the grass'. Similarly, in translation from German 'Frisch angestrichen' reads in semantic translation into English as 'Recently painted' while in communicative translation it turns into the more easily recognisable 'Wet paint!"

(Newmark, 1981).

The translation theories of the 1990s were increasingly concerned with ethical issues. "This was partly a reaction against traditional concepts like fidelity and equivalence, which 20th century uncertainty had left without any conceptual grounding. Yet it was also a response to the empiricism that had motivated many parts of translation studies in the 1980s." (Bassnett & Gentzler, 2007: 37). Chesterman, (1997) proposes that translation should have 'negative ethics', based on avoiding misunderstandings rather than on any ideal of complete equivalence.

"Equivalence had become a fact of all translations for descriptive translation studies" (Toury, 1980), he dissolved the concept to an extent that it could no

longer state what translators should do; the scholar's task was merely to describe its variants, norms and possible laws. At the same time, "equivalence had become no more than a restricted 'special case' for *Skopos teorie*, which sought to provide translators with alternative professional guidelines" (Pym, 1995).

For the postmodern approaches, notions like equivalence and fidelity were traditional essentialist illusions, unable to provide any guidelines at all. Barbara Johnson (1985) proposed "taking fidelity philosophically, as might a cheated spouse". That loss of faith left a gap, allowing for a return to fundamental ethical issues, this time based on the texture of human relationships rather than on any empiricism of performance. "Not gratuitously, this return to ethics has accompanied greater attention to dialogue interpreting, where more importance is intuitively given to people rather than to texts" (Pym, 2001).

Whatever the value of these distinctions, it is important to regard them as different translation strategies being more or less appropriate according to different translation situations.

1.4 The use of corpora in translation studies

Throughout the history of translation studies some trends have been developed in order to explain the successful practice of translation and to establish principles for practitioners. For these reasons we will make reference to one of the most promising current approaches to translation research, the corpusbased approach.

Only a few years ago, Mona Baker predicted that large corpora of both original and translated texts would permit translation scholars to reveal "the nature of translated text as a mediated communicative event." Since then, a great number of practitioners have begun to seriously consider the corpus-based approach as a new perspective within which translation and translating can be studied. The value of the corpus-based approach has also been recognized by contrastive linguists as a new way to study languages and various new designs of corpora have been developed by translators in order to facilitate the comprehension of the source language texts and to improve the whole translation process.

The approach of the translation studies based on corpora may provide insights into the characteristics of language when used for translation vs. the language used for monolingual communication. This approach may also provide access to the general characteristics of the target language in relation to different source languages.

The usage of corpora is an improved scientific approach in examining the characteristic features of translated texts. Corpora offer several benefits when we investigate translations: large amounts of material make it possible to study whether or not the characteristic phenomena of translations suggested in earlier studies really exist; corpora are excellent when comparing translated language with non-translated language and, more importantly, the conclusions based on large corpora are more reliable than those based on small samples and intuitions.

We can study translation based on corpora in different ways. For instance, we can use texts originally written in one language and texts originally written in

other languages and translated into that same language to create a monolingual corpus that will help us to study the differences between the translational and the non-translational language. As an example of this we can point out the study carried out by Laviosa in 1996 in which he used a one million word sample of the Translational English Corpus (TEC) to design the English Comparable Corpus (ECC), to analyse lexical and stylistic patterns in translated versus non-translated English.

Another way to study translation is by the use of a corpus composed of different texts originally written in different languages and their translations into one specific language. This method permits us to study the typical features of the translated texts. According to the studies of Sari Eskola, (Savonlinna School of Translation Studies, University of Joensuu, Finland) in many cases the readers can distinguish translations from original texts, although we do not know exactly the distinctive features of translated texts.

Now with the widely used computer-assisted, corpus-based analyses a new descriptive research in translation studies has been developed. By studying a corpus made of a group of source language texts and their corresponding translations into different languages we can formulate some universals about the changes that occur during the translation process.

Making use of the corpus-based approach, translators can select an amount of texts written in a specific source language and analyze different translations of each of these texts in the same target language.

The parallel corpora of texts in a source language aligned with their translations in a target language are other means used to study translation. According to Federico Zanettin, (University of Bologna, Italy) this type of corpus can be an

invaluable resource in both descriptive and applied translation studies. Whereas in applied fields such as machine aided translation parallel corpora can be used for lexical extraction and as translation memories, in descriptive research they can be used to investigate translation strategies, by retrospectively assessing how equivalence relations are recurrently realized in translated texts.

1.5 Translation and text typology: register, genre, discourse and text-type

The most recent trends in Translation Studies emphasize the role of text parameters in translation. There is no general agreement on the criteria to use for the classification of texts. Text typologies emerged from the human constant desire to list and classify what we know. This idea was discovered a long time ago. Indeed we can trace text typologies as far back as Aristotle. In his Rhetoric he classifies speech into three kinds: deliberative, forensic and epideictic. None of the systems proposed is comprehensive enough or generally accepted.

Many criteria are available: internal, external, cultural, stylistic, etc.; many labels have been suggested: genre, register, typology, sublanguage, etc.; texts could be grouped according to their topic, the type of audience they address, their purpose, and so on. Different disciplines (linguistics, socio-linguistics, grammatical studies, corpus-analysis, literary criticism, rhetoric, etc.) often show clashing preferences on how to categorize texts, each field being keener on one aspect or another. All the categories suggested, however, have no neatly defined boundaries.

At first sight, the problems a translator faces seem to have little to do with registers, text types or genres. The translation of a technical term remains the same regardless of whether it appears in a manual or a novel about constructing aeroplanes. Moreover, many translations do not obey the conventions of the target language: a doctor's certificate maintains the form it has in the source culture.

Yet register, discourse, genre, and text type are of enormous importance to translations. The move of attention from sentence level equivalence to text level and above it and the emphasis on communicative purposes of texts have been major improvements in modern translation theory. Equally, for a translation to be successful, these macro features may well count most.

Many features of registers, discourses, genres and text types are closely related. Short working definitions help to highlight differences between them prior to separate, more detailed descriptions: Text type is commonly used to refer to the functions of language or the function(s) of a text. Genre can be defined as the conventional realizations of texts within a "category". Because of this feature, Werlich has aptly named the same phenomenon text form; however, the term genre is used here because it is more common. Register is the variety of language regulated by the situation.

Mistranslating a word or having an ungrammatical element in the translation does not necessarily ruin the whole translation or alter its effect on the reader, but a failure to recognize either register, text type or genre and their implications for the translation affects the whole text. The "rules", or general expectations, about register, genre and text types are crucial for a writer or other text producer, because they must normally be followed in order to achieve the

intended effect on the reader. As this feature shows, the communicative purpose of texts is a central factor for all three.

Registers describe the variety in language regulated by the situation. Social roles are essential for understanding the choice of register: we take up different "roles" in different situations.

These normative expectations are connected to social positions). The common expectations about a persons' utterances in a given situation are central to determining the register, but not all situations are equal in this respect. Some situations are highly conventionalised, making the roles and the register more strictly defined. In less conventionalised situations, there may be less expectations.

Our choice of register influences our lexical choices. Also text level choices are affected, as is the syntax, e.g. the register of nurses speaking to patients, with simple clauses instead of complex sentences with connectors. Register should not be understood simply in terms of formality. Register is commonly analyzed in terms of three variables: field, tenor and mode, which "act collectively as determinants of the text through their specification of the register (Halliday 1978)".

Biber (1995), used the word register to refer to all situationally-defined varieties, but he extended the covering of this term, including in it also named varieties within a culture, such as novels, letters, sermons, etc. Register distinctions are usually defined in non-linguistic terms, by differences in purpose, interactiveness, production, relations, etc. However, there are usually important linguistic differences among registers. Moreover, many texts are mixed and registers could be defined at any level of generality, for example an academic

essay is a very general register, while the technical section of an essay on chemistry is a highly-specific register.

Register is therefore a subset of the language that fulfills communicative functions inside a specific context of situation. Certain meanings that conform a register are expressed with statistical higher probability by means of a set of linguistic forms than by another. Therefore the register concept points to the limited use of a group of linguistic resources determined by the context of situation. Socially, limitations exist about what one can say, how one can speak and even, if one can speak at all. Register is therefore a useful concept to explain the relationship between context of situation and language, although this should not be understood as a mechanical correlation of these elements.

Halliday (1966:87) points out that the register category is necessary to explain what people carry out by means of language use. It is not the fact or state of affairs of which one speaks, that determines the selection, but the convention that certain language type is appropriate for a certain use. The differences among the registers are fundamentally differences in the linguistic form, the vocabulary and the grammar. Although linguistic differences exist among the registers, they present aspects in common.

The correspondence of register with a context of situation allows it to be classified according to the three dimensions that represent the fundamental aspects of the situations in which one makes use of language. Therefore, registers are distinguished according to the field of discourse, the mode of discourse and the tenor of discourse.

The field of discourse refers to the area of operation of the linguistic activity that can coincide with the matter or topic, or it can be just a subsidiary part, in which

case the field is the entirety of the activity carried out. The tenor of discourse refers to the relationship among the participants in the activity and it distinguishes between different degrees of courtesy and intimacy. The mode of discourse, on the other hand, refers to the means by which the linguistic activity is carried out, by means of writing, or by means of oral speech.

More precisely (Halliday and Hasan, 1991:56-59) the field is related to the nature of the social activity and therefore to the types of actions that are carried out and its objectives. The tenor of discourse refers to the roles that the participants adopt in the social activity, and the degree of control on the interaction as well as the power held by one participant on the other one in a hierarchical system. As for the mode, this includes the role that the language has in the activity, which can vary from being constituent of the entirety of the activity to having a simple ancillary role, of secondary companion to the activity. For a translator or an assessor of translations, knowledge about different registers in both source and target culture is essential. Yet source texts constantly deviate from common expectations about registers. The translator is then faced with the question of how to accommodate this in his work. The notion of situations ranging from more to less conventionalised seems to be a useful starting point. When translating literature, in which expectations about the register are more relaxed, the translator may well best convey the author's intention by using a "wrong" register. In more conventionalised situations the translator is also more bound by the expectations of the register. Hence, when translating a business letter, which is to be sent to his commissioners' new business partners, the translator - following the commissioners' intention -

should oblige the expectations about register in the target language, regardless of the register of the source text.

It is interesting to note that the less there are demands on the register in a given situation, the more the translator has to be aware of the registers in the source text. In a highly conventionalized situation, the translator barely needs to notice the source text's register. However, in non-conventionalized situations the source text register(s)' need to be analyzed carefully. In literature, an odd choice of register is often made in order to signify something. The translator's duty is not only to recognize this, but also to convey the effect in the translation. Not an easy task, considering that registers may have different uses and connotations in different cultures.

Werlich introduces register as one form of variety, a set of linguistic features determined by cotextual or contextual factors (626). As other varieties he lists idiolect, dialect, sociolect, text idiom, style and medium (251). However, if we take register to mean choices based on situational factors, these seem to be either included in it or are defining features of it.

Concerning the concept of discourse, several authors propose different definitions. For some discourse is given by the interrelation of speech with the other processes of social interaction and the use of the non linguistic knowledge in communication.

For example Manguenau (1989:15-16) points out the existence of at least six linguistic conceptions of discourse:

- 1. as speech (in the Saussaurean sense of the term)
- 2. as a linguistic unit larger than the sentence, a message taken globally, an utterance

- 3. as the complex of rules of linkage between series of sentences that conform an utterance
- 4. as an utterance or text related to its production conditions
- 5. as an enunciation that comprises a speaker and a listener, and the intention of the former to influence on the latter.
- 6. as the use of language, in which creativity is exercised and the context and the new values of the linguistic units emerge.

Others characterize discourse as the communication flow, without setting contours or limits. Greimas and Courtés (1990:126) state that "In a first aproximation, you can identify the concept of discourse with that of the semiotic process, and consider that the entirety of the semiotic facts (relationships, units, operations, etc.), located in the sintagmatic axis of the language, depends on a theory of discourse."

The saussurean concept of discourse presents language use, speech or parole in individual and not social terms. Norman Fairclough (1991:119i) differs from this and when using the term discourse, this author maintains that language use is linked to the relationships and social processes that in a systematic way determine the variations in its properties, including the linguistic forms that appear in the texts.

There is a bond between speech and the social institutions in which it takes place. Human activities are carried out within the frame of more or less stable social institutions that assign certain roles to the individuals in their interaction and generate meanings and specific values that are linguistically articulated in systematic ways. These ways of expression of meanings and values associated

to social institutions are named discourses. There will be, then, political, religious, judicial, ethical discourses, etc. Discourses are the mode of existence in speech of the forms of the social conscience, of ideology and social psychology.

The conception of discourse as communicative behavior, as a manifestation of speech, can be distinguished from the concept of discourse as a reflection of the relationships and social values linked to an institution. If in the former discourse is unitary and refers to the oral or written flow of emission and reception, in which there is a diversity of linguistic and extralingüístic factors seen in their unity and continuity; in the latter what stands out is the discontinuity, the fragmentation of this unity in relation to the diverse institutions in which the communicative activity is carried out. Discourses will then be systems, with a higher or lesser degree of internal coherence that will be present in the texts. This position, adopted by the so-called critical discourse analysts like Gunther Kress and Norman Fairclough (see Caldas-Coulthard, 1993) influenced by the conceptions of V.N. Voloshinov, M. Bakhtin, Michel Foucault and Louis Althusser leads us to conceive discourse as "a complex of these elements: the social practice, the discursive practice, and the text (Fairclough, 1991:120)."

Texts, then, will show different discourses, in fact, according to G. Kress (1989:12) the resolution of the discursive conflicts is "the engine that produces the texts." In his conception discourse and genre are the main determining factors in texts.

Discourses when manifested in the texts make use of resources of one or

several registers however, they don't define the texts, neither do they articulate them. This function of articulating and defining is given by the genre.

Genre is a linguistic phenomenon which also stems from the fact that texts tend to be classifiable into categories. Genre is a widely used concept. The concept of genre has different definitions. For Timoféiev (1979:291) "genre is the group of peculiarities of the composition structure of the literary works". On the other hand, Todorov (1978:47-52) points out the concept of genre starting from the concept of the modification of a speech act, analyzing it from the tripartite perspective of Morrisian semiotics. These two conceptions, are commonly linked to a semantic dimension of genre.

The concept of genre in linguistics is more recent and it is generally linked to the linguistic-literary studies associated to Russian theoreticians Mijaíl Bajtín, P.N. Medvedev and V.N. Voloshinov that began to be widely disscussed in the west in the late 1960's. The theoretical studies and the pedagogical applications in the work of John Swales (1985, 1990) and Tony Dudley-Evans (1990) are more recent, and nearer to the linguistic tradition and to discourse analysis in the English language.

According to Bajtin (1982:248) all spheres of human activity are linked to the use of language, which is carried out through utterances. Those utterances reflect the specific conditions and the objective of each of the spheres of human practice by their thematic content, the verbal style (selection of the lexical, phraseological and grammatical resources of the language), for their composition or structure. The three previous aspects are linked in the utterance and they are determined by the specificity of a given sphere of communication.

