

Contrastive Analysis: The Problem of a Model

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1. Introduction:

Contrastive Linguistics, a branch of linguistics, uses contrastive analysis as its method. This analysis usually comprises three steps: description of two languages, usually the native language (L1) and the second or the foreign language (L2); comparison of the two languages to show similarities and contrasts between them, and finally prediction of the areas of difficulties and errors for the benefit of the learner of the second or the foreign language. Each of these processes: description, comparison and prediction has to be based on a suitable theoretical paradigm or model. I will therefore be concerned with three types of models: description models, comparison models and prediction models. Although all of these types are essential, the last two are casually mentioned, if ever, in the work of contrastivists.

Contrastive linguistics as a modern science has a recent history; it dates back to the last century. The early pioneers are Fries (1945), Weinreich (1953), Haugen (1956) and Lado (1957). Comparative studies, however, flourished in the nineteenth century, but they had a historical basis and aimed at tracing a common origin for a number of languages. They mainly concentrated on similarities among languages and neglected the synchronic aspect in studying language. There are two types of

linguistics: theoretical and applied. The former has a longer history (Fisiak 1981:3). Applied contrastive linguistics found a strong incentive in the United States of America during World War II. The objective of these two types of contrastive studies is different. Theoretical contrastive linguistics mainly concentrates on similarities with the aim of discovering linguistic universals; applied contrastive studies emphasize differences usually between two languages; their explicit aim is to solve the problems of the learner of a second or a foreign language by predicting errors and difficulties on the basis of these contrasts. Drawing a distinction between theoretical and applied contrastive linguistics is basic to the choice of a model in the three types of models mentioned above. This point will become clear in the following sections.

Contrastive linguistics has its ups and downs; it flourished 1950's. Great hopes and expectations were raised by such statements as the one expressed by Fries (1945:9) 'The most efficient materials are those based on scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner.' 1970's saw a decline in the enthusiasm for contrastive studies. Nearly all the basic principles and results of contrastive analysis were severely criticized. Nevertheless, paradoxically enough contrastive work continued, sometimes with vigour. The main reason for the crisis of confidence in contrastive studies has been the continuous change in the linguistics theories used as model for contrastive work. These shifts and modifications in linguistics destabilized the models used in contrastive analysis, and eventually resulted in demolishing most of the confidence in the discipline in the fifties of the last century. This negative influence is especially true of prediction. Prediction models have been criticized for not predicting correctly the errors which a learner actually makes, and sometimes for failing to predict some serious difficulties experienced by the L2 learner. It is to be noted that these criticisms have been directed mainly against applied contrastive linguistics.

The method followed by traditional contrastivists is summarized by Sajavaara (1981:37) as follows:

Traditional contrastive analysis is characterized by the methodological principle that the structure of the languages to be contrasted will have to be described first by means of one and the same

theoretical model, and these descriptions are then contrasted for the specification of similarities and dissimilarities. In most cases, the procedure is one of the following five (...):

- (1) The same categories of the two languages are contrasted;
- (2) The equivalents for a certain category of the target language are sought in the source language;
- (3) Rules or hierarchies of rules in the two languages are compared;
- (4) The analysis starts from a semantic category whose surface realizations are sought in the languages to be contrasted; and
- (5) The analysis starts from various uses of language.

Three important points emerge from this quotation: first contrastive analysis as often practiced is unidirectional; it proceeds from the target language to the native language and is biased towards the target language, which is described in greater detail. The exception is theoretical contrastive linguistics, which is adirectional; it is static and reflects no directionality (James 1980:142). As Marton states (1981:167) it is not necessary that the direction of contrastive analysis be from the target language to the native language; it could be carried out equally satisfactorily following the opposite direction. The prevalent practice of moving from the target language to the native language seems to be promoted by the fact that the contrastivist is nearly always a specialist in the foreign language, and the student for whom a contrastive analysis is written also majors in the foreign language.

Secondly, the question of the use of the same model for both languages; the main advantage of this is that any contrasts revealed by comparison will be traced to differences in the structures of the two languages. But using one model has also one obvious disadvantage: the model may suit one of the two languages better than the other. This is more likely to be the case when the target language and the native language belong to two different families of languages and cultures, as in the case of English and Arabic. In this case it may be better to use for each of the two languages a model which describes it best, then sift those contrasts which are due to the models from those which result from differences between the two languages. In practice this is usually not problematic.

The third point worth mentioning implied rather than expressed by the quotation above is that a model is supposed to be formulated independently of the two languages; only an independent model would ensure linguistically neutral and objective results. However, the models which have been used in contrastive studies have nearly all been derived from European languages; with English occupying the leading position. Subjecting a non-European language to such models normally yields results. Just because English has tense and aspect, for instance, attached to a category node termed auxiliary does not justify postulating a similar category for Arabic termed auxiliary in its deep structure. These types of postulations have no factual foundation and only help to complicate the model.

The present paper discusses the main models used in description, comparison and prediction. It comprises three main parts with an introduction and a conclusion. Sections 2,3 and 4 are devoted to description models, comparison models and prediction models, respectively. The main points of the paper will be summarized in section 5, the conclusion. The study also offers certain suggestions which may be helpful for a contrastivist when he/she chooses a model.

