THE SUBSET OF HEBREW PREPOSITIONS SHOWING SPATIAL RELATIONS OF STATIC CONTIGUITY

bу

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ABSTRACT

The purpose of this thesis is to demonstrate that in translation there are no interlingual criteria which determine the use of a specific lexical item in the target language for a given item in the source language. The criteria for determining translation equivalents are extralinguistic and intralingual. The extralinguistic criteria are situations which the linguistic events refer to. Items in two languages are translation equivalents only because they refer to the same situation in reality. The intralingual criteria are the categories and systems of a language—which determine the use of particular classes and items.

The particular items under discussion are "be" and "?al" which constitute the subset of Hebrew prepositions showing spatial relations of static contiguity. They are compared with English prepositions as formal correspondents and textual equivalents. The sense concepts (syntactic and semantic functions) of the Hebrew items and their English equivalents are studied in detail and compared. Several facts emerge from this study to confirm the hypothesis that the criteria for finding a target language equivalent for a source language item are not interlingual. In the case of the subset of prepositions studied in this paper the associated lexical items often determine the particular preposition to be used. Other criteria are the situation to which the linguistic event refers and the meaning of the preposition itself.

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INTRODUCTION

The purpose of this thesis is to show that in translation there are no interlingual criteria which determine the use of a specific lexical item in the target language for a given item in the source language. The criteria for determining translation equivalents are extralinguistic and intralingual. The extralinguistic criteria are the situations which the linguistic events refer to. Items in two languages are translation equivalents only because they refer to the same situation in reality. The intralingual criteria are the categories and systems of a language—which determine the use of particular classes and items.

The items under discussion in this thesis are two Hebrew prepositions and their English translation equivalents. The Hebrew and English items are compared as formal correspondents and textual equivalents; a detailed study is made of their sense concepts, i.e., what their syntactic and semantic functions are; and their sense concepts are compared.

CHAPTER I. BACKGROUND OF MODERN HEBREW

Modern Hebrew as spoken in Israel today is very closely related to Classical Hebrew, the language in which most of the Old Testament is written. When the modern Zionists decided to use Hebrew as their national language they took the vocabulary and grammar from Classical (or Biblical) Hebrew with necessary vocabulary items from post-Biblical (Mishnaic) Hebrew. Both the grammar and the vocabulary of Modern Hebrew were greatly influenced by the background of the Zionists, some of whom had been in Palestine for generations and were bilingual, speaking Hebrew and Arabic, but most of whom were Europeans who brought with them the Yiddish Language. Haim Blanc suggests that Yiddish was the most powerful non-Hebraic influence on Modern Hebrew.

There are two main types of Hebrew pronunciation corresponding roughly with the two groups of Zionists mentioned above. The Sephardic pronunciation is that used by the Jewish communities in the Arabic speaking world, i.e., North Africa and the Middle East; the Ashkenazic pronunciation is that used by the Jewish communities of Europe and America. There are, of course, variations within the Sephardic and Ashkenazic groups.

The phonology of Modern Hebrew is that of Sephardic Hebrew with Ashkenazic influence seen in the stress pattern of a few fixed phrases and proper names. The reason for the choice of Sephardic was that it

Haim Blanc, "Some Yiddish Influences in Israeli Hebrew," The Field of Yiddish, (1965), ed. Uriel Weinreich, p. 185.

was believed to be closer than the Ashkenazic to the Classical Hebrew pronunciation. This belief was probably influenced by the fact that there was a majority of Sephardic Jews resident in Palestine in the late nineteenth century when the modern Zionist immigration began. The Sephardic Jews also had official recognition from the Turkish government which gave them greater social stature in their communities than the recent immigrants.

Classical Hebrew was in use as a spoken language by the Israelites until the Babylonian captivity (c. 586 B.C.). After the return of some of the people from Babylon the Hebrew language was still used but came under more and more influence by Aramaic, the language of the western part of the Persian Empire. By the turn of the era Hebrew had ceased to be used as a first language by the common people who then used Aramaic, generously sprinkled with Hebraisms. Hebrew continued in use by Jewish communities all over the world as a language of instruction in religiously oriented schools, as a language of worship and prayer in the synagogues, as a language of correspondence between communities whose national languages were different, and as a spoken language at various times and in various parts of the world, but

Ruth Finer Mintz (Editor and Translator) Modern Hebrew Poetry: A Bilingual Anthology, (1966), p. xxvii.

William Chomsky, Hebrew: The Eternal Language, (1957), pp. 113 ff.

Harry M. Orlinsky, Ancient Israel, (1960), p. 148.