Each utterance is individual, but each sphere of the use of language elaborates its typical utterances, which are known as discursive genre.

However, for the purpose of translation, it seems best to start with the rather general definition of genre as (Swales, 9) "a class of communicative events which typically possess features of stability, name recognition and so on ". Or, Swales (1985) "a recognized communicative event with a public shared purpose and with objectives mutually understood by the participants in that event." And more elaborately (Swales, 1990):

"A genre includes a class of communicative events whose members share a group of communicative purposes. These purposes are recognized by the expert members of the parent discourse community, and therefore they constitute the basis of the genre. This basis conforms the schematic structure of the discourse and it influences and constrains the selection of the content and the style. The communicative purpose is a privileged criterion that operates to delimit the scope of a genre, as here conceived, to a rhetorical comparable action. Besides purpose, the exemplars of a genre show several patterns of similarity in terms of structure, style, content and adressed audience. If all the high probability are satisfied, the exemplars will be considered as expectations prototypical by the parent discourse community. The names of the genre inherited and produced by the discourse communities and imported by others constitute an valuable ethnographic communication, but they usually require further validation".

Kress (1989:18-19) defines genre as conventional forms of texts associated to certain social situations and he mentions, as examples of genre, the interview,

the essay, the conversation, a purchase, the seminar, the sport commentary, the seduction, the memorandum, the novel, the political speech, the editorial, the sermon, the joke and the instructions.

The idea of genres has spread so widely even outside the academic world that Trosborg feels we can talk about a "folk typology" of genres (6). In linguistic and translation studies, some definitions of genre are based mainly on external criteria (Trosborg, 9), while others stress the communicative role of genres. For expectations common to certain texts to develop, there need to be people who are regularly engaged in producing, reading or evaluating these texts. These groups, discourse communities, "are socio-rhetorical networks that form in order to work towards sets of common goals (Swales, 9)." In other words, genres are owned by the respective discourse communities. By familiarising himself with texts within a genre, the reader develops schemata, knowledge about that genre, which turns into a skill promoting acquisition of the content when reading new texts within that genre. Hence it is the communicative purpose that influences the formation of genres. (Swales, 9-10). Another notable definition comes from Werlich, who uses the term text form. To him, text forms are dominant manifestations of particular text types and text form variants composed in accordance with the general expectations (46). Genres are closely related to registers. In fact, the two were, for a long time, used rather interchangeably. A common definition for the distinction seems to be that "genres constrain the ways in which register variables of field, tenor and mode can be combined in a particular society", as Swales sums up, following Frow (Frow 1978:80 in Swales, 40).

Another definition comes from Couture: genres are completable structured texts, such as a weather forecast on television or a doctor's certificate, whereas registers represent stylistic choices (legal language, language of medicine). Hence, register works at the level of vocabulary and syntax, genre at the level of discourse structure. This allows for genre analysis to concentrate on the communicative aspects and the generic structure. If we consider that our definition of text type emphasised communicating the function of the text, the three aspects can be seen as complementing each other.

Swales (7) points out a further rationale for seeing genres not solely as groups of texts. He proposes that texts may play different roles in different environments. By this he means that texts should be evaluated in the context where they appear, as this may well affect the text. This, of course, has implications for the translator's work. The role of the text may well be a crucial factor in determining how a text should be translated.

The notion of social groups determining the respective genres is of importance to translation assessment. A translation which is perceived as low in quality by language experts, may sometimes be highly appreciated by the group determining the genre. Technical manuals translated for professionals are a good example of this. The optimal translations (optimal especially if costs are taken into account) may well break several conventional norms about readability or grammaticality. Yet the users' expectations about texts belonging to that genre may consist of other things. In technical translation it is now widely acknowledged that the users define the genre and translators should respect these expectations in their work. The same should apply to many other genres and their translation and translation assessment as well.

Our natural tendency is to interpret texts as communicative units, which have features connecting them to the world outside texts. Usually, when we have read a text, we can easily answer questions such as whether the text tries to inform us about something or whether it perhaps belongs to the scientific or the journalistic genre. Moreover, we seem to make assumptions about texts even before we have read them. These, too, are rather automatic, based on our previous experiences and therefore easily evoked. For a translator the analysis of register, text type and genre seems to be an optimal tool: without consuming much time, it seems to reveal something rather crucial about texts, and can be used to guide the translator's choices.

The theories concerning text type and translation are mostly based on the work done by Bühler in the 1930's (Chesterman, 105). Texts are often classified according to their predominant mode of expression (e.g. literary language). Bühler's idea was to categorise texts on the basis of their main function. Some texts rather obviously aim at influencing our beliefs, others are read for their aesthetic effects, yet others simply distribute information. This led Bühler to define three text types: conative, expressive and representative. (Reiss, 108). Bühler's ideas were further developed by Katharina Reiss, who has conducted influential work on the value of text types for translation. Three of her categories - informative, expressive and operative functions - are essentially based on Bühler's work (Reiss 108). In addition, Reiss has defined a fourth category, audio-visual texts (Ibid.). This is a sort of mixed category, which can include texts from all the other categories, as long as they are intended for audio-visual media (Ibid.). It is very likely that her aim with this addition has been to highlight the demands on a translation that can not be adequately found in the analysis

of the other functions, i.e. the distinction is made because of its practical and pedagogical value. It seems that although other categories can be suggested for different purposes, they do not alter the role of informative, expressive and operative functions as the basic categories. Also Reiss stresses that the three categories cover all written texts, though some texts are compound texts, i.e. texts with more than one function (Reiss, 111).

The text type theory strongly stresses the communicative role of texts. Hence, a translation is primarily a communicative service for the target language receivers (Reiss, 107). That texts can be categorised according to their function follows naturally from this. The text type theories were preceded by developments in the field of linguistics, where the attention was turned from small to larger units. In Reiss's theory, the text (or sentence or word) is not taken as the primary unit. Instead, texts form a whole with the function of the communicative event. (Reiss 113 115). It is this function, above all, that determines how a text should be translated. In a translation process this involves determining the type of text, the translator's conception of it and the aim of the translation. (Reiss 115). The most important implication for translation assessment seems to be, as Reiss concludes, that translations should be assessed only if the function has been determined and is known.

Thus, the practical application of text type theory is to define the main function of a text as part of the translation process. The idea is to enable the translator to focus in preserving this in his translation, as Reiss thinks should be the case if translation is "an end in itself, simply seeking to extend an originally monolingual communicative process to include receivers in another language"(114). In reality, the text type of the target text may turn out to have a

rather different function from the source text. A political speech by Winston Churchill translated for a modern school book will hardly have its original operative function, but rather be informative.

More recently, text types have been studied by J.C. Sager. Sager, too, in line with communication theory, stresses how translations should not be made of "texts", by which he means units of form and content. Instead, documents, i.e. the above defined texts with the writer's intention encoded in them, should be the unit of translation and translation assessment. (Sager, 27) This does not sound very different from Reiss's function. According to Sager, the writer only addresses his intended audience with the document. If other audiences are targeted with the document, as is the case with translations quite often, the document is given a new intention (by the translator). So many texts commonly seen as translations seem to fall in this category (e.g. the history book example above) that it seems only natural to allow translators to change the intention if the communicative purpose requires it.

In conjunction with this skill to recognize text types, registers or genres, readers have also acquired expectations about them. To be successful, a translator cannot ignore these expectations. Hence, text type, register and genre are not just useful, but necessary concepts for a translator.

While research on text types, registers and genres provides translators with valuable information, it is important to remember that these studies, like other text linguistic studies, can reveal no hard rules or exact dichotomies but only broad tendencies.

Writers may also break the conventions in other ways. The translator is then faced with a problem: if this is part of the expected behaviour on the side of

writers, should the translator, in his efforts to meet the expectations of the audience, also "break the rules"? Again, it may be, that different expectations apply to translated texts (if a text can be defined as a translation). The problems created by deviations from norms are not limited to the target culture. Equally well, a translator may define a source text as belonging to a certain source language genre, register or text type, yet having some deviations from it. It is then the translators' task to decide how to cope with this. If the translator wants to reflect this in the translation, it is by no means self-evident how this should be done. The same deviations are probably not possible, after all. In other cases, texts may be seen to be improved by making them to conform to the "rules" of the target culture. It seems that there are texts for which the realization of these rules is more important than trying to convey the SL author's own voice, for example, we have a rather strictly defined idea of how pieces of news must be constructed.

A second, related problem appears as we try to define how many registers, text types, or genres exist. This problem is particularly obvious, if we consider the number of registers. If there is only a relatively small number of registers which are used in translations, there is a risk of sacrificing individual features in favour of something which at its most extreme form may be just a bunch of stereotyped clichés. After all, registers are supposed to tell us how different people speak or write in different social situations. On the other hand, if the number of registers is high, the whole idea loses its practical applicability. With text types, this problem does not surface so easily, as the theory allows for mixed functions. But when applying the genre theory, there is a similar problem: if we define genres too strictly, we may either exclude truly indigenous voices altogether as

bad texts, or, when translating, tone down personal styles and make all texts sound similar.

This notion seems to be of major importance for translators if we think of the polysystem theory of literature and translations developed by Even-Zohar. As a part of the greater theory, EvenZohar states that in some situations a culture and its literature may develop above all through translation, as translated texts bring new features from the source culture into the target culture (1990, 46-47). Even-Zohar writes about new phenomena in literature at the level of entirely new genres, but there is no reason why this kind of phenomena could not happen at "lower" levels, or in the form of new subgenres. Of course, this notion does not give translators a license to ignore text level features. Yet this phenomenon of acquiring features from other cultures is in no way limited to the field of literature. Consider a relatively new phenomenon, using e-mail for business correspondence. With the arrival of the new communication method, new expectations on formulation are adopted. This, of course, was not solely caused by translators, but rather by all language users. Nevertheless the phenomena are the same: new conventions are adopted from other cultures.

It is not easy to define what the final decisions of a translator should be. After all, in many cases there seem to be good reasons for obeying the source culture conventions, just as there are for target culture conventions. Moreover, it is not easy to define what solutions fit within the desired range of these textual features. As more corpus studies are conducted, it may become possible to give some sort of guidelines about current tendencies on different fields.

In the following we will characterize the register, discourses, genres and texttypes of science journalism in relation to translation, since the study of errors we will conduct will be based on these texts.

1.6 The translation of science journalism

Science journalism is a relatively new branch of journalism, which uses the art of reporting to convey information about science topics to non-professional readers. In recent years, the amount of scientific news has grown rapidly with science playing an increasingly central role in society, and interaction between the scientific community and the general public has increased.

In science journalism the features of scientific discourse and journalistic discourse meet. From this meeting evolves yet another type of discourse, popular scientific discourse. Popular scientific discourse comprises different kinds of information on science that is directed to a non-professional readership. In this type of text the specialized knowledge is mainly presented in a neutral journalistic language, but emotive and connotative language as well as metaphors are used in order to make science interesting, entertaining, and understandable. The process of spreading science and technology through newspapers and magazines of general interest in English is mainly a journalistic activity, and it is related to scientific and technical activity by means of the essential features of the institution of the press.

According to Troyanskaya in her "The field structure of scientific style and its generic varieties" included in Tsvilling, (1978:16) when we are going to analyze the scientific-popular and scientific-advertising literature we should consider that the texts (in which they are present) are not uniform and they are represented

by many varieties (which have not been studied in detail). These texts are compositionally similar to the literary, conversational, scientific and publicistic functional styles. Their objective, in the scientific-popular literature, is to popularize the scientific knowledge to non-professionals and in the scientific-advertising literature, is to present the scientific knowledge with the objective of causing the desired reaction in the reader.

Generally we can say that the texts of scientific-technical popularization in the magazines of general interest are characterized by the simultaneous presence of the scientific terminology and of a non-specialized lexicon that can be neutral or specifically publicistic and journalistic. The lexicon that contributes mainly to the cohesion of the text consists of the words which refer to the human agents more than to the object of scientific study. And among them, those words which are not directly related to the scientific activity but rather to the users, patients or public of the scientific activities. As for the structure of the text, in the popularization, authors follow the consolidated patterns of the journalistic article and not those of the scientific article.

1.7 Translation quality assessment

Below, we summarize and compare a number of important TQA models. Whether they have actually been put into practice or have merely been proposed, almost all have one feature in common: categorization of errors lies at the heart of each approach. That being said, their concept of categorization differs, according to (1) whether or not they incorporate quantitative measurement and (2) whether they are standards-referenced (based on fixed standards that have to be met) or criterion-referenced (based on specific

objectives that have to be achieved for a given text), and they can be classified on that basis.

Models with a quantitative dimension

Canadian Language Quality Measurement System (Sical) The TQA model developed by the Canadian government's Translation Bureau is the best-known one, at least on the Canadian scene. It was developed both as an examination tool and to help the Bureau assess the quality of the 300 million words of instrumental translation that it delivered yearly. Applied from 1986 to 1994, the third-generation Sical incorporated a scheme based on the quantification of errors and on a twofold distinction between (1) translation (transfer) and language errors and (2) major and minor errors. Texts were given quality ratings according to the number of major and minor errors in a 400-word passage: A—superior (0 major errors/maximum of 6 minor); B—fully acceptable (0/12); C—revisable (1/18); and D—unacceptable. As such, it was a standards-referenced model: quality levels were defined in terms of the errors that a text of a given standard could contain.

Discourse analysis model

Using works by Searle (1969), Halliday and Hasan (1976), Widdowson (1978), and van Dijk (1980) for the theoretical underpinnings of their model, Bensoussan and Rosenhouse (1990) propose a TQA scheme for evaluating student translations by discourse analysis. They make a distinction between errors based on lack of comprehension and those resulting from other shortcomings or problems. Comprehension is assumed to happen simultaneously on the macro and micro levels. Accordingly, they divide errors into (1) macro-level misinterpretations (frame, schema) and (2) micro-level

mistranslations at the utterance (propositional content, communicalive function) and word (vocabulary/ expressions, parts of speech/verb tense, pronoun agreement, acceptability, and register) levels (1990: 71).

To demonstrate the model, the authors subdivide a chosen (literary) text of approximately 300 words into units ranging from one to three sentences in length, assign it to a group of students as a translation exercise, and proceed to identify and characterize errors at the macro and micro levels, giving points for correct translations of each unit. They then generate frequency tables for each category of error.

They conclude, among other things, that mistranslations at the word level do not automatically lead to misinterpretations of the frame or schema. In other words, the overall message may be preserved in translation, notwithstanding microtext error. On this basis they suggest that it may be possible to avoid the cumbersomeness of painstaking micro-evaluation of translations by basing evaluations on misinterpretations alone (Bensoussan and Rosenhouse 1990: 80).