2. Description Models

In theory, comparison may involve more than two languages, but for convenience the discussion here will be confined to two languages: the native language (L1) and the second language or the foreign language (L2). The term 'target language' will also be used for L2. As stated above, the first step in contrastive analysis is to describe the two languages or parts of them thoroughly and scientifically. Description requires to be based on a model or models. In deciding to choose one model or more, the contrastivist has to take into account the nature of the two languages and the aim of contrastive analysis, theoretical or practical. The model is usually borrowed from a linguistic theory, e.g. the structural, the transformational generative, or the functional systemic theory of language. However, this is not necessary; a contrastive analysis may find it more useful to use an eclectic model which makes use of certain aspects of two or more theories. I have personally found this eclectic model useful when comparing English and Arabic. A number of

factors influence an analysis to choose one model rather than the other, including the two languages compared, the level of comparison (phonology, grammar, vocabulary, etc.) the purpose of comparison: theoretical or pedagogical.

Rarely does comparison include every level or part of the two languages. Normally it is confined to certain levels, systems, sub-systems, constructions or rules. Since the linguistic level at which comparison is performed is important in determining the type of model used in description, it is useful to recognize the following four levels: (a) phonology, (b) grammar, (c) lexicon and (d) text and discourse. Levels (a), (b) and (c) belong to the traditional domain of linguistics, microlinguistics, which considers the sentence the highest unit of description. The last level, text and discourse, is concerned with units higher than a sentence. Only in the late 1950's and early 1960's did linguists start concerning themselves with analysing texts and discourse. The relation of these levels to the choosing of a model will be discussed in some detail in the subsections 2.1, 2.2, 2.3 and 2.4.

I propose that four characteristics are essential for a model: comprehensiveness, neutrality, simplicity and durability (cf. Twaddell 1968:195). The model of description should be as complete as possible so that it would help the contrastivist to deal with various levels, structures, constructions and subsystems of the languages with which he is concerned. This is especially problematic at grammatical level, where most of the theoretical models derived from linguistics are incomplete; they often describe certain areas of the languages under investigations. Moreover, these theories are unstable and keep changing. The contrastivist, in this case, has three choices: he can opt for a traditional model which is fairly complete; he may use an eclectic model which is as complete as possible; or he may select a modern theoretical model and apply it as if it were stable and complete. Personally, I have often found the second choice, the eclectic model, the most useful.

Neutrality means that the model should as far as possible be independent of the languages. At present nearly all the models available are derived from European languages, above all English, French and German. In practice, this means that in an English- Arabic contrastive analysis, the

model would be biased towards English. By choosing to be eclectic, the contrastivist would probably be able to counterbalance the quality of biasness in his model.

Finally, it is important that the model be simple especially if it is to be useful for pedagogical purposes. Twaddell mentions one factor which promotes complication in a model (1968:199):

The more a set of phonological or grammatical factors is limited to a particular style of formulation, the harder it may be for the working writer or teacher to make pedagogical use of it.

Thus depending on one linguistic theory often makes the model harder to comprehend and to use. There is another factor which complicates most of modern linguistic models, namely the frequent use of symbols and unfamiliar abstract marks in the hope of making linguistics a science like mathematics. But linguistics is not like mathematics and cannot become a pure science based on algorithms. Modern linguistics, especially macrolinguistics is a social science in a general sense and it is better, in my opinion, for a linguist to use a plain metalanguage to describe his facts than to fill his language of description with symbols. Here is an example from James (1981:68) which is not specially complicated, but the way rules and symbols are used does not certainly help to simplify the description:

English

1) Indef.
Article

$$\left(\begin{array}{l} a/ - (\text{adj}) \text{ N. sing} \\ o/ - (\text{adj}) \text{ N. pl} \end{array} \right)$$

Portuguese

Indef.
Article

$$\left(\begin{array}{l} \text{um/} - \text{adj N. Sing. m} \\ \text{ums/} - \text{adj N. pl. m} \\ O/ - \text{N} \end{array} \right)$$

James seems to be aware of this complication; for he explains the two rules in plain English immediately after formulating them.

To summarize, the best description model seems to be one which is comprehensive, neutral and simple; such a model is more durable and useful (cf. Twaddell 1968:201).

2.1. Phonological Models:

Here I will pass over the distinction drawn between articulatory, auditory and acoustic phonetics on the one hand and between phonetics and phonology on the other hand. I will confine myself to the functional use of sounds in a language, i.e. its phonological system. Comparing phonological systems is less problematic than comparing the other levels. It seems to me that there are two reasons for this: first, the borderline separating phonology from the other levels is clearer than that separating the level of grammar and vocabulary. Secondly, linguistic sounds lend themselves more readily to verification by means of laboratory instruments. The problems of phonology seem to be often solved in the laboratory. The most obvious models for comparing the sounds of two languages are two: the taxonomic model borrowed from structural linguistics, and the generative model based on Chomsky and Halle's *The Sound Pattern of English* (1968). Within the taxonomic model two subtypes are recognized based on Hockett's (1954) item-and-process (IP) and item-and-arrangement (IA) models. These two models are exemplified by James (1981:35-6) using the past form took:

- (i) (IP) / t u k / = / teik / + (/ ei/ → / u /), where the medial diphthong ei / is replaced by the monophthong / u / of took.
- (ii) (IA) / tuk / = / t - k / + / - u - /, where the root / t - k / has / ei / in the present form and / u / in the past form.