⁵A. E. Cowley, <u>Gesenius' Hebrew Grammar</u>, (1910), pp. 13-16.

especially in Palestine.6

When the Zionists began to settle in Palestine many of them immediately began to learn and use Hebrew. There were some European national groups who opposed the use of Hebrew but they soon lost ground and Hebrew was unofficially established as the language of the pioneers and the language of instruction in many of their schools. In 1904 "... the Language Committee of the Teachers' Organization of Palestine was charged with the responsibility of fixing the pronounciation [sic], the spelling, and the coining of new words." In 1918 Hebrew was "... firmly established as the unquestionable language of instruction in the schools of Palestine..."

There are two main factors influencing the language today. First, the Academy of Hebrew Language makes decisions on grammar, vocabulary and spelling which are carried out by the official radio station and newspapers. Many of the vocabulary items which are coined are technical terms borrowed from English. Second, the usage of the people in their everyday life, which is influenced by Arabic, brings new idioms and terms into the language.

Mintz, Op. Cit., p. xxxi. Cf. William Chomsky's Statement, "... there is ample evidence to prove that even for conversational purposes oral Hebrew has been employed, in limited degree and in certain localities, throughout the history of the Jewish people." Hebrew: The Eternal Language (1957), p. 26.

^{7&}lt;sub>Mintz, Op. Cit., p. xxxvii.</sub>

⁸ Ibid

⁹<u>Ibid., pp. xxxviii - xxxix.</u>

So many people in the State of Israel are immigrants that it is necessary for the state to maintain many schools for the teaching of Hebrew to adults and these are found in cooperative settlements, villages, towns and cities throughout Israel.

The kind of Hebrew discussed in this paper is that taught in the schools for adult immigrants. The sample text is taken from which is an Ulpan textbook, the title of which is translated A Thousand Words; part 2. Whenever the designation, "Hebrew", is used in this paper it means Modern Hebrew as spoken in the State of Israel.

DEFINITION OF TERMS

CHAPTER II.

The subject of this paper is the translation of two particular items in Hebrew. Therefore, definitions of translation in general and of several other terms used in the discussion are necessary.

Translation is defined by J. C. Catford as "the replacement of textual material in one language... by equivalent textual material in another language..."

Eugene Nida expresses the view that in translating one takes "a unique message in the source language" and then one "'creates' an equally unique message in the receptor (or target) language."

(Abbreviations SL and TL will be used in this paper.)

This can be explained graphically by putting the three levels or major components of a language in diagram form as in Figure 1.

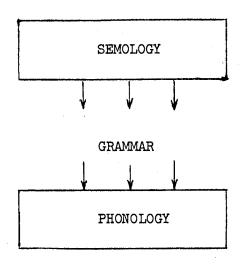
¹⁰A Linguistic Theory of Translation (London, 1965), p. 20.

Toward a Science of Translating (Leiden, 1964), p. 9.

Cf. M.A.K. Halliday, Angus McIntosh and Peter Strevens, The Linguistic Sciences and Language Teaching (London, 1964), pp. 123, 124, where the same idea is expressed. "...the translator observes an event in one language...and performs a related event in another...language. But the total result is two texts which stand in mutual relation; each, as it were 'a translation of' the other."

¹² The terminology is that of Sydney M. Lamb, Outline of Stratificational Grammar (Washington, D.C., 1966), pp. 1, 2.

Figure 1



There are many thousands of elements in this component such as events, phenomena, relationships, etc.

This component includes what is traditionally called syntax and lexicon.

The number of elements in this component is very small, e.g., about twenty-six for the Hebrew language.

In Figure 1 the grammar is shown to be the connecting link between semology and phonology, and since every language has a different system of grammar it is clear that in order to get the same message in two languages it is necessary, when translating from one to the other, to attempt to get back to the semology and create a message describing the same events, phenomena, relationships, etc. as were described in the source language.

The best unit to work with as a piece of translation material is the sentence. ¹³ However, "...the concept of equivalent items and categories at various ranks is a meaningful one..." ¹⁴ and in this paper the item which is discussed is the class "preposition." In dealing with the preposition the prepositional phrase must be included in the discussion.

¹³Willard V. Quine indicates that there is some doubt as to whether one can speak of the meaning even of a sentence because of the interdependence of sentences in many kinds of communication. "Meaning and Translation," The Structure of Language, eds. Jerry A. Fodor and Jerrold J. Katz, (Englewood Cliffs, New Jersey, 1964), 460-478, p.463.

¹⁴Halliday, McIntosh and Strevens (1964), p. 126.