Teleological model

One of the few Canadian theorists to focus on TQA, Larose (1987) makes explicit a quality factor that is only implicit in Sical and SEPT: the objective of the translator. Aware of the dangers of subjectivity and hypercriticism in TQA, Larose issues a salutary warning to the evaluator: "Every translation must be assessed in terms of the appropriateness of the translator's intention to that of the author of the original, not of the appropriateness of the translator's intention to that of the evaluator" (1987:223; our translation). In making this statement, he is contending that TQA cannot be a closed system, as it has tended to be in

literary-translation criticism; it must take as its starting point the client's and other requirements and goals that the translator has endeavoured to meet.

Larose goes on to propose a multilevel grid for textological TQA, covering microstructures, macrostructures (thematic strings, cohesion, etc—in short, the overall semantic structure), superstructure (narrative and argumentative structures) and external factors, including the conditions of production, intentions, sociocultural background, and so on. Furthermore, the higher the level of the translation error (microstructure being the lowest), the more serious it will be.

In later articles (1994 and 1998), Larose elaborates on the idea of a "teleological," criterion-referenced TQA model, contending that TQA can be objective and reliable if the real objectives not of the author but of the translation contract issued by the client are taken into account. Once the objectives are established, the evaluator is in a position to determine the criteria (referential meaning, concision, etc.) and constraints (time, cost, the client's implicit and explicit quality requirements, even social values and requirements) against which one or more translations of a source text are to be assessed. The approach is a very pragmatic one: Assessment basically involves comparing the goals of the translator with the resulting translation, in light of pertinent criteria and constraints (1994: 369).

Larose proposes a new grid for a multicriteria analysis in which translations are evaluated against each quality criterion separately and the value of each criterion is weighted according to its importance for the contract. He illustrates the grid with translations of literature, each rendering of lines from Aristophanes's Lysistrata being rated against seven criteria:

referential meaning, poetic character, humorous imitation of Spartan speech, expression of contrast between Athenian and Spartan speech, rimes, and concision. The criteria may be far removed from those of instrumental translation, but Larose contends that it would certainly be possible to devise a relevant set of criteria for instrumental TQA. He points out that the number of criteria must be limited (fewer than Gouadec's 675!) if the model is to be workable.

Referring to the fact that the Translation Bureau has distanced itself from Sical, Larose notes that there is a fundamental contradiction between sampling for TQA purposes and the contemporary focus on total quality and zero defects. At the same time, he points out that the objective of zero defects is probably unrealistic—hence the Bureau's return to systematic revision of the whole translation (1998: 181).

Larose concedes that the creation of a truly comprehensive TQA grid is probably impossible, because of the number of parameters or criteria, the complexity of their relationships, and the time and resources required to implement it (1998: 175). Accordingly, any grid is necessarily reductionist and based on the most relevant parameters and criteria.

Non-quantitative models

Critique productive

Unlike the error-based models above, Antoine Berman's model (1995) incorporates a positive assessment of (literary) translation. Rejecting what he sees as an ideology-driven, judgmental model of TQA, in which the evaluator is intent only on highlighting defects in the target text (TT) or in demonstrating how norms in the target culture condition it, Berman advocates an assessment that

brings out not only the shortcomings but also the qualities and originality of the translation as a work of art. He then proposes a general procedure. The key step is the selection of significant passages in the translation that encapsulate its essence and comparison of these "zones signifiantes" (1995:70) with the original. The ensuing "confrontation" may well bring out differences between the source text (ST) and the TT, but they may be assessed as strong points contributing to the originality of the translation.

Berman's is a closed system, and his approach is an empirical one with no specific assessment criteria. His overarching purpose is to demonstrate the superiority of a translation approach that brings out the essence of the original.

Functionalist model

In an attempt to counter what she sees as arbitrary, subjective criticism of literary translations, Katharina Reiss (1971; 2000), an early and leading exponent of the functionalist theory of translation, proposes a method of translation criticism based on text type and goals. After isolating two main translation methods—text-oriented and goal-oriented—Reiss goes on to contend that the critic must assess quality against the standards or criteria appropriate to the method applied. This involves consideration of the linguistic elements of, and extra-linguistic elements affecting, a given text type and the "special function or readership which the translation is intended to serve" (2000:114). Thus, well before Larose, Reiss brings out the prime importance of the textological and teleological (goals, end use of translation) aspects of TQA. At the same time, she underscores the influence on TQA of the subjective conditions of the hermeneutical process and the translation critic's personality.

Skopostheorie

Christiane Nord (1991a, 1991b, 1992) elaborates on Reiss's (1981) premise of translation as intentional, interlingual communicative action and proposes an analytical model based on the function and intention of the target text in the target culture and applicable to instrumental as much as to literary documents. Depending on the function of the target text and the translation instructions issued by the initiator of the translation request, the translator may intend to preserve all semantic and formal features of the original or adapt the ST material extensively. Thus, she envisages the possibility of establishing grades of required types of translation on a scale running from extreme fidelity to extreme liberty (1991b: 28).

Nord's notion of "grades" of translation quality is not comparable to those of Sical or SEPT. Her grades are based on a conscious decision to produce a relatively "literal" or relatively "free" translation and do not encompass a tolerance level for errors unwittingly committed by the translator. It is the "initiator" of the translation project who issues the translation instructions and defines the skopos, or prospective target situation (1991b: 8). Accordingly the evaluator must take the TT skopos as the starting point for TQA. Thus Nord's approach closely parallels that of Larose, who emphasizes the need for TQA to factor in reader expectations and the requirements set by the client in the contract.

Nord emphasizes that error analysis is insufficient: "[I[t is the text as a whole whose function(s) and effects) must be regarded as the crucial criteria for translation criticism" (1991b: 166). This is a key qualification, for on the basis of a selection of relevant ST features, the translator may eliminate ST items, rely

more heavily on implicatures, or "compensate" for them in a different part of the text. Indeed, as van Leuven-Zwart points out in developing an interesting corollary of translation-oriented analysis, the "shifts in meaning" that account for many "unsatisfactory" ratings in professional translation should perhaps not be considered as errors at all, given that equivalence is not feasible (1990: 228-29). In short, microtextual error analysis is insufficient.

In the examples of translation-oriented text analysis presented to illustrate the model, Nord's judgments are generally parameter-specific, and when there is a judgment, it is not definitive. Indeed, she states that there "will be no overall evaluation of the translated texts" (1991b; 226). She does, however, make a definitive, overall judgment on the sample texts as a whole: "[N]one of [the translations] meet the requirements set by text function and recipient orientation" (1991b: 231). But how does she generate an overall assessment from the parameter-specific comparisons, particularly when her judgment is based on the nature of the errors, not their number?

Descriptive-explanatory model

In an update of a work first published in 1977, House (1997) presents a detailed non-quantitative, descriptive-explanatory approach to TQA. Like Bensoussan and Rosenhouse, House uses the functional text features explored by Halliday (1978) and Crystal and Davy (1969). She does, however, take issue with the functional approach proposed under Skopostheorie because, in her view, it relativizes the importance of the meaning of the source text in favour of the primacy of target-culture norms and purpose. She rejects the principle enunciated by Reiss and Vermeer (1984: 96) that "[t]he purpose of translation determines the means" (our translation). Indeed, she prefaces her presentation

of the model with a clear statement of her belief in autonomous meaning of the text and, consequently, the importance of equivalence, although her notion of equivalence is tempered by communicative and pragmatic considerations.

Like Larose and Nord, House calls for a textological approach to TQA: "The importance of the textual aspect of meaning has often been neglected in evaluations of translations, although the necessity of achieving connectivity between successive sentences in another language while at the same time retaining the semantic meaning conveyed in the original is important, especially in covert translation" (1997:31). Armed with her notion of equivalence based on a distinction between overt (source-text-oriented) and covert (target-text-based) translation, and applying a grid developed from established linguistic theory, House dismisses the idea that TQA is by nature too subjective. At the same time, she does not underestimate the "immense difficulties of empirically establishing what any 'norm of usage' is," especially for the unique situation of an individual text (1997:18), and of meeting the requirement of knowledge about differences in sociocultural norms (1997: 74). She also concedes that "the relative weighting of individual errors ... is a problem which varies from individual text to individual text" (1997: 45).

Expanding the three components of rhetoric (invention of arguments, arrangement/order of arguments, and style), Malcolm Williams proposes to develop his model, an argumentation centered approach, on the basis of the following discourse categories:

- 1. Argument schema
- 2. Rhetorical topology
 - (a) Organizational relations

- (b) Connectives (conjunctives and other inference indicators)
- (c) Propositional functions
- (d) Types of argument
- (e) Figures
- (f) Narrative strategy

1.8 Typologies of translation errors

In several universities mainly in the French speaking sections and even in the field of the professional translation, typologies based on centenarian categories are still used to define translation errors; these categories were created to evaluate the reverse translation (theme) and direct translation (version) that were a fundamental element of the traditional lessons of foreign language in the French culture. The current versions of these typologies usually identify the errors of sense transmission with the categories of false sense, non-sense, countersense and different sense and the expression errors in the target language (TL) with categories such as grammar, spelling, barbarism, imprecise, etc.

These categories have been frequently criticized; but their use has remained for years in several academic and professional circles. Gouadec gives two fundamental reasons why this happens: "the first reason is the force of habit, and the second is a veiled reference to the persistent popularity of the positions of the well-known school of Comparative Stylistics (Gouadec, 1989: 36).

Some authors point out the inadequacies of *L'Estilistique Comparéé* as a method for the teaching of translation, for example Hurtado (1995: 54) among

other deficiencies mentions that the method is centered on the product more than on the process and Gouadec (1989:36) proposes to leave apart all the classifications carried out so far and make a fresh start. The traditional categories base the evaluation of the translation on a comparison of two products (the source text (ST) and the target text (TT)) and they do not take into account the communicative process. Kussmaul (1995) says that the evaluation methods based on these typologies analyze the translation errors as linguistic errors (from the perspective of the professor of the foreign language) so grammatical or lexical deficiencies are penalized by the nature of the error itself; that is to say they do not see TT as a translation and they limit it to a linguistic exercise. The error is studied at word level more than at textual level (Palazueloset et al. 1992:17). According to Kupsch- Losereitel the major deficiency of these typologies lies in the consideration of the error as a deviation of a linguistic norm; the analysis focuses on the errors committed by the student, and the professor looks for the causes of these errors and not their effects.

In spite of the critics new methods have been elaborated starting from L'Estilistique Comparéé. by the middle 1970's emerged the first version of SICAL (système canadien d'appréciation de la qualité lingistique, Canadian system of appreciation of the linguistic quality) whose objective consisted on evaluating the quality of the translations carried out by the Federal Bureau of Translation. This system developed fifteen evaluation parameters that we consider should be mentioned for their great utility. They are as follows:

(1) Parameters of sense transmission

- (I) Sense: The transmission of the sense of the ST (non sense, counter sense, different sense, etc.).
- (II) Terminology: Specialized terminology, acronyms or abbreviations, etc.
- (III) Structure: The way the translation units are organized and structured.
- (IV) Effect: Any effect of style or tone: alliteration, puns, emphasis, etc.
- (V) Écart (deviation): "linguistic deviations" (écart de langage) include any unnecessary variation of register, or any incoherence or thought opacity.

(2) Writing parameters

- (VI) Spelling and punctuation.
- (VII) Syntax
- (VIII) Use: the use of idioms and of archaic or regional terms.
- (IX) Style: it is necessary to know how to choose among the possible options: for example, to avoid the "heavy" style, to know when the repetition is necessary or not, to know how to place the words correctly.
- (X) Tonalité (tone): any tone variation not justified by the ST.
- (XI) Logic: any incoherence not justified by the ST: for example, images or incomprehensible metaphors.
- (3) Parameters "stride the SL and TL (à cheval sur la LD et la LA)."
- (XII) Démarche (management): This parameter has to do mainly with the cultural aspect of the translation.

(XIII) Nuance: this parameter supplements the (I) "sense". It is applied if the translator has only understood the essential sense of a unit of the ST and it has lost some nuance.

- (XIV) Addition: the translator should transmit "nothing else but the truth."
- (XV) Subtraction (omission): the translator should transmit "the whole truth."

Palazuelos et al. propose a new concept of translation error as well as its different classifications. Based on the work of Coseriu "Lo erróneo y lo acertado en la teoría de la traducción" (1985) they demonstrate the differences that exists between errors of speech (of production) and the translation errors (of reproduction). They also distinguish between translation errors as such and those that the translator could make. Palazuelos et al., taking into account Coseriu's postulates, state that translation implies:

- to know how to interpret what has been denoted and the sense of a text in a language "X".
- 2. to know how to reproduce what has been denoted and the sense of a text in a language "Y".

Therefore any non fulfillment of this is considered as a translation error that they define as any failure concerning the reproduction, in the target language, of the textual content given in a source language. (Palazuelos et al. 1992:68).

To identify these errors they are based on the comparison of ST and TT since the objective of the reproduction (i.e. of the translation) is to establish an equivalence relationship between both contents. Starting from this concept of equivalence in the translation they propose six types of possible relationships among the contents of both texts:

- 1. Equivalent sense
- 2. Different sense
- 3. Opaque sense
- 4. Expanded sense
- 5. Restricted sense

6. Related sense

Palazuelos et al. share important concerns with other experts, but they formulate their taxonomy within a limited framework: the concept of translation just as product and not as process and product; the concept of evaluation as the equivalence comparison between two products.

On the other hand House (1977: 103) describes the essence of translation as sense conservation through two languages. This sense has three aspects: semantic, pragmatic and textual. The author defines the translation as the substitution of a text in the source language for an equivalent text at the semantic and pragmatic levels in the target language. For this to be possible the translation should have a functional equivalence similar to that of the source text. Therefore the translation error consists in not achieving this functional equivalence and House names it covertly erroneous error (hidden error).

House distinguishes among these errors of translation and those that results from a linguistic faulty competence which are known as overtly erroneous errors (patent errors), they include:

 "a mismatch of the denotative meanings of ST and TT elements" (House, 19977: 105).

2. writing errors in TL (of grammar, syntax, etc.)

Kupsch-Losereit (1985) considers translation from a functional perspective. The concept of functional adaptation is a fundamental element for the definition of translation error. "A meaningful assessment of any translation must accordingly be based on the analisys and comparison of an ST and to TT, both of which should constitute the realization of to specific equivalent text function in to communication situation (for instance cultural norms, stereotypes, geographical, historical and institutional aspects)" (Kupsch-Losereit,1985: 170). The relationship among the communicative function, thematic construction, textual coherence and linguistic structure is specific of the language and the target culture. For example the use of the imperative in English (Read) and German (Lesen Sie) is not posible in French where the infinitive would be preferred (Lire) or another verbal form (Veuillez lire). The author considers that the translation should correspond in a functional, semantic and syntactic way to its original text. Therefore the error of translation is a fault against:

- 1. the function of the translation
- 2. the coherence of the text
- 3. the type or the textual form
- 4. the linguistic conventions
- 5. the conventions and specific conditions of the culture and the situation.
- 6. the linguistic system

Just as House, Pym establishes a difference between the translation errors and the language errors, but from a different perspective. Pym (1992) proposes a classification of errors with the objective of fomenting a fruitful relationship

between the class of translation and that of foreign languages. The author distinguishes among binary errors where there is an opposition between the "correct" and "incorrect" and non binary errors where this distinction doesn't apply, it is rather a question of "it's correct, but..." Pym (1992: 285) points out that the translation class is devoted mainly to the analysis of non binary errors and that the binary errors only require a punctual and shallow correction.