In the generative model two levels of sound structure, deep and surface, are proposed: e.g. sing has at deep level the sound / ŋg /, then / g / is deleted and the surface structure has / si ŋ /. Thus sing is represented as / ŋ /
/ si ŋ g / → / si ŋ /.

Of course, there are other more recent models, e.g. parametric, and there will be others in the future. The reason I have confined myself to the two models above is that they have been influential in contrastive analysis. Probably the generative model is more useful in theoretical linguistics; it offers greater explanatory details. However, the taxonomic model is more beneficial for applied linguistics, where the contrastivist can use the IPA charts to compare the sounds of the two languages (cf. James 1980:74-83). In pedagogical studies, the generative model has been the subject of severe criticism. James (1968:82) writes: 'The phonological deep structure not only lacks psychological reality, but seems to contradict it, with its postulation of these "quasi-mystical underlying forms.'" This is also the view of a number of other linguists namely Sanders (1981:26), who states that "teaching has always been concerned with getting the student to produce correct surface structures.' It is to be noted that in the haydays of the contrastive projects in the United States and Europe in 1960's nearly all the contrastive work used a kind of taxonomic model. The concept of distinctive features first put forward by the Prague School phonologists (Jakobson and others) may be used here profitably, since these features are universal and may be used as a basis for description and comparison, a type of *tertium comparationis*.

One final point about the phonological model or rather about its application in teaching is worth mentioning here; it is advisable that the teacher avoid the narrow, pedantic application of one theoretical model when he/she trains his/her students. The objective should be the broader pattern of comprehensibility rather than restricted precision of pronouncing a word exactly as a native speaker of RP, for instance, does. Rivers warns against such tendencies which are found among the teachers of pronunciation (1968:155):

In concentrating on the sounds which the students find hard to articulate, the teacher often trains them to produce these in a distinctive and restricted way that the speaker sounds ridiculously pedantic or pretentious to a native speaker, who has learned to produce this sound with variations (within a band of tolerance) dependent on phonological environment or level of discourse. In an emic approach, the student will acquire the phonological system as a functioning whole, learning to discriminate and produce sounds which signal distinctions of meaning with the new language, without being constantly reminded of ways in which it is

similar to or different from the phonological system of the native language.

2.2. Grammatical Models

The most serious problem of description is in finding a suitable model to describe the grammatical systems or subsystems of the two languages which are the subject of contrastive analysis. The main reason for this is that modern syntactic theories on which grammatical models are based are characteristically short lived and therefore incomplete. To this may be added the shift in the field of linguistics itself, which necessarily influences the grammatical model. The early theories of linguistics stopped at the level of sentence as the highest unit of description. Since the late 1960's, most linguists started to feel that the limits had to be extended to include units above the sentence – text and discourse (cf. Gleason 1968:39; Lado 1968:132). There has also been an essential shift in the viewpoint concerning the nature of language and the proper subject of linguistics. Linguists are no longer restricted to the domain of competence, they are also concerned with performance, where the context of an utterance acquires considerable importance. This latter trend termed macrolinguistics, in contrast to the earlier trend known as microlinguistics, is the dominant practice in linguistics today, and has started to influence contrastive analysis.

It is paradoxical that the earliest impetus for contrastive analysis was provided by American structuralists (cf. Fries 1945) who claimed that each language comprises an independent system which determines the syntactic relation and the semantic values inside the system – a view hardly favourable to comparing and contrasting languages. The earliest work in contrastive analysis adopted the structural model as expounded by Bloomfield (1933) and developed by his followers. This model is known as Immediate Constituent Model (IC). It is mainly concerned with substitution and distribution of linguistic forms. The main criticism directed against this model is that it confines itself to form and neglects meaning; it is mechanical and fails to explain certain distinctions between sentences, as for example, between He is eager to please and He is easy to please.

With the publication of Chomsky's *Syntactic Structures* in 1957 a new theory of language study was introduced: The Transformational Generative Theory. It postulated a deep and a surface structure for language and thus heralded a new dawn for contrastive analysis. The theory claimed that languages were similar at deep structure, the differences they revealed were confined to surface structure. If this was true deep structure would be ideal as a basis for description and comparison, a *tertium comparationis*. Most of the contrastive analysis in 1960's was directly or indirectly influenced by the transformational generative theory. However, the major projects were more conservative; except for the Polish Project which adopted a generative model, the other American and European models chose an eclectic model. Less than ten years later major cracks began to appear in the transformational generative grammar, and a number of competing theories began to emerge including Generative Semantics and Case Grammar. Stockwell the director of the English-Spanish Contrastive Project at the University of California, Los Angeles refers to this spilt as 'the confused state of contemporary theory.' (1968:25).

