0. Introduction

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The problems of translation are numerous and lie in several hierarchies which are simultaneously present and interacting in any given set of languages. Perhaps the problems are most salient where the material to be translated involves concepts which are foreign to the receptor language or where the difference in language also reflects a difference in cultures. The difficulties are intensified in the case of Bible translation which involves a three- (and often four-) way linguistic-cultural shift: from the language and culture of the original, through the translator's linguistic-cultural background, to the linguistic-cultural situation of the receptor language which at times involves a growing bilingual-bicultural situation different for the receptor and the translator.

It is the purpose of this paper to outline a set of procedures for determining which of the generally accepted devices for introducing new concepts into receptor languages would most economically stimulate semantic change in any given situation. That is, the procedures are an attempt to enable a translator initiating work in a new language to predict with a certain degree of accuracy the device appropriate to a given situation and the normal semantic load assignable to it. Devices discussed are APPROXIMATION, including the use of related items, metaphors and similes; CREATION, including analogical innovations of similes as well as simple calques; CULTURAL EQUIVALENTS, calques of a different nature; and BORROWING, the introduction of the foreign term, with or without qualifications such as obligatory grammatical markers or optional explanatory wordings.

For maximal usefulness a set of procedures should be independent of a particular grammatical or semantic theory. As a basis for outlining the procedures herein presented, however, the author has made the following theoretical assumptions:
1) that language is patterned; 2) that the patterns in any given language are discoverable; 3) that the degree to which an analysis of the semantic patterns is possible in the framework of current theories can be used to predict (at least partially) the areas in which meaning change is most likely to occur; 4) that it is to some degree possible to recognize the normal synchronous position of a given language prior to the inception of semantic change and to attempt to program change at recognized terminal points; 5) that by deliberate choice of grammatical and semantic patterns parallel to those that occur in a language, the translator will be able to predict to some extent the structure and forms most likely to instigate a smooth and rapid change whether a) in the extension of the meaning of an item or b) in the use of loan items.

Ideally, the translator should have at his disposal a basic analysis of both the source and the receptor languages. These analyses need not both be done by the same linguist, nor need they necessarily be stated in terms of the same theory. They should be easily convertible or usable for contrastive analysis and should include at least the base grammar and its transforms; clause types with their nuclear and satellite tagmemes; or co-occurrence classes and their restrictions.

1. The first Procedure is a precursory semantic analysis of representative sets of semantic equivalents. This analysis may be based on any of the current semantic theories, the choice of which may slightly modify the order of approach, but should not greatly modify the results. The following steps are intended to give the precursory semantic analysis. Steps 1.3 through 1.7 should be carried out separately for each of the languages involved.

1.1. Select a representative area of homogeneity between the cultures.

1.2. Choose one basic concept within that cultural area. For the purposes of this study, it is better not to choose one of the closed systems such as kinship, numerals, pronouns, etc. Since the more thorough this part of the study is, the higher the chance of predictability in procedures 5 and 6, the linguist may wish to do several similar studies in order to broaden the basis for comparisons and predictions. The discovery of the more amorphous semantic systems or patterns within the language is of primary interest here.

1.3. List words, idioms and metaphors which have the concept as their referent. To be sure that no related words have been missed, it would be good to check 1) the colligations of the listed items for possible additions, and 2) the four universal word types: objects, events, abstracts, and relationals, to see that they have all been considered.
1.4. Determine the semantic range of each item listed in 1.3. Here the methods of analysis which have been productive for the study of closed systems and those for the study of connotations may not be as helpful as the studies of range based on the contexts in which an item occurs or as those of paradigmatic relations.

1.5. Determine the range of overlapping items, or the degree of synonymity existent between ways of expression. The analytical method which attempts to find possible substitutes within certain frames may prove effective here.

1.6. List the associative, denotative and connotative fields for each item. The semantic differential technique might be helpful here if some modification could be divided so that it would be useable among non-literate peoples.

1.7. Summarize the results in chart, matrix or diagram form. This should highlight terminal points and holes in the semantic patterning.

1.8. Compare the resultant analyses noting especially the following:

1.8.1. The formal similarities, that is, the word types and load carried by the grammatical structures.

1.8.2. The formal differences. This may prove to be merely a restatement of 1.8.1., but until procedures can be refined, it is deemed wise to utilize both methods to determine which is the more productive for the specific languages involved.

1.8.3. The semantic equivalences. Perhaps the most helpful procedure here is to ask Richard's seven questions in regard to the sets of equivalences:

I. How far do they pick out the same (or at least analogous) things to talk about?

II. How far do they say the same (or at least analogous) things about them?

III. How far do they present with equal vividness and/or actuality, weak or strong?

IV. How far do they value in the same ways?

V. How far would they keep or change in the same ways?

VI. How far are the dependencies and interplay between I, II, III, IV, V, and VI itself, the same in them both?

VII. How widely would they serve the same purposes, playing the same parts, within the varying activities they might occur in?
1.8.3. The holes in the semantic-formal equivalences.

The comparison described here should give a frame from which to predict the areas most susceptible to semantic change, the directions in which the translator may expect the highest degree of success for programmed change, and the type of semantic-grammatical shifts between the languages so that programmed changes may be made to follow those patterns.

2. In the areas where the cultures are not parallel, further procedures are necessary. Those presented in this section are designed to provide analyses of non-parallel or only partially parallel cultural areas and to determine the extent of comparability or correspondence in any given situation. If the results of the study suggested in 2.1 through 2.4 shows the term studied to carry a very high percentage of the total communication load, the translator may wish to skip the studies suggested in 2.5 to 2.7 and continue on to 3. If, on the other hand, the percentage of the communication load is normal or relatively low, the translator should continue with 2.5.