1.9 The concept of translation error

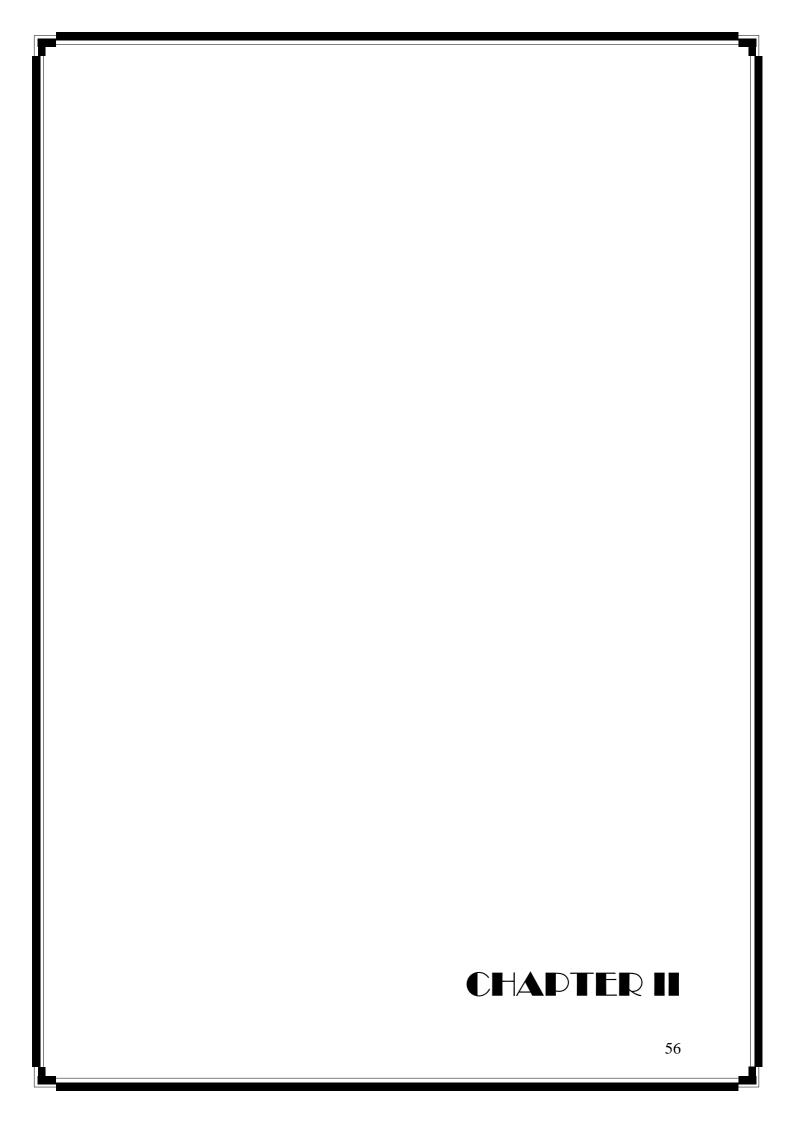
For the analysis of translation errors we have consulted some definitions given by different authors. Nord (1997:59-62) includes "translation brief" (which refers almost to the same thing as "commission") as an important element in her concept of translation error. According to the author "translation brief" should contain information about the intended text function, the target audience, the medium for text transmission, etc. Then she defines "translation error" (in terms of the purpose of the translation process and product) as "a failure to carry out the instructions implied in the translation brief": or more specifically, "If the purpose of a translation is to achieve a particular function for the target addressee, anything that obstructs the achievement of this purpose is a translation error" (Nord, 1997:73-75). This broad definition is followed by a functional model of translation errors which are classified into four categories (Nord 1997:75-78). Nord's model, which applies particularly to non-literary translation, is a challenge to the traditional criterion for evaluating errors in literary translations, i.e. anything in the TT that is not "faithful" to the ST is deemed as a translation error.

Wilss (1982:201), for example, describes a translation error as "an offence against a norm in a linguistic contact situation." Obviously, a functionalist perspective allows us to identify many translation errors which would not be considered as such according to the traditional approach.

Pragmatic translation errors are caused by "inadequate solutions to pragmatic translation problems such as a lack of receiver orientation." The consequences of such errors are serious because target audiences tend not to realize that they are getting irrelevant or insignificant information. However, it is not very difficult to solve pragmatic translation problems "once they have been identified as problems." Normally they can be identified only by a competent person comparing the ST with its TT in the light of the translation brief (Nord 1997:75).

Considering the different kinds of errors described in the literature we will use the following definition for lexical error in this research. A lexical translation error is the lack of equivalence between a source text and a target text which is the result of the failure to properly interpret the sense of a lexical unit in the source text. This inadequate sense is expressed by a lexical unit in the target text that results in a non-sense, a different sense or a counter-sense and can be restored to an equivalent sense by the omission, addition or substitution of that lexical unit in the target text.

In this definition the concept of the sense of a lexical unit has to be understood in terms of the dialectical relations among the different kinds of meaning: the structural meaning, comprising the syntagmatic and paradigmatic meanings, the denotational meaning which reflects the general features of the referent, and the pragmatic meaning which includes the stylistic aspects, connotation and valuation. All these meanings interact in the specific referential use in a context to produce the sense.



CHAPTER II. ANALYSIS OF LEXICAL TRANSLATION ERRORS

2.1 Research Methodology

The present research is intended to analyze the lexical translation errors made by 4th year students majoring in English when translating science journalism texts from English to Spanish. These errors cause linguistic deviations that interfere in the correct sense transmission of the ST, thus, affecting the communication process. This analysis will help us to propose some strategies to improve the teaching of translation.

This research methodology was carried out following five stages:

- 1. First we selected the translations made by 4th year students. As an academic activity in the subject Computer Assisted Translation, the students used MT software (Promt and Power Translator) ¹ to translate the texts that had been previously segmented into sentences and pasted into a Microsoft Excel sheet. Thus originals and translations were aligned side by side, sentence by sentence on two adjacent columns of the sheet. Afterwards the students revised the interligned translations.
- 2. Secondly we organized our corpus making use of the source texts that were aligned with their corresponding translations.
- 3. A third stage entailed the checking of the translations. To accomplish this task we read the whole texts to find possible faults of equivalence at a sentence level.

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¹ @promt Professional, Version 7.0, March 2005. PROMT Ltd, 2003-2005. Power Translator . Version 9.0, 2002, 2003 Language Engineering Company, LLC.

- 4. We tried to find an explanation for the presence of these translation errors.
- 5. And, based on this and the examination of some theoretical criteria on translation strategies we suggest new proposals to prevent the commission of lexical translation errors.

2.2 Survey

Jointly with the analysis of the bibliography we surveyed 18 advanced translation students at the Central University "Marta Abreu" of las Villas to determine the students' level of knowledge about translation errors. (See Apendix 1)

This survey included open questions (in which they could give their own considerations) and closed questions (in which they had to select among the given options).

Most of them defined a translation error as the transmission of a different sense of a word or expression of the ST into the TT, and only three of them considered a translation error as a fault of equivalence between the ST and TT. Among the topics proposed, the students found the most difficult science and technology, followed by science journalism and socio-political topics; generally they did not consider cultural topics hard to translate and one of them mentioned literary translation as one of the most complex for the translator.

Regarding the frequency of the commission of errors, 66 % of the surveyed acknowledged that they sometimes make errors and a 33% stated that in their case this happens frequently.

From the list of errors presented, the students identified the lexical and pragmatic errors as those which affect more the communication process and the quality of translation, followed by the syntactic and stylistic errors.

The surveyed identified as translation errors the following (in this order): terminological inadequacy, omission, ambiguity, spelling, the use of a word in English in a translation to Spanish, different style, addition, and generalizations.

The most frequent causes of these errors were: the translators' ignorance concerning the topic, the terminology and the cultural aspects of the source language, insufficient linguistic and extra linguistic competence, and inadequate training.

The majority of the students in order to prevent these errors, they previously search information on the topic, they use monolingual, specialized and bilingual dictionaries, they ask they professors or consult specialists on the subject. And some of them added that if they have any problem concerning the vocabulary they generalize as a strategy.

As other aspects that may affect the translation process they mentioned the lack of available bibliography and means to get the information needed.

The results of this survey and the analysis of the bibliography allowed us to corroborate the validation of the scientific problem of our research, as well as to determine possible solutions to this problem

2.3 Analysis of lexical translation errors

For the analysis of lexical translation errors we have worked with a linguistic corpus. It is a full-text, synchronic, specific, bilingual, written, parallel

translational corpus of English and Spanish. It is also a mono-source-language, mono-translation-mode (written mode), multi-translation method (machine and human translation) into mother tongue. The total size of this corpus is 696, 372 words, 320, 494 in English and 375,878 in Spanish.

Our corpus consists of a group of texts of science journalism originally written in English and its corresponding translations into Spanish. These translations have been made by advanced students of English Language at the Central University "Marta Abreu" of Las Villas.

We analyzed these translations based on the typology of errors proposed by SICAL, but we only classified them according to their effect on the transmission of sense (non sense, counter sense and different sense).

From the corpus we have selected a number of the most typical examples of these translation errors. In the following instances we will show the source texts (ST) with its numerical reference, the target texts (TT) with errors and the correct translation (CT) with a comment explaining the kind of error.

Table 2.1 Distribution of lexical translation errors.

Lexical translation errors	Omission	Addition	Substitution	Total
Counter Sense	-	-	3	3
Non Sense	-	-	10	10
Different Sense	10	5	32	47

Counter sense

ST 61: Even the vast amounts spent by America's star - wars program failed to produce lasers which could act as agents of destruction <u>in their own right</u>.

TT: Incluso las enormes cantidades que empleó el programa de la guerra de las galaxias estadounidense fallaron a la hora de producir lásers que podrían actuar como agentes de destrucción <u>de su propio derecho</u>.

CT: Incluso las enormes sumas que empleó el programa de la guerra de las galaxias estadounidense no pudieron producir lásers que podrían actuar como agentes de destrucción por sí mismos.

Lexical substitution of the expression "por sí mismos" for "en su propio derecho" causes a counter sense

ST 183: A dramatic jump in the survival <u>rate</u> of heart - attack victims may result from training emergency medical technicians to apply shocks to correct fibrillation, the wild disruption of normal heart rhythm that often follows an attack.

TT: Un salto significativo para aumentar el <u>rango</u> de sobrevivientes a infartos cardíacos pudiese ser el resultado de un entrenamiento a los técnicos médicos para casos de emergencias a la hora de aplicar shocks con el fin de corregir la fibrilación, grave alteración del ritmo cardíaco normal que con frecuencia antecede al infarto.

CT: Un aumento significativo en la <u>tasa</u> de supervivencia de las víctimas de infartos cardíacos puede lograrse si se entrenan los técnicos de medicina de urgencia en el uso de choques eléctricos para corregir la fibrilación, la grave alteración del ritmo cardíaco normal que a menudo sigue al infarto.

Lexical substitution of the word "antecede" causes a counter sense. Lexical substitution with the word "tasa" for "rango" causes a different sense.

ST (10): Cancer vaccines

TT: Las vacunas de Cáncer

CT: Vacunas contra el cáncer

Lexical substitution of the preposition "contra" for "de" causes a counter sense.

Non sense errors

Lexical substitution

ST 7: In Chicago, meanwhile, a customer strolls into a Ford showroom hoping to check out the latest little sporty <u>number</u>.

TT: Mientras tanto, en Chicago un cliente se pasea en un salón de muestras de carros de la marca Ford esperando comprobar el último pequeño <u>número</u> deportivo.

CT: Mientras tanto, en Chicago un cliente se pasea en un salón de muestras de carros de la marca Ford esperando comprobar el último pequeño <u>modelo</u> deportivo.

Lexical substitution of the word "modelo" for "número" causes a non sense.

ST 7: Mr. Scott's job is to make holographic versions, using a judicious combination of Russian lasers, Scottish mirrors and Silicon Valley <u>microchips</u>.

TT: El trabajo de Sr. Scott es hacer versiones holográficas, usando una combinación juiciosa de lásers rusos, espejos escoceses y microchips de Valle de Silicio.

CT: El trabajo del Sr. Scott es hacer versiones holográficas, usando una combinación juiciosa de lásers rusos, espejos escoceses y <u>microprocesadores</u> del Valle de Silicio.

Lexical substitution of the word "microprocesadores" for "microchips" causes a non sense. (Terminological inadequacy)

ST 280: By slipping a new gene into lab mice, the team made the animals' skin cells produce a molecule called <u>beta - catenin</u>.

TT: Introduciendo un nuevo gen en ratones de laboratorio, el equipo hizo que las células de piel de los animales producieran una molécula llamada la <u>beta - catenin</u>.

CT: Introduciendo un nuevo gen en ratones de laboratorio, el equipo hizo que las células de piel de los animales producieran una molécula llamada la <u>beta</u> - <u>catenina</u>.

Lexical substitution of the word "beta-catenina" for "beta-catenin" causes a non sense. (Terminological inadequacy)

ST 41: Evolution may have been able to cope with <u>Warfarin</u> _ a poison to which most rats have grown resistant _ but it will have difficulty curbing curiosity.

TT: La evolución puede haber sido capaz de lidiar con la <u>Warfarin</u>, un veneno al cual muchas ratas se han vuelto resistentes, no obstante, estos animales tendrán problemas para contener la curiosidad.

CT: La evolución puede haber sido capaz de lidiar con la <u>Warfarina</u>, un veneno al cual muchas ratas se han vuelto resistentes, no obstante, estos animales tendrán problemas para contener la curiosidad.

Lexical substitution of the word "Warfarina" for "Warfarin" causes a non sense.

ST 2:" Industrial settings may contain high concentrations of <u>particulate</u> matter in terms of the weight of material suspended in the air, but the number of really small particles _ those with dimensions measured in billionths of a metre, and thus called nanoparticles _ is often not particularly high.

TT: "Dentro del ámbito industrial podrían aparecer altas concentraciones de materia <u>particulate</u> en relación con el peso del material suspendido en el aire pero el número de partículas muy pequeñas_ aquellas con las dimensiones estimadas en los billonésimos de un metro y aquellas conocidas como nanopartículas_ a menudo no son tan elevadas.

CT: "Dentro del ámbito industrial podrían aparecer altas concentraciones de materia <u>en forma de partículas</u> en relación con el peso del material suspendido en el aire pero el número de partículas muy pequeñas_ aquellas con las dimensiones estimadas en los billonésimos de un metro y aquellas conocidas como nanopartículas_ a menudo no son tan elevadas.

Lexical substitution of the expression "en forma de partículas" for "particulate" causes a non sense.

ST 51: Ai's sudden death underscores the tragic consequences of a <u>food - poisoning</u> epidemic that the World Health Organization has declared "unprecedented" in modern history.