One important work adopting the generative model at this period is Di Pietro's *Language Structures in Contrast* (1971). However, this work has come under severe criticism (Sanders 1981:21) for suggesting that teachers should try to teach deep structures and teaching should be based on generative contrastive analysis which must be rule-governed. Sanders (1981:25) replies that 'teaching has always been concerned with getting the student to produce correct surface structures'. She comments on the second point concerning 'rule-oriented teaching' put forward by Di Pietro, by quoting Chomsky (1966) that 'a person is not generally aware of the rules that govern sentence interpretation in the language that he knows; not, in fact, is there any reason to suppose that it will help the learner with his actual production of the foreign language to see 'similarities' at the deep structure level' (p.26).

In the field of theoretical contrastive linguistics the conclusion arrived at through comparing languages has sometimes been short lived and misguided. James (1980:7) cites an example from Ross (1969), who suggests that adjectives are derived from NPs in deep structure. Ross based his claim on English, German and French as in:

- Jack is clever, but he doesn't look it.
Hans ist klug, aber seine Sohne sind es nicht.
(Lit. Jack is clever, but his sons aren't it).
Jean est intelligent, mais ses enfants ne le sont pas.

Data from Polish disproved this claim, where the substitute for the adjective is an adjective and not a pronoun. Ross's claim may also be disproved with data from Arabic:

- جاك ذكي ولكن أولاده ليسوا كذلك.
(Jack dakiyun wa laakinna awlaaduhu laysu kadaalika).

Where كذلك is a prepositional expression. (= 'like that'). In fact evidence from Arabic would point to the possibility that adjectives are related to verbs. Consider the following:

- أخذ السارق ما خف وزنه وغلي ثمنه.
(The thief carried away whatever was light and valuable).

- خافت الفتاة حين رأت منظر المشنقة.
(The young woman was afraid when she saw the sight of the gallows).

- أحمر التفاح.
(The apples are (have become) red).

The main transformation generative theories used in contrastive work are Chomsky's grammar, Fillmore's Case grammar and Generative Semantics. A brief account of those models may be found in James (1980: Chapters 3 and 4).

Two European theories are worth mentioning here: the Prague School Linguistics which stressed a functional view of language and introduced such concepts as Functional Sentence Perspective (FSP), Communicative Dynamism (CD), Theme and Rheme, and Given and New Information. The work of the Prague School has been and still is used profitably in contrastive analysis. The second theory is Systemic Linguistics pioneered by Firth and further developed by Halliday and other British linguists. The main advantage of this theory is that it emphasizes the importance of context and views language as a social system and a means of

communication. Like the Prague School, Systemic linguistics adopts a functional view of language. Certain categories of this theory, namely Unit, Structure, Class, System, are often borrowed by contrastivist because they belong to linguistic universals.

2.3. Lexical Model :

The study of lexicon was virtually neglected in linguistics for along time. This reflected negatively on contrastive studies, which as we have seen derived their models from linguistic theories. However, a sort of comparative lexicology has always been maintained by three groups of scholars: ethnologists, dictionary makers (lexicographers) and translators. Some ethnologists maintained that different languages impose their own reality of the external world (cf. Sapir and Whorf); their views led to what is known as linguistic relativity. There are two types of linguistic relativity: a strong version which claims that our language determines what distinctions we see in the outside world: i.e. the same reality is seen differently by peoples speaking different languages. The best proponents of this are Sapir and Whorf in what is known as Sapir-Whorf hypothesis. The weaker version of linguistic relativity maintains that a language is determined by its culture, and only through culture does a language influence our view and way of thinking about the outside world. Most linguists nowadays believe in a type – usually the weaker version – of linguistic relativity. Linguistic relativity certainly complicates matters for contrastive lexicology, since it claims, for example, that the pairs market: سوق , marriage: زواج and democracy: ديموقراطية are not absolute equivalents; they refer to different realities determined by different cultures.

A different point of view is expressed by those who believe that human experience has a basic common foundation shared by all human beings. Marriage, for example, refers to the same social institution – a contract between a man and a woman. Different cultures show different ways of realizing this social contract. This view, which believes in the universality of human experience, is more favourable to contrastive analysis and may serve as a basis for these studies in lexicology. Derived from this universalist view are certain theories which deal with the vocabularies of various languages: the semantic field theory which is based on paradigmatic relations between the words of a vocabulary and divides the

lexicon of a language on the basis of these relations to a number of areas or fields: e.g. kinship terms, culinary terms, colour terms. This last area (field) has been studied by a number of scholars including Berlin and Kay (1965) who claim that there are eleven universal colour terms from which different languages choose their colour terms according to a natural hierarchy (cf. Lyons 1977: 246). Thus all languages with two colours have words for black and white; all languages with three colours have terms for black, white and red, and so on. In spite of criticism directed against this theory, it can still serve as a basis for contrasting various areas of the vocabularies of different languages. For example, to express heat, English has four basic terms: cold, cool, warm and hot; whereas Arabic has three terms: بارد, دافئ, حار. The contrast between the two languages in this field may be illustrated by the following diagram:

English	cold	cool	warm	Hot
Arabic	بارد	دافئ	حار	

Componential analysis, which has been inspired by distinctive feature analysis in phonology, is based on syntagmatic relations. It claims, as in phonology, that meaning may be analyzed into primary (indivisible) semantic features or components which combine to form the meaning of a word. Thus the meaning of 'cow' may be analyzed into the following components: BOVINE + MATURE + FEMALE; the meaning of 'woman' may be stated as: HUMAN + MATURE + FEMALE. It will be clear that the contrast between these two words lies in BOVINE vs. HUMAN. In spite of the criticism levelled against componential analysis, it can be usefully used in comparing certain areas of the vocabularies of various languages; for example, 'murder' may be contrasted with قتل as follows: murder: CAUSE + DIE + DELIBERATELY; qatala (قتل): CAUSE + DIE. To translate the English word into Arabic, one has to narrow the meaning of the Arabic term by using a modifier, e.g. قتل عمداً ; قتل عمداً (= killed deliberately).

2.4. Discourse Models:

Only recently has linguistics and in turn contrastive analysis become interested in investigating units larger than sentence. This new trend, which may be dated back from early 1970's, has introduced essential

changes in the study of language. These changes have involved all the traditional levels including phonology, syntax, and lexicon. The centre of linguistic studies has shifted from competence to performance, from language as a system (code) to language as a means of communication. Language is studied with its context, which has become essential in determining meaning. Two units above the sentence have emerged: text and discourse. Textual studies concentrate on the formal relations of utterances including cohesion, thematic organization and information distribution. Discourse studies usually termed discourse analysis emphasize the functional aspects of utterances: how these utterances are used in communication to perform speech acts. In this section, both text and discourse will be discussed under the general term discourse; this inclusive view is justifiable since these two units complement each other: text may be considered the formal underlying network which discourse activates and uses in communication to achieve certain acts like informing, asking, greeting, ordering and requesting. A model of describing discourse will have two main components; one investigating the formal organization (text) and the other dynamic functional relations (discourse). These two components may be subsumed under the Organization and Meaning of discourse.

At the present time there are two models available for analyzing discourse, one developed in Britain and the other in the United States. The main difference between the two is that the British model views discourse as a finished product and tries to analyze it on that basis; the American model, known as the ethnomethodologist model, looks at discourse as a process unfolding in space and time. Thus the British (Birmingham) model analyzes discourse structurally into transactions, exchanges, moves and acts which are explained in detail in Sinclair and Couthard (1975). The American model, which envisages discourse as a dynamic process taking place between participants in an actual situation, analyzes this process into turn-taking involving such things as opening, replying and closing; pauses, overlapping, adjacent pairs, preferred and dispreferred responses. Whether using the British or the American model, a contrastivist may investigate how these aspects of discourse are realized in various languages. He/she may, for example, study by means of data collected from a number of persons how turn-taking is achieved in English and Arabic. The results may reveal that there are more pauses and overlappings in an Arabic discourse than there are in the corresponding

English discourse. The two languages may differ in how they initiate a discourse, how they maintain it and how they close it. The difference between English and Arabic is, for example, obvious in greetings. There is some repetition in Arabic as in the following; (for repetition as a strategy in discourse see McCarthy and Carter 1994: 144).

- كيف حالك؟ (How are you?)
- بخير والحمد لله. (Fine, God be praised.)
- كيف حال الأولاد؟ (How are the children?)
- عال العال والحمد لله. (Excellent, God be praised.)
- كيف حال العائلة؟ (How is the family?)
- الجميع بخير. (All are well.)
- كيف حالك؟ (Again how are you?)
- عال، الحمد لله. (Excellent, God be praised.)

In English there are fewer turns:

- How are you?
- Fine. Thank you.

Moreover, in Arabic there is more inquiry about family and relatives than there is in English. Other genres than conversation may be contrasts, e.g. narrative discourse, jokes and interviewing. In the British model, an exchange often consists of three moves in English: initiation, response and follow-up:

- A- What time is it? (initiation)
- B- Ten-thirty. (response)
- A- Thanks. (follow-up)

A corresponding Arabic discourse would probably have four moves:

- A- الساعة كم من فضلك؟ (initiation)
- B- العاشرة والنصف. (response)
- A- شكراً. (follow-up)
- B- الشكر لله. (follow-up)

In English, such a favour is regarded as too small to deserve a follow-up

from the speaker (McCarthy 1991: 16).

Various theories of pragmatics in addition to semantics are used in investigating the meaning of discourse, which includes deixis, presupposition, implicature and speech act. These aspects of pragmatic meaning are universal, but how they are realized in various languages is culture specific. For example, deictic elements of a discourse may be compared in English and Arabic; these elements indicate how participants, time, place, etc are related to the context. The way languages use these elements differ. For example, English often uses that to refer anaphorically to objects involving negative feelings for the speaker:

- What is that in your hand? (pointing to a speaker)

In a similar situation, the Arabic speaker may use هذا (lit. this):

- ما هذا الذي في يدك؟

Personal pronouns when occurring together are ordered differently in English and Arabic. The normal order in English is: 2nd person + 3rd person + 1st person: e.g. you, he and I. An Arabic speaker starts with the 1st person, then the 2nd, then the 3rd person: أنا وأنت وهو (I, you and he).