2.1. Following steps 1.3 to 1.7, make a formal study of the semantic area of the concept to be translated from the source language.

2.2. Determine how extensive the concept is in the source material.

2.3. Determine what percent of the semantic content is cultural, what percent is metaphorical, and what percent is by extension.

2.4. Determine what percent of the total communication is dependent on the cultural content and its extensions.

2.5. Check the receptor language for any areas that are semantically similar or parallel to those studied in 2.1 through 2.4. For each area recognized, conduct a study such as that described in 1.3 through 1.7.

2.6. Compare the results of the study in 2.1 through 2.4 with those of 2.5. This procedure, parallel to 1.8, is calculated to show the patterning of the roughly related semantic areas of the two languages.

2.7. Compare the results of 2.6 with those of 1.8. This is a comparison of the patterning in two sets of semantic areas.

3. The procedures in this section are designed to select the translation device most likely to instigate an acceptable semantic change in a particular grammatical-semantic situation.

3.1.1. If there is a high percentage of semantic parallelism, choose the term which most nearly approximates the patterning of
1.8, being careful that the emotive meanings are not too strongly opposed. This is the CULTURAL EQUIVALENT.

3.1.2. If there is a medium percentage of semantic parallelism, that is, related areas, with related terms, choose that term which most nearly parallels the patterning demonstrated in 1.8. The context will act as an agent of semantic change for this APPROXIMATION.

3.1.3. If the initial comparative procedure in 2.7 has revealed a hole in the formal equivalents, consider the CREATION of an item. Note the parallel structural patterns revealed by a comparison of the grammatical analyses. Following these patterns, attempt to create items whose formal-semantic structure is analogous to the other formal-semantic structures of the language as revealed by the comparative study in procedure 1.8.

The choice between the creation of a simile and that of a word or phrase should be partially determined by the percentage of cultural content of the semantic item in the source language, and partially determined by the patterns as displayed in procedures 1.8 and 2.7. Two conditions would favor the CREATION OF A SIMILE over a word or phrase: 1) a relatively high cultural content, and/or 2) a revealed patterning which demonstrates that the receptor language normally uses a simile in parallel situations. Conversely, if the cultural content is relatively low, or if patterning in the receptor language does not favor similes, the translator should attempt to CREATE A WORD parallel in structure to the members of the class of words which normally parallels the structural form occurring in the source language.

3.2. In cases where the translator has judged that the communication load of the item and its extensions was too heavy, or where procedures 2.5 through 2.7 have failed to be productive, the translator should use a BORROWED term. The choice of the form -- whether that of the original or one from a neighboring linguistic-cultural areas -- should be determined by the tendencies in the receptor linguistic-culture. If the receptor linguistic-culture has a tendency to avoid or withdraw from the neighboring linguistic-culture, it is probably better to transliterate from the original. Whichever is used, it will be necessary to fit the term into the linguistic context by assigning it to its probable class and morpho-syntactic distribution and into the semantic structure by building in the redundancy needed to give the term a load equivalent to that of other terms in the class.

4. Besides underscoring the need for further modification and refinement of current semantic theory, this set of procedures has raised further theoretical questions:

1) Can semantic components be measured in such a way that predictions regarding the rate and time required for each type of change could be calculated?
2) Given an affirmative reply to 1), what factors are involved in differing rates of change?

3) Is there an accurate way of measuring communication load? Is it possible to determine what percentage of a communication load is "very high", "normal", or "relatively low" (2,3)?

4) Can individual diachronic studies within an unwritten language be made? How is this related to systemic irregularities? --co-existent systems? -- techniques of reconstruction?

5) If it is possible a) to recognize loan words in the synchronic state of an unwritten language, b) to establish roughly the date of original contact with the item or donor language, and c) to estimate the amount of contact with the donor language; could it be possible to describe a scale of receptivity from which to predict the acceptance of further loans?

5. Further research might include comparative studies such as the following:

1) measurement of the semantic components of native words and those of loan words in the same language;
2) comparison of the diachronic semantics of native and loan words within the same language;
3) attempts at predictions based on either 1), 2), or both. These would be especially fruitful if done on languages such as Tzeltal, where there is evidence of the successful construction of a Christian vocabulary and linguistic documentation prior to the deliberate initiation of the changes.
4) measurement of the amount of new meaning in items which have been successfully programmed into semantic change.
5) calculations regarding successful semantic change to see if there is a significant difference when attempted from central to peripheral meaning areas and when attempted from peripheral to central areas.

6. The bibliography read in the preparation of these procedures and considered pertinent to the problems raised is presented in two parts. Part I deals with semantic theory, Part II with the aspects and principles of translation.
FOOTNOTES

1. This paper was originally prepared for a course in Diachronic Semantics at the Linguistic Institute, Indiana University, 1964.

2. Here the translator needs a delicate measure to determine where he is justified, as Humphries suggests, in substituting such cultural equivalents as American flat races for Ovid's chariot races (65), and where he is justified in following Bratcher and Nida when they insist that certain items with their extensions play such an integral part in the entire communication that they must be retained with explanations of the distinctive functions also included.

3. The procedures herein outlined have been calculated to reveal equivalent similes and metaphors such as "beholding in a mirror" (II Cor. 3:18 with "seeing in a shadow" in Usarufa of New Guinea, where the Usarufa culture demands an adjustment of any flaw reflected in a person's shadow (data from D. Bee, SIL, 1964). It is also calculated to exclude the use of items with high emotive meanings which counter-indicate the possibility of semantic change in the desired directions. An example would be the use of "goat keeper" in Psalm 23 in Tlingit for years before new workers discovered the disparagement and contempt with which goat keepers were regarded (data from Naish and Story, mimeographed letter).
BIBLIOGRAPHY

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PART II: ASPECTS AND PRINCIPLES OF TRANSLATION


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