TT: La repentina muerte de Ai pone <u>en</u> relieve las trágicas consecuencias de una epidemia de <u>intoxicación</u> que la Organización Mundial de la Salud ha declarado "sin precedentes" en la historia moderna.

CT: La repentina muerte de Ai pone <u>de</u> relieve las trágicas consecuencias de una epidemia de <u>intoxicación</u> que la Organización Mundial de la Salud ha declarado "sin precedentes" en la historia moderna.

Lexical substitution of the preposition "de" for "en" causes a non sense.

Lexical omission of the word "alimentaria" causes a different sense.

ST 51: Just eight days after the first reports of <u>food poisoning</u> in Okayama, two <u>elementary school</u> girls died from 0157.

TT: Solo ocho días después de los primeros informes de <u>intoxicación</u> en Okayama, dos niñas de nivel elemental murieron de O157.

CT: Solo ocho días después de los primeros informes de <u>intoxicación alimentaria</u> en Okayama, dos niñas <u>estudiantes de primaria</u> murieron de 0157.

Lexical substitution of the expression "dos niñas estudiantes de primaria" for "dos niñas de nivel elemental" causes a non sense.

ST 51: Most vulnerable are the country's 25,000 <u>hemophiliacs</u>, who depend on a blood - clotting product made from blood from thousands of donors.

TT: Los más vulnerables son los 25,000 <u>hemophiliacs</u> del país que dependen de productos coagulantes hechos de sangre de miles de donantes.

CT: Los más vulnerables son los 25,000 <u>hemofílicos</u> del país que dependen de productos coagulantes hechos de sangre de miles de donantes.

Lexical substitution of the word "hemofilicos" causes a terminological error.

ST 51: After school on July 11, a 10 - year - old named Ai and <u>scores</u> of other children from Kuze Elementary School in Sakai, southeast of Osaka, were admitted to the Senboku Kinen hospital, a small private facility down the hill from her family's tiny apartment.

TT: Después de terminar las clases el 11 de julio, una niña de 10 años llamada Ai y <u>registros</u> de otros niños de la Escuela Elemental Kuse, en Sakai, sudeste de Osaka, fueron admitidos en el hospital Senboku, una pequeña instalación privada al bajar de la colina en la que se encuentra el pequeño apartamento de su familia

CT: Después de terminar las clases el 11 de julio, una niña de 10 años llamada Ai y <u>veintenas</u> de niños de la Escuela Elemental Kuse, en Sakai, al sudeste de Osaka, fueron admitidos en el hospital Senboku, una pequeña instalación privada al bajar la colina en la que se encuentra el pequeño apartamento de su familia.

Lexical substitution of the word "veintenas" for "registros" causes a non sense

ST 83: One <u>arginine butyrate</u> may prove to be impractical for routine use because it has to be <u>given intravenously</u>, but the other <u>isobutyramide</u> is <u>taken</u> by mouth.

TT: Un <u>arginina butirato</u> puede resultar poco práctico para el uso rutinario porque tiene que ser <u>dado intravenosamente</u>, pero el otro, isobutiramida, es <u>adquirido por la boca.</u>

CT: Un <u>butirato de arginina</u> puede resultar poco práctico para el uso rutinario porque tiene que ser <u>suministrado por vía intravenosa</u>, pero el otro, isobutiramida, es <u>suministrado por vía oral.</u>

Lexical substitution of "butirato de arginina" for "arginina butirato" causes a non sense.

Lexical substitution of "suministrado por vía intravenosa" for "dado intravenosamente" causes a non sense.

Lexical substitution of "suministrado por vía oral" for "adquirido por la boca" causes a non sense.

Different sense

Addition

ST 5: <u>Sea squirts</u>, starfish and earthworms also have immune systems worth investigating.

TT: <u>El mar proporciona mucha información</u>, las estrellas de mar y las lombrices de tierra también tienen sistemas inmunológicos dignos de investigar.

CT: <u>Los pepinos de mar</u>, las estrellas de mar y las lombrices de tierra también tienen sistemas inmunológicos dignos de investigar

Lexical addition of the expression "El mar proporciona mucha información" and the omission of the words "pepino de mar" cause a different sense.

ST 5: But unlike human antibodies, some of these molecules don't merely label the bacteria and leave the <u>killing</u> to other parts of the body's defences.

TT: Pero a diferencia de los anticuerpos humanos, algunas de estas moléculas no simplemente identifican las bacterias y dejan la labor de <u>combatirlas</u> a otras entidades <u>especializadas</u> en la defensa del cuerpo.

CT: Pero a diferencia de los anticuerpos humanos, algunas de estas moléculas no simplemente identifican las bacterias y dejan la labor de <u>destruirlas</u> a otras partes de la defensa del cuerpo.

Lexical addition of the word "especializadas" causes a different sense.

Lexical substitution of "destruirlas" for "combatirlas" causes a different sense.

ST 7: Car makers around the world are hoping to use <u>the latest</u> in virtual reality and holographic displays to discover what customers want, speed up their development process and help sell the new cars they design.

TT: Los fabricantes de carros alrededor del mundo esperan usar <u>el último carro</u> en realidad virtual y demostraciones holográficas para descubrir lo que los clientes quieren, esto acelera su proceso de desarrollo y ayuda a vender los nuevos carros que ellos diseñan.

CT: Los fabricantes de carros alrededor del mundo esperan usar <u>lo último</u> en realidad virtual y pantallas holográficas para descubrir lo que los clientes quieren, acelerar su proceso de desarrollo y contribuir a que se vendan los nuevos carros que ellos diseñan.

Lexical addition of the word "carro" causes a different sense.

Lexical addition of "esto" causes a different sense."

ST 280: States the report: "In communities without paramedics, defibrillation by specially trained emergency medical technicians with careful supervision by physicians offers an opportunity to improve the patient's <u>heretofore dismal chances</u> of surviving cardiac arrest."

TT: El informe sostiene que: "En las comunidades sin paramédicos, el empleo de la defibrilación por los técnicos médicos especializados para casos de emergencias y a la vez supervisados bien de cerca por los médicos, ofrece una oportunidad de mejorar <u>la salud</u> del paciente, lo que aumenta <u>la posibilidad</u> de sobrevivir al paro cardíaco."

CT: El informe sostiene que: "En las comunidades sin paramédicos, el empleo de la defibrilación por los técnicos médicos especializados para casos de emergencias y a la vez supervisados bien de cerca por los médicos, ofrece una oportunidad de mejorar <u>las posibilidades</u> <u>hasta ahora casi inexistentes</u> de sobrevivir al paro cardíaco."

Lexical addition of the word "salud" causes a different sense.

Lexical omission of "heretofore dismal" causes a different sense.

ST 51: The study, conducted by a Canadian research team, relied on a large sample group of cell - phone owners who had been involved in <u>road mishaps</u> and agreed to release their phone records.

TT: El estudio, dirigido por un equipo canadiense de investigación, se baso en un amplio grupo de muestra de dueños de celulares quienes habían estado involucrados en <u>algunos accidentes</u> y estaban de acuerdo con hacer públicos sus archivos telefónicos.

CT: El estudio, dirigido por un equipo canadiense de investigación, se baso en un amplio grupo de muestra de dueños de celulares quienes habían estado involucrados en <u>accidentes de tránsito</u> y estaban de acuerdo con hacer públicos sus archivos telefónicos.

Lexical addition of the word "algunos" causes a different sense.

Lexical omission of "de tránsito" causes a different sense.

Omission

ST 5: Means also exist to stop the human body rejecting the foreign proteins: this technology is used <u>already</u> to make rat and mouse antibodies acceptable for use in anti - cancer and <u>other therapy</u> for human patients.

TT: También existen los medios necesarios para frenar el rechazo del cuerpo humano a las proteínas ajenas: esta tecnología es empleada para hacer que los anticuerpos de las ratas y los ratones sean aceptables para la aplicación de otras terapias contra el cáncer en pacientes humanos.

CT: También existen los medios necesarios para frenar el rechazo del cuerpo humano a las proteínas ajenas: esta tecnología <u>va</u> es empleada para hacer que los anticuerpos de las ratas y los ratones sean aceptados para su uso en terapias contra el cáncer <u>v otras</u> en pacientes humanos.

Lexical omission of "ya" causes a different sense.

Lexical omission of "y otras" causes a different sense.

ST 5: <u>But</u> if cockroach therapy is to be given orally and not by injection, a way must be found to protect the big protein molecules against being broken down by digestive enzymes.

TT: <u>Si</u> la terapia basada en las proteínas de la cucaracha no será inyectada sino que será dada de forma oral, debe encontrarse una manera para proteger las grandes moléculas de proteína de ser descompuestas por las enzimas digestivas.

CT: <u>Pero si</u> la terapia basada en las proteínas de la cucaracha se va a suministrar de forma oral y no mediante inyecciones, se debe encontrar una manera para proteger las grandes moléculas de proteína de ser descompuestas por las enzimas digestivas.

"Lexical omission of "pero" causes a different sense. (Syntax also plays a role in this error)

ST 60: Scotland is an enlightened country; but there is a nasty streak of chauvinism in its conservationists

TT: Aunque Escocia es un país culto en ocasiones da muestras de chovinismo.

CT: Escocia es un país culto, pero hay una desagradable veta de chovinismo <u>en sus</u> ecologistas.

Lexical omission of "en sus ecologistas" causes a different sense.

ST 121: Declared DeLaurier: "As far as we are aware, it's the first engine - powered flapping - wing aircraft to fly."

TT: DeLaurier declaró: "hasta donde conocemos, este es el primer avión con alas móviles impulsado por un motor."

CT: DeLaurier declaró: "hasta donde conocemos, este es el primer avión con alas móviles impulsado por un motor que vuela."

Lexical omission of the expression "que vuela" causes a different sense.

ST 182: The costly and <u>cumbersome</u> practice of implanting pacemakers in <u>heart</u> <u>patients</u> can be cut back drastically without harm to patients, according to a report in the Journal of the American Medical Association.

TT: La práctica costosa de hacer implantes de marcapasos en <u>el corazón de los</u> <u>pacientes</u> pudiese ser eliminada de manera drástica sin dañar al paciente, según reporta el Journal of the American Medical Association.

CT: La práctica costosa y <u>engorrosa</u> de hacer implantes de marcapasos en <u>pacientes enfermos del corazón</u> pudiese ser eliminada de manera drástica sin dañar al paciente, según un informe publicado en la Revista de la Asociación Médica Norteamericana.

Lexical omission of the word "cumbersome" causes a different sense.

Lexical substitution causes a different sense because "heart patients" refers to patients with a heart disease. (Syntax also plays a role in this error).

ST 362: The \$750,000 robot reduces labour costs by doing the work of at least four people, processing 750 pigs an hour.

TT: El robot de \$750,000 reduce los costos, haciendo el trabajo de por lo menos cuatro personas, procesando 750 cerdos en una hora

CT: El robot de \$750,000 reduce los costos <u>por mano de obra</u>, haciendo el trabajo de por lo menos cuatro personas, procesando 750 cerdos en una hora.

Lexical omission of the expression "por mano de obra" causes a different sense.

ST 364: Anyone who has had a bowel and <u>colon</u> examination with an endoscope knows how uncomfortable it is.

TT: Cualquiera que se haya hecho un análisis de intestino con un endoscopio sabe lo incómodo que es.

CT: Cualquiera que haya tenido que hacerse un examen del <u>colon</u> o del intestino usando un endoscopio sabe cuan incomodo es.

Lexical omission of the word "colon" causes a different sense.

ST 51: "This is just like the [Kobel earthquake."

TT: "Esto es simplemente como [Kobe] el terremoto."

CT: "Esto es simplemente como el terremoto (el de la ciudad de Kobe)".

Lexical omission "el de la ciudad de Kobe" causes a different sense.

ST 51: <u>Most forms of the microbe</u> are inoffensive creatures that reside harmlessly in the intestines of animals, including humans.

TT: <u>La mayoría de los microbios</u> son criaturas inofensivas que residen en los intestinos de los animales, incluso de los humanos sin causar daño.

CT: <u>La mayoría de las cepas de este microbio</u> son criaturas inofensivas que residen en los intestinos de los animales, incluso de los humanos sin causar daño.

Lexical omission of the word "cepas" causes a different sense.

ST 51: Doctors don't know what causes this new disease that destroys the <u>body's</u> <u>immune system</u>, and there is no cure.

TT: Los doctores no saben lo que causa esta nueva enfermedad que destruye el <u>sistema inmunológico</u>, y para la que no existe cura.

CT: Los doctores no saben lo que causa esta nueva enfermedad que destruye el <u>sistema inmunológico del organismo</u>, y para la que no existe cura.

Lexical omission of the word "organismo" causes a different sense.

Substitution

ST 41 It employs a system of pneumatic tubes similar to those that used to <u>take</u> <u>messages around buildings</u>, or money around the snootier sort of department store.

TT: El sistema consiste en el uso de tubos neumáticos, similares a aquellos que se empleaban para <u>comunicar un edificio con otro</u> o para obtener dinero en las tiendas mas engreídas.

CT: Emplea un sistema de tubos neumáticos similares a los que solían <u>llevar</u> mensajes de un lugar a otro en los edificios o transportar dinero en las tiendas por departamentos más exclusivas.

Lexical substitution causes a different sense because the expression "comunicar un edificio con otro" is more general than "take messages around buildings".

ST 41: Once the animal is thoroughly frozen, a second fan <u>blows</u> the ball back to its starting position.

TT: Una vez que el animal esta totalmente congelado, un segundo ventilador <u>atrae</u> a la pelota a su posición inicial.

CT: Una vez que el animal esta totalmente congelado, un segundo ventilador <u>impulsa</u> la pelota a su posición inicial.

Lexical substitution of the word "impulsa" for "atrae" causes a different sense

ST 41: <u>The insidiousness</u> of the J - line system is that it subverts the defense mechanisms that rodents use to stay out of trouble.

TT: El<u>artificio</u> de la línea J consiste en destruir los mecanismos de defensa que utilizan los roedores para permanecer alejados del peligro.

CT: <u>La naturaleza insidiosa</u> de la línea J consiste en destruir los mecanismos de defensa que utilizan los roedores para permanecer alejados del peligro.

Lexical substitution of the words "naturaleza insidiosa" for "artificio" causes a different sense

ST 41: The system will not be cheap _ the prototype cost %6m (\$60,000) to build _ but <u>losses to rodents</u> in warehouses, particularly in the tropics, can be enormous.

TT: El sistema no será barato, la construcción del prototipo cuesta %6m (\$60.000), sin embargo la <u>eliminación de roedores</u> en los depósitos, en particular en la zona tropical, puede ser considerable.

CT: El sistema no será barato, la construcción del prototipo cuesta %6m (\$60.000), pero las <u>perdidas debidas a los roedores</u> en los almacenes, en particular en la zona tropical, pueden ser enormes.

Lexical substitution of the expression "perdidas debidas a los roedores" for "eliminación de roedores" causes a different sense.