On the formal level of discourse (text), cohesion, thematic organization and information distribution are three major areas which may be explored in contrastive analysis. Cohesion in English has been studied in detail by Halliday and Hasan (1976) using Systemic linguistics. This area has not been investigated thoroughly for Arabic texts. The Prague School theory combines thematic organization with information distribution; it assigns thematic status to elements carrying given information and rhematic status to those expressing new information. Halliday's systemic linguistics considers theme-rheme and given-new two distinct systems, which are correlated in that the unmarked theme expresses given information and the unmarked rheme new information ; but this is not necessary. A contrastivist comparing thematic and information structures in English and Arabic faces the problem of choosing between the systemic model and the Prague School model. The first model, which has been developed from data derived from English is probably more suitable for the English language; whereas the Prague theory model, which is

based on data taken from a Slavonic language, is perhaps more suitable for Arabic, which like Slavonic languages has a flexible word order. Probably the solution here is to opt for an eclectic model which combines certain aspects of both models. Personally, I have always found it useful to use the systemic model with a number of modifications from the Prague School model to suit Arabic as well as English (cf. Aziz 1988).

At the level of discourse grammar and vocabulary acquire an additional functional dimension. Two examples, one for each of these areas will illustrate the point. For example, traditionally relative clauses in English are introduced by *wh*-relative pronouns, *who* and *which* sets, *that* or the zero relative pronoun. The use of these pronouns is restricted by the gender of the antecedent (person/ non-person), the case of the antecedent (subject/ object) and the type of the relative clause (restrictive/ non-restrictive). Arabic, on the other hand, has two sets of relative pronouns: *الذي* and its feminine form *التي* which have dual and plural forms. These forms are restricted by case (subject/ object and genitive); and the zero relative pronoun. The first set is used with a definite antecedent and the zero pronoun with an indefinite antecedent. For example:

- the man who came الرجل الذي جاء
- a man who came رجل جاء
- the book (which) you bought الكتاب الذي اشتريته
- a book (which) you bought كتاب اشتريته
- the two women (whom/ that) you saw المرأتان اللتان رأيتهما
- my sister, who came here أختي التي جاءت إلى هنا
- my aunt, whom you met last week عمتي التي قابلتها بالأمس

At discourse level, their function is to indicate two types of information one less important expressed by the relative clause included inside the main clause in English, as this example from Tessa Moore cited by McCarthy and Carter (1994: 125) illustrates:

- (1) Guy Faukes, who tried to blow up Parliament, was a Roman Catholic.
- (2) Guy Faukes, who was a Roman Catholic, tried to blow up Parliament.
- (3) The plot failed.

(2) and (3) form discourse; (1) and (3) do not. If however (3) is replaced by (4):

(4) He was just one of many who were prepared to die for their faith.

Then only (1) and (4) form discourse, (2) and (4) do not. The Arabic sentence corresponding to (1) – (4) are:

(1.a) كان جاي فوكس كاثوليكيًا، وقد حاول أن يفجر البرلمان

(2.a) حاول جاي فوكس أن يفجر البرلمان، وكان كاثوليكيًا

(3.a) وقد فشلت المؤامرة

(4.a) وهو واحد من الكثيرين الذين كانوا مستعدين للموت من أجل عقيدتهم

Here too, only (2.a), and (3.a), and (1.a) and (4.a) are discourse; the other arrangements are not. It is to be noticed that Arabic normally expresses minor information in such sentences by a coordinate clause placed after the main clause, which conveys the main information.

With regard to vocabulary, some words acquire a dynamic function in discourse; they are termed procedural (Widdowson 1983: 92-4); and others termed schematic have a relatively constant function. Procedural words have a relatively general sense which may be interpreted differently in different contexts: e.g. object, process, thing. Schematic words, as stated above, have a fairly constant sense: e.g. pencil, red, telescope. For example:

(5) In the dark he saw a shining object; it was a big diamond.

(6) In the forest he saw an ugly object; it was a dead snake.

The word object in (5) refers to a diamond, in (6) to a dead snake. Diamond and snake, on the other hand, belong to the schematic part of English vocabulary. Arabic vocabulary may also be investigated with regard to its procedural and schematic elements. For example, the word شيء is used to express the sense of object in (5) and (6):

(5.a) رأى شيئاً يلمع، وكان هذا الشيء جوهرة كبيرة

(6.a) رأى في الغابة شيئاً قبيحاً، وكان هذا الشيء حية ميتة

These areas of vocabulary require further contrastive research work.