This is especially necessary in translation because there is not always a TL formal correspondent for a particular SL item. Thus, if the Hebrew preposition under discussion has no English preposition as a textual equivalent, the equivalent will be sought at a higher rank, i.e., at group rank or at clause rank. The main concern in this paper is, however, to discuss two members of the class "preposition" in Hebrew and their translation equivalents in English. 15

Class, as defined by Halliday, is "...a grouping of items identified by operation in a structure." The class "preposition" in Hebrew is a class of relational morphemes which occur before noun groups and before other prepositions and particles in certain fixed (idiomatic) phrases, some of which are compound prepositions. The class "preposition" in English is a class of relational words or groups which occur before noun groups to form adverbial groups.

¹⁵ The grammatical terminology used in this paper, unless otherwise specified, is that of M. A. K. Halliday, "Categories of the Theory of Grammar," WORD, XVII, December 1961, 241-292.

¹⁶ Halliday (1961), p. 264.

¹⁷Cf. Nida (1964), p. 62.

This definition is adapted from Zellig S. Harris' discussion of classes of Arabic in <u>Structural Linguistics</u> (Chicago, 1951), p. 286. The class "noun groups" includes objective-possessive suffixes and certain interrogative pronouns (or "introducers" as Harris labels them).

¹⁹ Cf. J. McH. Sinclair, A Course in Spoken English, (3, Grammar) (London, 1965), pp. 81 ff. Many prepositions have the feature of being "...compounded of several 'words' but [are] analysed in grammar as single words." p. 84.

A formal correspondent is defined as, "...any TL category which may be said to occupy, as nearly as possible, the same place in the economy of the TL as the given SL category occupies in the SL." A textual equivalent is defined as "...any TL text or portion of text which is observed on a particular occasion...to be the equivalent of a given SL text or portion of text."

²⁰Catford (1965), p. 32.

²¹Catford (1965), p. 27.

CHAPTER III.

THE DEGREE OF CONVERGENCE BETWEEN FORMAL CORRESPONDENCE

AND TEXTUAL EQUIVALENCE OF THE CLASS "PREPOSITION"

IN MODERN HEBREW AND ENGLISH

The fact that the Hebrew prepositions are defined as morphemes and the English prepositions as words would seem to prohibit at the outset any discussion of formal correspondence. Although in Hebrew there are several grammatical classes which have bound morphemes as exponents their operations in the structures of Hebrew correspond quite regularly with the operations of equivalent classes in English structures which have words as exponents. An example of this is the definite article which is given in the Hebrew grammar books as a bound morpheme "ha" and is realized, after the operation of morphophonological rules, as "ha," "he" or "a". This morpheme operates in the structures of Hebrew as the word "the" operates in the structures of English, with the obvious qualification that the use of each is determined by the grammar of its respective language. Thus the difference in rank between the Hebrew article and English article does not prohibit their relation as formal correspondents. Some members of the class "preposition" in Hebrew are morphemes and some are words (e.g., "bə" and "?al" respectively). Two criteria are used to differentiate between words and morphemes in Hebrew. A word can have stress; a morpheme by itself cannot. A word does not undergo morphophonological changes; a morpheme does. But because of the evident correspondence of Hebrew and English prepositions in grammatical structures, Hebrew prepositions can be considered words for the purposes of this study.

The descriptions of the two languages must also indicate the feasibility of attempting to show any comparison between a class in one language and a class in the other. 22 If in the "...selection among categories and items in the target language that are recognized on contextual criteria as equivalent to categories and items in the source language..."23 one finds that there is some apparent formal correspondence between the classes of the two languages, then one can begin to look for the degree of convergence between formal correspondence and textual equivalence of the classes in the two languages. But if one finds that there is a class in the SL for which there is no formal correspondent class in the TL another course must be taken to determine textual equivalence. 24 There is some evident formal correspondence between the classes of Hebrew and English and the task of determining the degree of convergence between formal correspondence and textual equivalence of the class "preposition" is possible. The Hebrew prepositions "be" and "?al", which constitute a subset of the set (or "class," in Halliday's terminology) of prepositions will represent the class "preposition" in this study. This subset of prepositions shows spatial relations of static contiguity.

These descriptions must be "...written according to the same grammatical theory." E. A. Levenston, "A Classification of Language Differences," IRAL IV/3, Sept. 1966, 199-206, p. 200.

²³Halliday, McIntosh and Strevens (1964), p. 125.

An outline of procedure for this sort of undertaking is given by E. A. Levenston, "The 'Translation Paradigm,' A Technique for Contrastive Syntax," IRAL 3.221-225 (1965).

A. The Preposition "bə" and its English Equivalents.

The English translations given for this preposition by

Ben-Yehuda's Pocket English-Hebrew Hebrew-English Dictionary²⁵

are, "in, at, by, with." Other possibilities are, "into, on, among, during, for, of."²⁶ These English equivalents of the Hebrew "be" are just those equivalents which are prepositions, i.e., formal correspondents. There are also occurrences of "be" in the Hebrew text which have an English equivalent "nil" and there are occurrences which have no equivalent at word rank (not the same as "nil"). In the latter case the equivalent can be found at group or clause rank, i.e., the group or clause being the unit of translation, and the English equivalent may be a group, a clause or a word.