- ST 42: <u>Sifting out possible</u> placebo effects can be hard __ chiropractors, for example, spend much longer with patients than conventional doctors do, which may contribute to their success though some therapists would argue that the distinction is irrelevant.
- TT: <u>La investigación</u> de posibles efectos placebos puede resultar difícil -los quiroprácticos, por ejemplo, pasan mas tiempo con sus pacientes que los médicos convencionales, lo cual puede contribuir al éxito de los primeros -aunque algunos terapeutas podrían argumentar que esta distinción es irrelevante
- CT: <u>La eliminación</u> de posibles efectos placebo puede resultar difícil -los quiroprácticos, por ejemplo, pasan mas tiempo con sus pacientes que los médicos convencionales, lo cual puede contribuir al éxito de los primeros -aunque algunos terapeutas podrían argumentar que esta distinción es irrelevante.

Lexical substitution of the word "eliminación" for "investigación" causes a different sense.

- ST 42: <u>In</u> 1994 at least one new purveyor of "complementary medicine" (as alternative medicine styles itself) has opened every day in America.
- TT: <u>Desde</u> 1994, al menos un nuevo centro proveedor de "medicina complementaria" (como también se conoce a la medicina alternativa) se ha inaugurado todos los días en Estados Unidos.
- CT: <u>En</u> 1994, al menos un nuevo centro proveedor de "medicina complementaria" (como también se conoce a la medicina alternativa) se ha inaugurado todos los días en Estados Unidos.

Lexical substitution of the preposition "En" for "Desde" causes a different sense.

- ST 2: It would also explain the seasonal variation in levels of <u>blood clotting</u> <u>factors</u> that have been seen in two studies, one of people in Belfast, the other of Londoners.
- TT: También explicaría la variación estacional en los niveles de <u>sangre los</u> <u>factores de coagulación</u> que han sido objeto de estudio en dos investigaciones, una realizada <u>por</u> personas de Belfast, las demás llevadas a cabo <u>por</u> londinenses.
- CT: También explicaría la variación estacional en los niveles <u>de factores de coagulación de la sangre</u> que han sido objeto de estudio en dos investigaciones, una realizada <u>a</u> personas de Belfast, y la otra <u>realizada a</u> londinenses.

Lexical substitution of the preposition "a" for "por" causes a different sense.

Lexical substitution of the expression "llevadas a cabo" for "realizadas a" causes a different sense.

Syntax also plays a role.

ST 3: Among the intellectual grandees who raised Manchester to its 19th century eminence there was no brighter light than John Dalton.

TT: Entre los grandes intelectuales que llevaron <u>el</u> Manchester a la eminencia del siglo 19 no hubo alguien más deslumbrante que John Dalton.

CT: Entre los grandes intelectuales que llevaron <u>a</u> Manchester a la eminencia del siglo 19 no hubo alguien más deslumbrante que John Dalton.

Lexical substitution of the preposition "a" for "el" causes a different sense.

ST 3: When he died, 40,000 of his fellow Mancunians filed past his coffin.

TT: Cuando se murió, 40000 de sus seguidores Mancunianos caminaron al pasar su ataúd

CT: Cuando se murió, 40000 de sus conciudadanos de Manchester desfilaron frente a su ataúd.

Lexical substitution of the word "seguidores" for "conciudadanos" causes a different sense.

Lexical substitution of the word "Mancunianos" for "de Manchester" causes a different sense.

Lexical substitution of the word "desfilaron" for "caminaron" causes a different sense.

Lexical substitution of the word "frente" for "al pasar" causes a different sense.

ST 3: Normal colour vision depends on three pigments, each sensitive to a range of wave - lengths, but most sensitive to one particular colour.

TT: La visión del color normal depende de tres pigmentos, cada uno sensible a un rango de <u>ondas v longitudes</u>, pero más sensible a un color en particular.

CT: La visión del color normal depende de tres pigmentos, cada uno sensible a un rango de <u>longitud de ondas</u>, pero más sensible a un color en particular.

Lexical substitution of the expression "longitud de onda" for "ondas y longitudes" causes a different sense.

ST 5: They are finding ever more ways of resisting the antibiotics that mankind has carefully developed from <u>moulds</u> and <u>streptomycetes</u>.

TT: Ellos han logrado resistir una y otra vez los efectos de los antibióticos que el hombre ha desarrollado cuidadosamente de moldes y streptomycetes.

CT: Ellos han logrado resistir una y otra vez los efectos de los antibióticos que el hombre ha desarrollado cuidadosamente de mohos y estreptomicetos.

Lexical substitution of the word "moho" for "moldes" causes a different sense.

Lexical substitution of the word "estreptomicetos" for "streptomycetes" causes a non sense.

ST 7: He sees only a dreary Escort.

TT: Él sólo ve una Escolta deprimente.

CT: Él solamente ve un Escort deprimente.

Lexical substitution of the word "Escort" for Escolta" causes a different sense (terminological inadequacy).

ST 7: Disc drivers

TT: Conductores de disco

CT: Choferes virtuales

Lexical substitution of the expression "<u>Choferes virtuales</u>" for <u>"Conductores de disco</u>" causes a different sense.

ST 60: It seems an eminently <u>sensible</u> attitude: <u>pine heads</u>, please copy.

TT: Esto parece una actitud eminentemente <u>sensible</u>: <u>la parte alta de los pinos</u>, por favor copie.

CT: Esto parece una actitud eminentemente <u>sensata</u>: <u>cabezas de pino</u>, préstenle atención.

Lexical substitution of the word "sensata" for "sensible" causes a different sense.

Lexical substitution of the expression "cabezas de pino" for "parte alta de los pinos" causes a different sense.

ST 122: After DeLaurier went to Toronto in 1974, the men continued their research long - distance.

TT: Después de que DeLaurier visitó Toronto en 1974, los hombres continuaron su investigación a larga distancia.

CT: Después de que DeLaurier regresó a Toronto en 1974, los hombres continuaron su investigación a larga distancia.

Lexical substitution of the word "regresó" for "visitó" causes a different sense.

ST 122: The year was 1987, the World Wide Web not yet even <u>a glimmer</u> in computer hackers' eyes.

TT: Era el año 1987, la Internet no constituía aún ni <u>un atisbo</u> para los ojos de los piratas informáticos.

CT: Era el año 1987, la Internet no era todavía ni el más <u>mínimo brillo</u> en los ojos de los piratas informáticos.

Lexical substitution of "mínimo brillo" for "un atisbo" causes a different sense.

ST 182: In 1991, Bray and his partners founded Open Text Corp., <u>based</u> in Waterloo, which soon became a leader in text - indexing software that allows computers to retrieve items from large collections of documents.

TT: En 1991, Bray y sus compañeros fundaron la corporación Open Text, <u>basada</u> en Waterloo que pronto se convirtió en líder de los software diseñados para índices de textos que les permite a las computadoras recuperar los artículos de las colecciones grandes de documentos.

CT: En 1991, Bray y sus compañeros fundaron la corporación Open Text, <u>localizada</u> en Waterloo que pronto se convirtió en líder de los software diseñados para índices de textos que les permite a las computadoras recuperar los artículos de las colecciones grandes de documentos.

Lexical substitution of the word "localizada" for "basada" causes a different sense.

ST 183: In this <u>study</u> of 197 patients at New York's Brooklyn Hospital, the number of pacemaker implantations was cut in half after a review committee was set up to determine if each implantation was really necessary.

TT: Tal <u>experimento</u> que involucró a 197 pacientes se llevó a cabo en el Hospital de Brooklyn, Nueva York, donde como resultado se redujo a la mitad la cantidad de implantes de marcapasos, luego de que se creara un comité de control con el objetivo de determinar si cada implante era necesario o no.

CT: En este <u>estudio</u> que involucró a 197 pacientes se llevó a cabo en el Hospital de Brooklyn, Nueva York, donde como resultado se redujo a la mitad la cantidad de implantes de marcapasos, luego de que se creara un comité de control con el objetivo de determinar si cada implante era necesario o no.

Lexical substitution of the noun "experimento" causes a different sense, because the word "study" is more general.

ST 280: In an experiment being reported in the <u>journal</u> Cell, biologists managed, for the first time, to coax skin cells to do what they hadn't done since they were kids: form <u>hair</u> follicles.

TT: En un experimento relatado en el <u>diario</u> La Célula, los biólogos por primera vez, pudieron convencer a las células de la piel para hacer lo que ellas no habían hecho desde que eran niñas: formar folículos <u>de capilares.</u>

CT: En un experimento relatado en la <u>revista</u> La Célula, los biólogos por primera vez, pudieron convencer a las células de la piel para hacer lo que ellas no habían hecho desde que eran niñas: formar folículos <u>pilosos</u>.

Lexical substitution of the word "revista" for "diario" causes a different sense. Lexical substitution of the word "pilosos" for "de capilares" causes a different sense.

ST 361: Still, Fuchs is confident there's a way to turn on beta - catenin just long enough to establish new follicles, which "could lead to a powerful method to safely reverse balding."

TT: Sin embargo, Fuchs confía en que hay un modo de activar la beta - catenin durante tiempo suficiente como para establecer nuevos folículos, lo que "podría conducir a un método poderoso para <u>evitar</u> la calvicie sin peligro."

CT: "Sin embargo, Fuchs confía en que hay un modo de activar la beta - catenin durante tiempo suficiente como para crear nuevos folículos, lo que "podría conducir a un método poderoso para <u>revertir</u> la calvicie sin peligro."

Lexical substitution of the word "revertir" for "evitar" causes a different sense.

ST 362: With that <u>kind</u> of storage space, users will be able to load up to 150 CDs' worth of music from a personal computer onto the Jukebox's hard drive, which is similar to those used in laptops.

TT: Con ese <u>tipo</u> de espacio de almacenamiento, los usuarios podrán cargar el equivalente al valor de 150 CD de música de una computadora personal hacia la unidad de disco duro de un jukebox, que es similar a los que se usan en las computadoras portátiles.

CT: Con esa <u>cantidad</u> de espacio de almacenamiento, los usuarios podrán cargar la música de hasta 150 discos compactos de una computadora personal hacia la unidad de disco duro de una jukebox, que es similar a los que se usan en los computadoras portátiles.

Lexical substitution of the word "cantidad" for "tipo" causes a different sense.

ST 364: The governmental Quebec Centre for Industrial Research wants to adapt the robot, which is built under a joint venture with Riopel Inc. in Vallee - Jonction, Que., to handle other cuts of pork and expand into beef.

TT: El Centro gubernamental de Quebec para la Investigación Industrial quiere adaptar el robot que se construye en una entidad mixta con Riopel Inc. en Vallee - Jonction, Quebec, para ocuparse de otros tipos de cortes de carne de cerdo y expandirse hacia <u>otras carnes</u>.

CT: El Centro gubernamental de Quebec para la Investigación Industrial quiere adaptar el robot que se construye en una entidad mixta con Riopel Inc. en Vallee - Jonction, Quebec, para ocuparse de otros tipos de cortes de carne de cerdo y expandirse hacia la <u>carne de res</u>.

Lexical substitution of the words "carne de res" for "otras carnes" causes different sense.

ST 364: Now, gastroenterologist Dr. Paul Swain of the Royal London Hospital in Britain says he and his colleagues have built a wireless capsule endoscope that patients swallow like a large pill.

TT: Hace poco el gastroenterólogo Dr. Paul Swain del Royal London Hospital, en Bretaña dice que él y sus colegas han construido una cápsula endoscópica inalámbrica que los pacientes puedan ingerir como una píldora grande.

CT: Hace poco el gastroenterólogo Dr. Paul Swain del Royal London Hospital, en Gran Bretaña dice que él y sus colegas han construido una cápsula endoscópica inalámbrica que los pacientes puedan ingerir como una píldora grande.

Lexical substitution of the words "Gran Bretaña" for "Bretaña" causes a different sense.

ST 7: The battery - powered device, described in the <u>current issue</u> of the journal Nature, measures just 11 mm by 30 mm and contains a miniature video camera.

TT: El dispositivo, que funciona con baterías, descrita en la <u>actual emisión</u> de la revista Nature, mide solamente 11 mm por 30 mm y contiene una videocámara en miniatura.

CT: El dispositivo, que funciona con baterías, descrita en el <u>último número</u> de la revista Nature, mide solamente 11 mm por 30 mm y contiene una videocámara en miniatura.

Lexical substitution of the expression "último número" actual emisión" causes a different sense.

ST 51:"This is the most complex illness that has ever faced this nation in <u>epidemic proportions."</u>

TT: "Ésta es la enfermedad más compleja que ha enfrentado esta nación <u>pues</u> <u>afecta todo el país".</u>

CT: "Ésta es la enfermedad más compleja que ha enfrentado esta nación en cuanto a las <u>proporciones de una epidemia</u>

Lexical substitution of the expression "en cuanto a las proporciones de una epidemia" for "pues afecta todo el país" causes a different sense.

ST 51: Swimming pools in afflicted areas were closed, several summer festivals were canceled, and supermarket chains suspended sales of certain <u>beef products</u>.

TT: Las piscinas en áreas afectadas fueron cerradas, varios festivales de verano fueron cancelados y las cadenas de supermercados suspendieron la ventas de ciertos productos cárnicos.

CT: Las piscinas en áreas afectadas fueron cerradas, varios festivales de verano fueron cancelados y las cadenas de supermercados suspendieron la ventas de ciertos productos que contenían carne de res.

Lexical substitution of "que contenían carne de res" for "cárnicos" causes a different sense.

ST 51: Since the baffling and highly fatal disease surfaced two years ago, it has spread to 35 states and the District of Columbia, striking 1,450 <u>Americans</u> and causing at least 558 deaths.

TT: Desde que la desconcertante y sumamente mortal enfermedad apareció hace dos años, se ha extendido a 35 estados y el Distrito de Columbia, afectando a 1,450 <u>americanos</u> y causando por lo menos 558 muertes.

CT: Desde que la desconcertante y sumamente mortal enfermedad apareció hace dos años, se ha extendido a 35 estados y el Distrito de Columbia, afectando a 1,450 estadounidenses y causando por lo menos 558 muertes.

Lexical substitution f the word "estadounidenses" causes a different sense.

ST 51: Sanitation workers sprayed disinfectant <u>through</u> the city's worst affected schools.

TT: Los recolectores de basura rociaron desinfectante <u>a través de</u> las escuelas mas afectadas de la ciudad.

CT: Los recolectores de basura rociaron desinfectante <u>en</u> las escuelas mas afectadas de la ciudad.

Lexical substitution of "a través de" for "en" causes a different sense.

ST 51: With the collapse of the body's <u>disease - fighting</u> immune system, the patient is left open to infections and a rare cancer called Kaposi's sarcoma.

TT: Con el colapso del sistema inmunológico <u>luchando con la enfermedad</u>, el paciente queda expuesto a las infecciones y a un raro cáncer llamado sarcoma de Kaposi.

CT: Con el colapso del sistema inmunológico <u>del organismo</u> <u>que combate las enfermedades</u>, el paciente queda expuesto a las infecciones y a un raro cáncer llamado sarcoma de Kaposi.