3. Comparison Models

Comparison of two or more languages implies that these languages share some common basis or property; otherwise there is no point in comparing completely different languages. On the other hand, it is not useful to compare identical objects; it is like comparing a thing with itself. In the words of Twaddell (1968: 198):

Some linguists say that languages differ unpredictably and without limit. Other linguists say that all languages are very much alike in their 'deep structure' and differ only in their surface structures. Obviously, it comes to the same thing, so far as FL learning is concerned: when deep structure is so deep that all languages are essentially alike, depth equals triviality, for practical pedagogical purposes.

Thus when linguists compare two structures or subsystems the implication is that there is a common ground and some contrast worth comparing. It is to be noted that there is a distinction to be drawn between difference and contrast. The latter presumes a kind of similarity as its basis, the former does not. Rivers (1968: 151) draws this distinction in teaching: 'for pedagogical purposes a useful distinction can be drawn between difference and contrast. Differences can be taught as a new items of knowledge, whereas native-language interference must be combatted in areas of contrast.' The basis of contrast is equivalence: this is the basis of comparison models.

The elements chosen for comparison are presumed to be equivalent. For example, adjectives in English and Arabic are compared on the assumption that these two categories have a common basis: the choice is based on equivalence. The crucial question here is: what kind of equivalence is involved in one's choice? This is a question about the model of equivalence. There are basically two types of models here: formal and functional. The formal model deals with structures and rules, whereas the functional model is semantically based or meaning-oriented. When we compare the position of adjectives in English and Arabic and state that English adjectives usually precede the noun head, whereas Arabic adjectives usually follow the noun head, the model of comparison

is formal. When we state that both Arabic and English adjectives may be used restrictively and non-restrictively, the model is functional or notional. With the broadening of the field of contrastive analysis to include discourse, functional equivalence has come to include pragmatic meaning. Thus when comparing how greetings are realized in English and Arabic, the assumption is that the speech act of greeting is notionally the same in both languages and cultures – socially and pragmatically the same in that it helps to maintain some type of intimate relation between the participants and in turn helps the course of daily life to progress more smoothly.

In contrastive studies, the formal and the functional models of equivalence are often combined although this is not necessary. At the present time comparison whose aim is pedagogical rarely stops at formal relations; it tends to include notional aspects of the elements compared. Theoretical contrastive work often confines itself to structural or functional relations only; one of the two models is used to the exclusion of the other. It is also possible to choose a notional model to investigate formal relations only or vice versa. For example, in comparing how the articles in English and Arabic are formally realized, the contrastivists may start with the notion of definiteness and state that in English there are three markers: the for definite reference, a for indefinite reference and zero for non-definite reference (cf. Lyons 1977: 188). Arabic, on the other hand has two markers: the definite article and the non-definite article zero.

The structural model may also be used to investigate functional relations. For example, a linguist may choose to examine the position of the adjective before its noun head in English and Arabic to see how it correlates with its function as restrictive or non-restrictive. Thus premodification such as: *حسن الوجه* is nearly always restrictive, e.g. *هذا رجل حسن الوجه* (Lit: this is a man handsome as to his face, i.e. he belongs to the class of men who have handsome faces.) In English, the premodifying position of the adjectives may be restrictive or non-restrictive (cf. Quirk 1994: 1239): e.g. This is my intelligent son (restrictive: the other one is not; or non-restrictive: I have only this son and he is intelligent). However, these last two possibilities may be considered as a combination of a formal and functional models.

These equivalent models are non-directional: they are neutral with regard to the native and the foreign languages. On the basis of equivalence, a category or a system may be chosen from L2 and compared with that in L1, or vice versa. For theoretical contrastive studies, there is no favoured direction. For applied contrastive analysis, the favoured direction is for the contrastivist to move from the second foreign language to the native language. The application of the model is therefore usually biased in favour of the foreign language since this is the target language which the learner is to acquire. There is another reason for this tendency, which has been mentioned before (see section 1), namely the contrastivist is often a specialist in the foreign language.

4. Prediction Models

In discussing prediction models, we move from the linguistic to the psychological component of contrastive analysis which is concerned with using the results of the analysis for pedagogical purposes. Prediction models are therefore part of applied rather than theoretical contrastive analysis. Theoretical contrastive studies do not concern themselves with pedagogical prediction; they aim at discovering linguistic universals. As has been stated above, applied contrastive analysis received a strong impetus in the statement of C.C. Fries (1945: 9) (see section 1). The assumption underlying the process of comparison is that, in the words of Lado (1957: 2): 'individuals tend to transfer the forms and meanings and distributions of forms and meanings of their native language and culture to the foreign language and culture'. Two types of transfer have been recognized: positive and negative. The former is based on similarities between the native language of the learner and the foreign language; the latter, negative transfer termed also interference, results from contrasts between the native language and the foreign language. Thus similarities between L1 and L2 will help to facilitate the process of learning, whereas differences between the two languages will create problems for the learner. Contrastive analysis, it has been claimed, can predict four things: the cause of a problem, the areas of difficulty, the errors which the learner may face, and finally the tenacity or endurance of some errors. The last point implies suggesting a scale of difficulty (cf. Rivers 1968: 154).