Lexical substitution of the expression "que combate la enfermedad" for "luchando con la enfermedad" causes a different sense.

Omission of the word "organismo" causes a different sense.

ST 51: Even the <u>lournal</u> study did not say the phones were responsible for the accidents, but that they were merely associated with them.

TT: Ni siquiera el estudio del <u>Periódico</u> dijo que los teléfonos eran responsables por los accidentes, pero que ellos estaban simplemente asociados con estos.

CT: Ni siquiera el estudio de <u>la revista Journal</u> plantea que los teléfonos eran responsables de los accidentes, sino que simplemente ellos estaban asociados a estos.

Lexical substitution of the word "revista" for "periódico" causes a different sense.

ST 51: And Michael Goodman, a researcher with the U.S. National Highway Traffic Safety Administration, concurred, pointing out that the nature of a call __ an argument, say __ could be more distracting than the call itself.

TT: Michael Goodman, un investigador de la Administración Nacional Norteamericana de Tráfico y Seguridad de Carreteras, coincidió con lo planteado, señalando que la naturaleza de una llamada __ dígase un argumento __ podría distraer más que la propia llamada.

CT: Michael Goodman, un investigador de la Administración Nacional Norteamericana de Tráfico y Seguridad de Carreteras, coincidió con lo planteado, señalando que la naturaleza de la llamada __ dígase una discusión _ podría distraer más que la propia llamada.

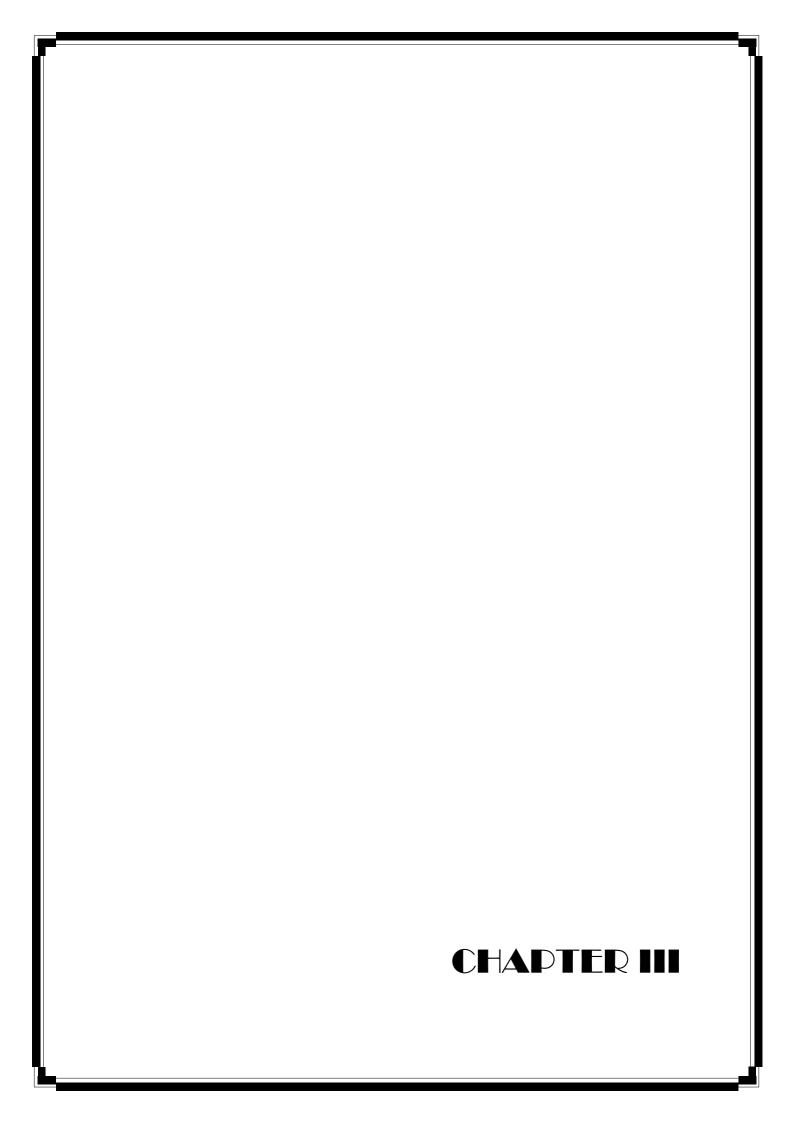
Lexical substitution of the word "discusión" for "argumento" causes a different sense.

ST 51: The crisis calls into question yet again the <u>competence</u> of Japan's bureaucrats.

TT: La crisis otra vez pone en cuestión la <u>competitividad</u> de los burócratas Japoneses.

CT: La crisis otra vez pone en duda la <u>competencia</u> de los burócratas Japoneses.

Lexical substitution of the word "competencia" for "competitividad" causes a different sense.



CHAPTER III. PROPOSAL OF STRATEGIES FOR THE DEVELOPMENT OF TRANSLATORS' BILINGUAL LEXICAL COMPETENCE.

3.1 Causes of lexical errors

In our research we have identified two fundamental possible causes that may have led advanced translation students to commit the analyzed errors. These are as follows:

 The incorrect recognition of the contextual meaning of a lexical unit in the ST, which implies a correct translation of a wrong meaning.

ST: Its engineers <u>run</u> computer simulations of crashes to see whether new designs meet government safety standards, saving months and hundreds of thousands of dollars by avoiding having to smash real prototypes into real walls.

TT: Sus ingenieros <u>dirigen</u> simulaciones de computadora de accidentes para ver si los nuevos diseños encuentran estándars de seguridad del gobierno, salvando meses y cientos de miles de dólares evitando la necesidad de romper verdaderos prototipos en verdaderas paredes.

CT: Los ingenieros <u>ejecutan</u> programas de computadoras de simulación de choques para ver si los nuevos diseños cumplen con las normas de seguridad gubernamentales y así ahorran meses y cientos de miles de dólares al evitar tener que hacer chocar prototipos de verdad contra paredes de verdad.

 The correct recognition of the meaning in the SL but its incorrect expression in the TL.

Example # 1: Error of lexical combinatorics

ST 7: The battery - powered device, described in the <u>current issue</u> of the journal Nature, measures just 11 mm by 30 mm and contains a miniature video camera.

TT: El dispositivo, que funciona con baterías, descrita en la <u>actual emisión</u> de la revista Nature, mide solamente 11 mm por 30 mm y contiene una videocámara en miniatura.

CT: El dispositivo, que funciona con baterías, descrita en el <u>último número</u> de la revista Nature, mide solamente 11 mm por 30 mm y contiene una videocámara en miniatura.

Lexical substitution of the expression "último número" actual emisión" causes a different sense.

Example # 2: The meaning of the equivalent used is more general or more specific than that of the ST.

ST: <u>In this study</u> of 197 patients at New York's Brooklyn Hospital, the number of pacemaker implantations was cut in half after a review committee was set up to determine if each implantation was really necessary.

TT: <u>Tal experimento</u> que involucró a 197 pacientes se llevó a cabo en el Hospital de Brooklyn, Nueva York, donde como resultado se redujo a la mitad la cantidad de implantes de marcapasos, luego de que se creara un comité de control con el objetivo de determinar si cada implante era necesario o no.

CT: <u>En este estudio</u> que involucró a 197 pacientes se llevó a cabo en el Hospital de Brooklyn, Nueva York, donde como resultado se redujo a la mitad la cantidad de implantes de marcapasos, luego de que se creara un comité de control con el objetivo de determinar si cada implante era necesario o no.

Example # 3: Stylistic marks are different for the ST and TT. (different stylistic meanings, use of different registers).

ST: Four scientists from the Universities of London and Cambridge have tested the preserved eye for pigment genes to see exactly what kind of colour blindness Dalton had.

TT: Cuatro científicos de las Universidades de Londres y Cambridge han probado <u>el ojo en conserva</u> para los genes del pigmento para investigar qué tipo de ceguera al color tenía Dalton.

CT: Cuatro científicos de las Universidades de Londres y Cambridge han analizado <u>el ojo preservado</u> para determinar la presencia de los genes del pigmento ocular para identificar qué tipo de ceguera al color tenía Dalton.

3.2. The concept of translation strategy

According to the Merriam Webster's 11th Collegiate Dictionary a strategy is: a) a careful plan or method: a clever stratagem, b) the art of devising or employing plans or stratagems toward a goal.

This definition has been applied in the field of translation studies by several experts who have reformulated it taking into account the needs and features of the translator' work. For example Krings (1986:18) considers as a translation strategy "the translator's potentially conscious plans for solving concrete translation problems in the framework of a concrete translation task". Similarly, Loescher (1991:8) states that it can be defined as "a potentially conscious procedure for solving a problem faced in translating a text, or any segment of it." As it is stated in these concepts, the notion of consciousness is significant in distinguishing strategies which are used by the learners or translators. In this

regard, Cohen (1998:4) asserts that "the element of consciousness is what distinguishes strategies from these processes that are not strategic."

Furthermore, Bell (1998:188) differentiates between global (those dealing with whole texts) and local (those dealing with text segments) strategies and confirms that this distinction results from various kinds of translation problems. And Seguinot (1989) believes that there are at least three global strategies employed by the translators: (1) translating without interruption for as long as possible; (2) correcting surface errors immediately; (3) leaving the monitoring for qualitative or stylistic errors in the text to the revision stage.

Jaaskelainen (1999:71) considers strategy as, "a series of competencies, a set of steps or processes that favor the acquisition, storage, and/or utilization of information." He maintains that strategies are "heuristic and flexible in nature, and their adoption implies a decision influenced by amendments in the translator's objectives."

Taking into account the process and product of translation, Jaaskelainen (2005) divides strategies into two major categories: some strategies relate to what happens to texts, while other strategies relate to what happens in the process.

Product-related strategies, as Jaaskelainen (2005:15) writes, involves the basic tasks of choosing the SL text and developing a method to translate it. However, she maintains that process-related strategies "are a set of rules or principles which a translator uses to reach the goals determined by the translating situation" (2005:16). Moreover, Jaaskelainen (2005:16) divides this into two types, namely global strategies and local strategies: "global strategies refer to general principles and modes of action and local strategies refer to specific activities in relation to the translator's problem-solving and decision-making."

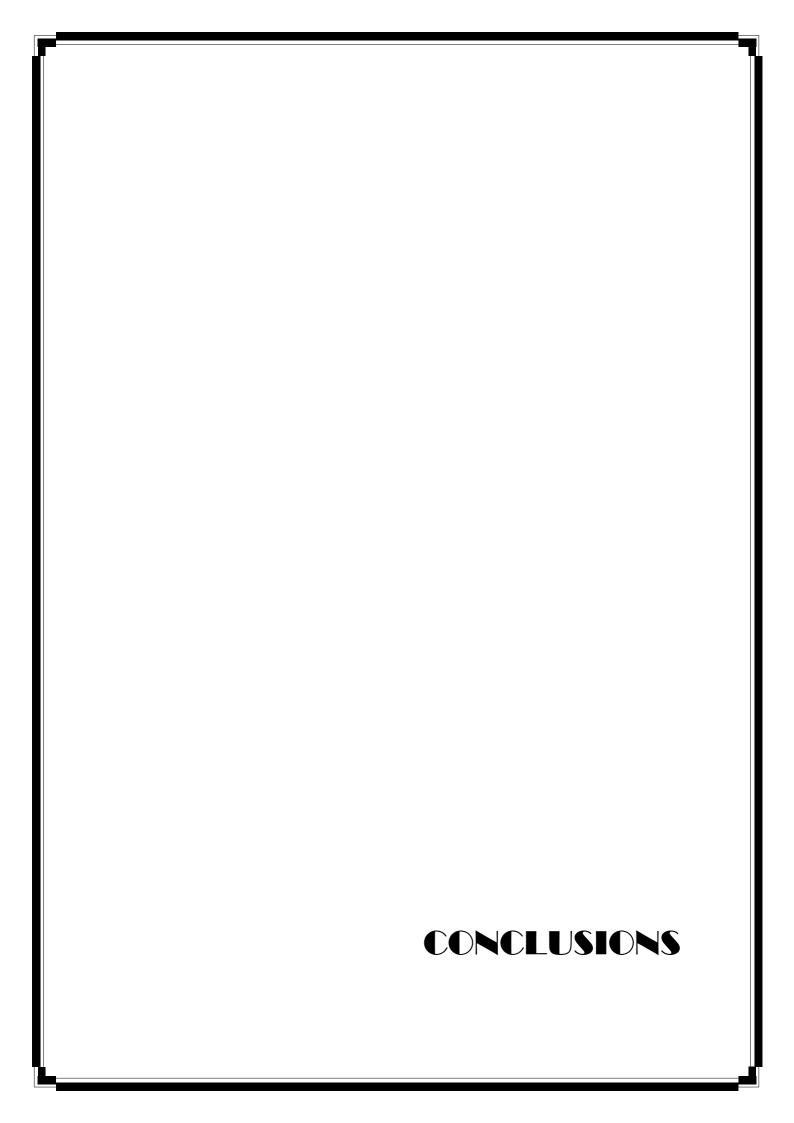
Strategies are not directly visible as part of the observable translation output. In principle, they fall into three categories: they can be conscious, potentially conscious, or totally subconscious. Whenever strategies are not directly accessible through the translator, they need to be hypothesized from the available data.

As a discipline, Translation Studies operates across a range going from the non-applied to the applied. The non-applied level is concerned with the description, explanation and prediction of phenomena, and therefore translation strategies pertaining to this level have an essentially descriptive, explanatory and predictive role; they contribute to our understanding and knowledge of translation as an activity.