This prediction model which flourished in 1950's and 1960's was based

on the psychological theory prevailing at that period, namely behaviorism, which explained the process of learning on the basis of stimulus and response (S-R). Behaviorism in psychology was founded by Watson, whose classic book *Behaviorism* was published in 1924; and was borrowed into linguistics by Bloomfield, whose views as expounded in his book *Language* (1933) had considerable influence on linguistics in America and elsewhere. Linguistic behaviorism remained a strong force until it was severely criticized by Chomsky in his critique of Skinner's *Verbal Behavior* (1957), when it began gradually to be replaced by cognitive psychology.

In late 1960's and in 1970's applied contrastive analysis came under severe criticism which negatively affected contrastive analysis in general. Most of this criticism came from the United States (cf. Alatis 1968: 2-3), and was directed at the predictive power of the model used. It was claimed that contrastive analysis was often unable to predict certain difficulties, and that it sometimes identified errors which did not actually materialize in the process of learning. Some linguists claimed that contrastive studies should confine themselves to the task of explaining, and leave the test of identifying errors to error analysis. Error analysis first emerged as an alternative to contrastive analysis in 1960's (cf. Hamp 1968; Strevens 1971), and was later 'assigned the function of verifying the predictions of contrastive analysis in the light of empirical data collected within the more inclusive field of contrastive linguistics (Varadi 1980: 79, quoting Madarasz, Paul Huba 1968): 'Contrastive linguistic Analysis and Error Analysis', Unpublished Ph.D. Dissertation, Berkeley University of California). In recent years, the main task of error analysis has been investigating what is variously known as 'transitional competence' (Corder 1967), 'interlanguage' (Selinker 1972) or 'approximative systems' (Nemser 1971) of the foreign language learner. As a result of this, the fields of these two studies, contrastive and error analysis, have been revised and widened considerably (cf. Nemser & Slama-Cazacu 1970). It is paradoxical that in spite of all this criticism, contrastive studies have continued to be carried out, sometimes with greater vigour.

The transfer model of prediction based on behaviorism was, as stated above, severely criticized, and with cognitive psychology replacing behaviorism a number of linguists suggested that the transfer model

should be replaced by another model based on Ignorance Hypothesis (James 1980: 144). Ignorance hypothesis is defined by Varadi (1980):

If interest in the acquisitional process is not restricted to the inhibitive effect of the clash of the two systems, and if the learning process is also considered, one cannot escape the fact – almost too obvious to mention – that the T (target language) does not present itself to the learner at a single stroke, as it were. Consequently, along with an analysis of inhibition and the facilitation of AS (approximate systems), there must be a third domain in ASA (approximate system analysis): the study of hiatus. Errors of this type result from the fact that neither the learner's B (base or source language), nor his previously acquired knowledge of T – the main sources and components of his AS – is of any help, and the learner is in (perhaps temporary) ignorance of particular areas of the target language.

Interference was therefore considered by many linguists a vacuous concept. Newmark (1970: 225) expresses this view briefly and clearly: 'the cure for interference is simply the cure for ignorance.' In recent years, the early strong version of transfer model found in Lado's writing (1957) has given way to a weaker version which claims that some of the learner's errors are due to interference from the mother tongue. However, there are other sources of errors found in the speech and writing of the learner of a foreign language, namely overgeneralization, ignorance of rule restrictions, incomplete application of rules and the building of false systems or concepts (Richard 1971). Thus two types of errors are recognized: interlingual errors resulting from interference of the native language, and intralingual errors due to other sources. The transfer model is combined with ignorance model derived from error analysis resulting in an eclectic model which is better equipped to predict, diagnose and explain the learner's errors.

5. Conclusion

Three main types of models are used in contrastive analysis: Description Models, Comparison models and prediction models. These three types are

distinct but interrelated, and their choice is determined by the purpose of analysis: theoretical or applied and the level of analysis: phonological, grammatical, lexical and discorsal. The main sources from which models of analysis are derived are two: linguistics and psychology, sometimes combined with cultural, ethnological and sociological dimensions. Often the models used in contrastive analysis have been in a tumultuous state and the most unstable of them has been the model used in grammatical description. The unstable state of the model has been one of the reasons for the ups and downs which contrastive analysis has witnessed in the second half of the twentieth century.

The main virtues of a model consist in its simplicity, comprehensiveness and durability. A complicated model is difficult to exploit in a classroom or elsewhere (e.g. in translation, typology and in linguistic universals). One of the factors which complicate a model is basing it wholly and narrowly on one linguistic theory. In procedural matters, excessive use of the language of symbols for no other reason except to prove that linguistics including contrastive linguistics is as precise as mathematics is another factor which makes the model incomprehensible to teachers, and sometimes even to specialists. Linguistics is a science within the humanities and the plain language is a more effective instrument for expressing it. Most of the models available now and in the past are incomplete; they are derived from theories which describe small parts of a language often inconclusively. Perhaps the way to overcome this difficulty is to have recourse to more than one theory. There is another virtue in an eclectic model. It is usually not so short lived as a model based wholly on one theory. The latter model disappears with the demise of the theory. Durability, simplicity and comprehensiveness are essential properties of a successful model.

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