3.3 Proposal of strategies

Taking into account the previously given definitions of translation strategy and the specific conditions of the translation teaching in our course we propose the following:

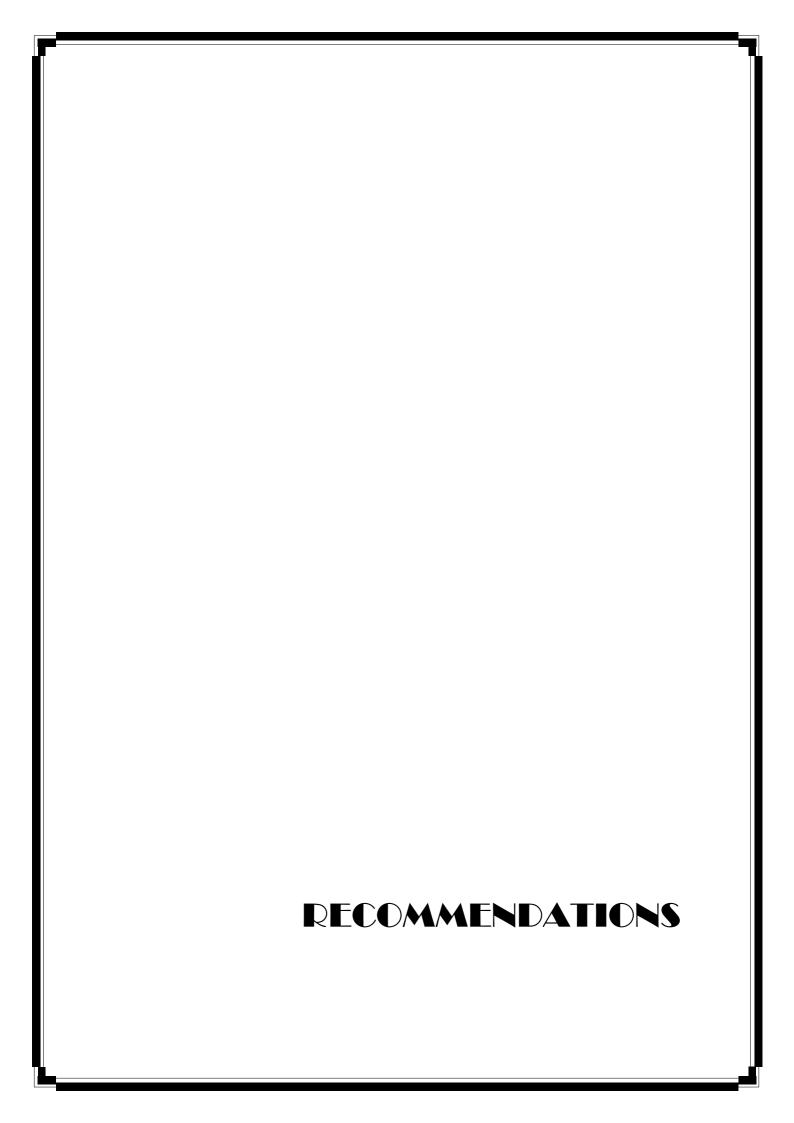
- The translation of whole text should not be the exclusive focus of teaching, the translation of fragments that illustrate the typical translation errors should also be used.
- To interpret the texts orally and explain their content to an interlocutor in order to make the meaning explicit for both the translator and his interlocutor



CONCLUSIONS

In this dissertation we have reported the research we carried out with the help of the corpus of English-Spanish translated texts of science journalism. The study of the concepts of translation and equivalence, the techniques of the corpus-based approach, as well as the literature on translation strategies and error analysis allowed us to accomplish our purpose.

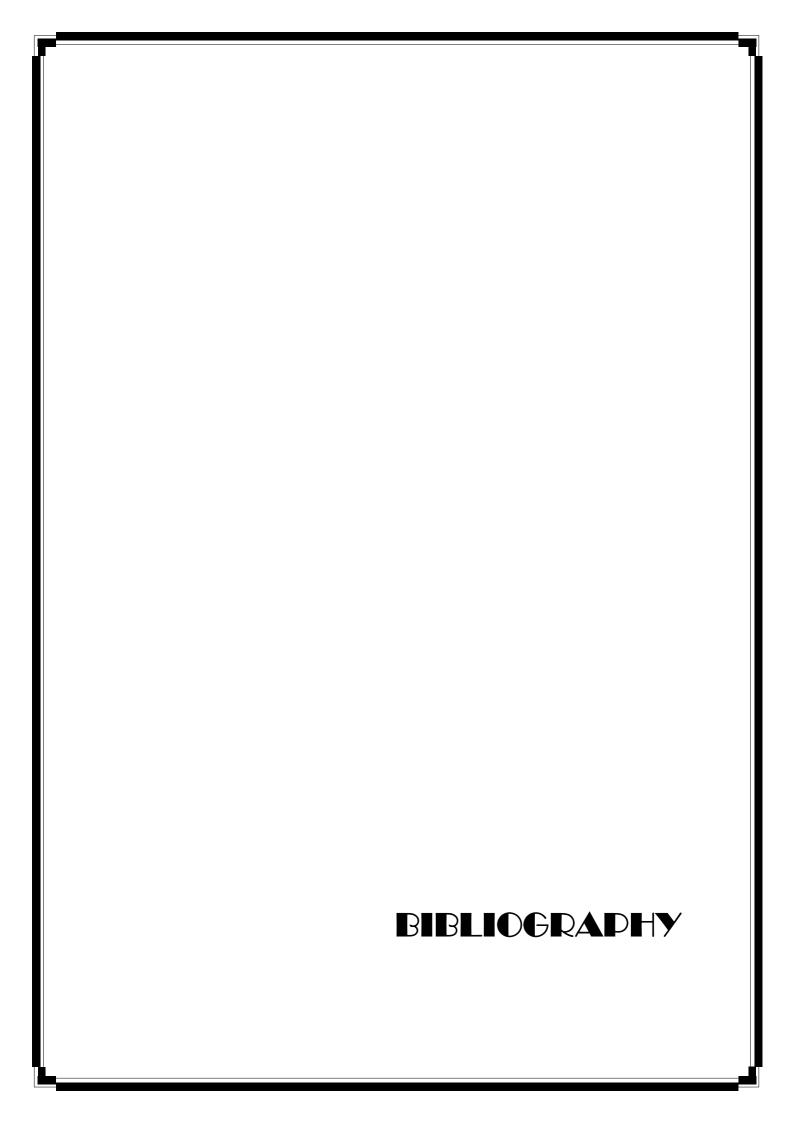
We have found that the most common translation errors are mainly related to the parameter of sense transmission. In several translated texts we frequently found examples that transmit a different sense from the ST, this occurs due to the fact that the student did not fully understand the unit in the ST and they did not make the precise and appropriate translation.



RECOMMENDATIONS

This research should be enriched by future papers on this subject:

- To consider the results obtained in this research regarding lexical translation errors and the proposed correction strategies in the training of translators in undergraduate courses at the university.
- To continue to apply error analysis based on the proposed classification.
- To generalize the results of this research in other research papers and dissertations.



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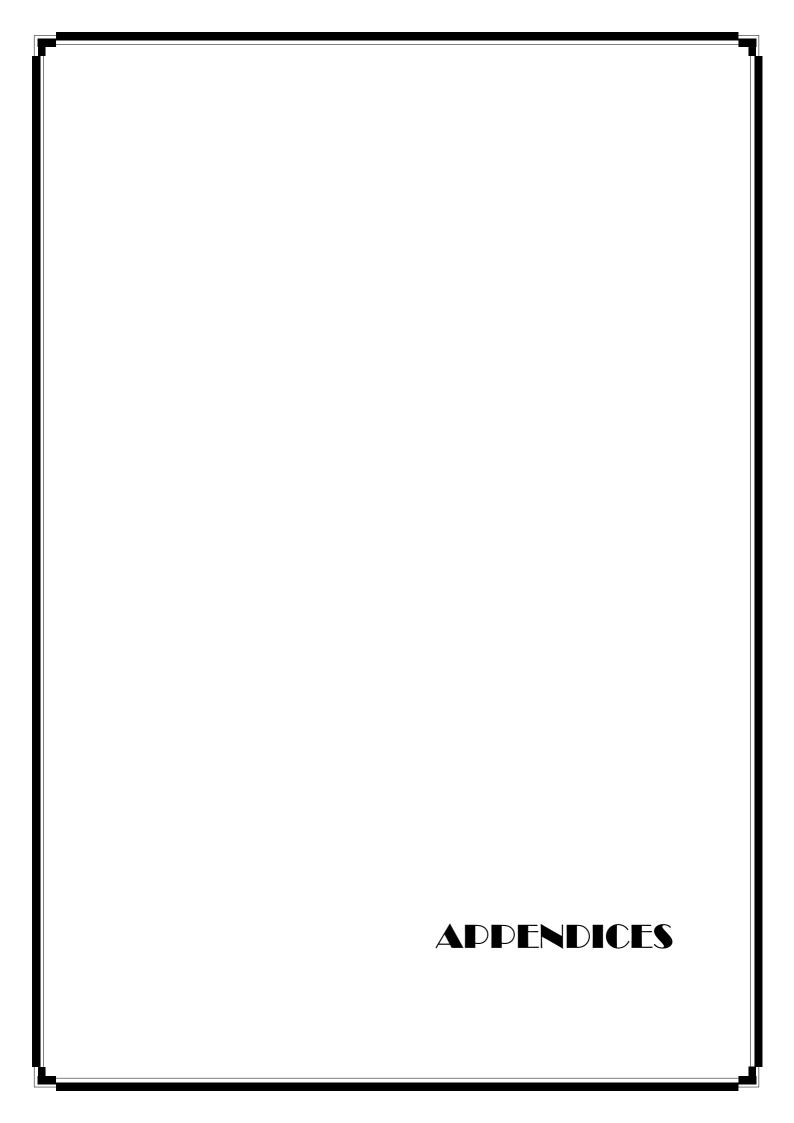
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SOFTWARE

Microsoft Office Excel 2007



APPENDICES

Appendix 1. Survey

1.	How would you define translation error?
2.	 What of the following topics are more difficult for you when translating? Science journalism Socio-political topics Cultural topics Science and technology Others. Can you mention them?
3.	How often do you make translation errors?
0.	Frequently Sometimes Rarely Never I do not know
4.	In your opinion which of the following translation errors affect more the communication process and translation quality? Syntactical Lexical Stylistic Pragmatic Others
5.	 Which of the following are translation errors? Addition Omission Terminological inadequacy. Ambiguity Style Generalization

• The use of a word in English in a translation to Spanish

- 7. What are the most common causes of these errors?
- 8. What stragies do you use to prevent the commission of translation errors?
- 9. Are there any other aspects you think may affect the translation process? If any, can you mention them?

Appendices

Appendix 2. Texts

2 Air pollution	Economist	Echruan, 19, 1005
2 - Air pollution 3 - Scientific history	Economist	February 18, 1995 February 18, 1995
•		•
4 - Gold	Economist	June 3, 1995
5 - The point of the cockroach	Economist	June 3, 1995
7 - Virtual reality	Economist	May 27, 1995
10 - International relief	Economist	May 13, 1995
21 - Road warriors	Economist	April 29, 1995
22 - Medical records	Economist	April 29, 1995
23 - Superconductors	Economist	September 14, 2000
41 - Curiosity killed the rat	Economist	December 17, 1994
43 - Batteries	Economist	December 10, 1994
44 - Dermatology	Economist	December 10, 1994
45 - Transplants	Economist	December 3, 1994
47 - Step by step	Economist	November 26, 1994
51 - The Belladonna solution	Economist	November 19, 1994
60 - Morally pineless	Economist	October 22, 1994
61 - How big can be beautiful	Economist	October 8, 1994
62 - Laser surgery	Economist	October 1, 1994
65 - Postmodemism	Economist	September 24, 1994
66 - Cosmic distances	Economist	September 24, 1994
71 - Display technology	Economist	September 3, 1994
81 - A trick of the light	Economist	October 15, 1994
82 - Brain research	Economist	October 15, 1994
83 - Sickle - cell anaemia	Economist	February 4, 1995
88 - A rare species	Economist	January 28, 1994
90 - Dotty	Economist	April 24, 1993
101 - Back again	Economist	March 11, 1995
102 - Bang	Economist	October 29, 1994
104 - Faster ships	Economist	November 26, 1994
105 - Heroic doses	Economist	August 27, 1994
106 - Hyenas	Economist	January 28, 1994
122 - Web Weavers	Mcleans	January 29, 1996
123 - Space Sightings	Mcleans	January 29, 1996
124 - Send in the clones	Mcleans	March 18, 1996
141 - Hard hit by the latest flu	Mcleans	March 2, 1998
142 - Hormones for hunger	Mcleans	March 2, 1998
144 - A Daughter's last Gift	Time	September 5, 1994
146 - Toxic Tampons	Time	October 6, 1980
147 - Taking Stock of Bonding	Time	December 14, 1981
150 - Relax, Mrs. Sprat	Time	November 2, 1992
152 - Hubble Out Of Trouble	Time	January 24, 1994
181 - Use for Marijuana Drug	US News and World Report	July 21, 1980
183 - Saving Heart - Attack Victims	US News and World Report	July 21, 1980
184 - A Mean Strain of Strep	Newsweek	July 23, 1990
188 - Scanning the Skeleton	Newsweek	December 9, 1996
191 - The Cells Are Multiplying	Newsweek	December 23, 1996
196 - Digital Image Technology	Newsweek	September 21, 1998
216 - Robots in the cockpit	Economist	August 15, 1998
217 - Information technology	Economist	July 16, 1998

040 Patata handa	Francist	A
218 - Potato - heads	Economist	August 15, 1998
263 - The Puffins Are Coming	Newsweek	August 24, 1981
265 - Patients: Read Before Signing	Newsweek	July 14, 1980
270 - Mad About the Boy	Time	February 16, 1998
272 - Sex as Suicide	Time	January 15, 1996
273 - Are Animal Organs Safe for people?	Time	January 15, 1996
280 - Making Old Follicles Young Again		December 7, 1998
281 - Origins	Newsweek	December 7, 1998
282 - Alaska's Runaway Glacier	Newsweek	·
	Time	August 25, 1986
283 - Revolution on a Desktop	Time	June 30, 1986
284 - A Way Out for Junkies		January 19, 1998
302 - When Did AIDS Begin? 303 - Did Polio Researchers Create	Time	February 26, 1998
AIDS?	Time	December 13, 1999
304 - Ethics and AIDS Drugs	Time	July 12, 1999
306 - Fighting AIDS	Time	March 29, 1999
307 - Who Discovered The AIDS Virus	Time	March 29, 1999
308 - Drug Holiday	Time	February 15, 1999
309 - Good News At a Price	Time	February 15, 1999
321 - New kid on the block	Economist	October 12, 2000
322 - New realities?	Economist	October 5, 2000
323 - In praise of Bayes	Economist	September 28, 2000
325 - The bee's knees	Economist	September 28, 2000
341 - Hot stuff	Economist	June 15, 2000
342 - Infertility and inheritance	Economist	June 8, 2000
344 - Some baseless speculations	Economist	May 25, 2000
361 - Long play	Mcleans	June 19, 2000
362 - A better way to get back bacon	Mcleans	June 5, 2000
363 - Light - speed chip	Mcleans	June 5, 2000
364 - Easy to swallow	Mcleans	June 5, 2000
365 - Determining the age of the		
universe	Mcleans	May 29, 2000
366 - Pixel this	Mcleans	May 29, 2000
367 - The true form of the universe	Mcleans	May 8, 2000
368 - Toxic ships	Mcleans	May 8, 2000
369 - NEXT: THE ABORTION PILL	Time	September 30, 1996
382 - Many benefits, many perils	US News and World Report	January 3, 2000
390 - How to build a better bull	US News and World Report	January 17, 2000
391 - New technique resets the		
biological clock	US News and World Report	January 26, 1998
392 - Copies upon copies	US News and World Report	February 7, 2000
398 - Small steps against AIDS	US News and World Report	February 15, 1999
399 - Add insult to injury	US News and World Report	February 21, 2000
401 - The 10 - minute test for strokes	US News and World Report	March 30, 1998
402 - Fighting TB: a second chance to	LIC Nows and World Danart	March 21, 1007
do it right	US News and World Report	March 31, 1997
403 - The wisdom of the gut	US News and World Report	April 3, 2000