Ehud Ben-Yehuda and David Weinstein, eds. (New York: Washington Square Press, Inc., 1961).

From the translation of the examined text made by the writer of this paper with the help of Aya Keren and Menachem Lorber, native speakers of Hebrew.

1.	in	, 128	
-•		120	
2.	on	33	
3.	at	24	
4.	with	10	
5.	ру	6	
6.	during	2	Figure 2
7.	among	2	
8.	for	3	
9.	into	2	
10.	of	5	
11.	nil	11	
12.	group rank equivalents	26	
13.	idioms	13	
	TOTAL	265	

With these data the translation equivalences of "bə" in terms of probabilities can be stated. These are found by dividing the number of occurrences of a certain English translation equivalent by the total number of occurrences of the Hebrew preposition. If every occurrence of preposition y in Hebrew were translated by preposition z in English the probability of y=z would be 1. If the Hebrew preposition y could never be translated by English preposition x the probability of y=x would be 0. Of course, if either of the limits, 0 or 1, were ever reached there would be no need for any discussion on the subject; but

²⁷J. C. Catford, <u>A Linguistic Theory of Translation</u> (London, 1965), pp. 30 ff.

the values between the limits can be useful to the translator, especially if they are combined with contextual factors such as are provided by the study in chapter IV of this paper. The unconditioned equivalences (i.e., without any contextual factors having been considered) of "be" in terms of probabilities are as shown in Figure 3.

1.	in	.4830	
2.	on	.1242	
3.	at	.0906	
4.	with	.0377	
5.	by	.0226	
6.	during	.0075	
7.	among	.0075	Figure 3
8.	for	.0113	
9.	into	.0075	
10.	of	.0189	
ļl.	nil	.0415	
12.	group rank equivalents	.0981	
13.	idioms	.0491	

To find the degree of convergence between formal correspondence and textual equivalence we take the total number of translation equivalents for the preposition "bə" which are English prepositions and divide by 265, the total number of occurrences of "bə" in the text sample. The unconditioned equivalence probability of the equivalence

²⁸J. C. Catford (1965), p. 33.

"Hebrew preposition = English preposition" is .8113. The degree of convergence between formal correspondence and textual equivalence is thus seen to be quite high. There is a possibility here for different interpretations of the data. The degree of convergence given above was found by adding equivalents 1 - 10 of Figure 2 and dividing by the total number, 265. But in equivalent 12 there are some phrases which could be given at word rank if the translator is interested in finding all denotative meanings and not limiting himself to connotative meanings. Thus the equivalence probability could be higher at the risk of getting awkward translations or undesirable stylistic differences. Some phrases which in Hebrew are in the register of everyday speech have English equivalents in a poetic register, 30 e.g. Hebrew "?amar belibo" is English "he said in his heart." To translate this phrase in English as "he said in his heart" would be to give it formal equivalence; to translate

The terms "denotative" and "connotative" are from S. I. Hayakawa, Language in Thought and Action, 2nd edition (New York, 1964), p. 58. Hayakawa introduces these terms and then actually uses the terms "extensional" (which is denotative) and "intensional (which is connotative). The terms are used in this paper with meanings differing slightly from Hayakawa's "extensional" and "intensional." The denotative meaning is that which it refers to in the physical or non-physical world. The connotative meaning is that which is suggested in the mind of the speaker or hearer.

The definition of "register" differs with each writer who treats the subject (Cf. Spencer and Gregory, "An Approach to the Study of Style," Linguistics and Style, ed. John Spencer (London, 1964), fn. on pp. 86-87. The broadest definition and most useful for this paper is that of Halliday, McIntosh and Strevens (1964), p. 87. Register is, "The name given to a variety of language distinguished according to use..."

it as, "he said to himself" would be to give it dynamic equivalence. 31

The former translation may be thought by some English speakers to be a perfectly good English expression and in no need of being re-worded as, "he said to himself" or "he thought." The reason for this opinion may best be explained by a statement of Professor C. Rabin:

There are cases...where the literature translated at the early stage is so widely read and authoritative, or simply the volume of translation at that stage is so wast, that the reading public becomes accustomed to the alien style, and even comes to think of it as the only appropriate style for this type of literature, and no improvement is possible any more. . . . The most common type of this fixation arises from translations of the Bible.

It is better to stay within equivalent registers or styles when translating. "Translating consists in producing in the receptor language the closest natural equivalent to the message of the source language, first in meaning and secondly in style." 33

B. The Preposition "?al" and its English Equivalents.

According to Ben-Yehuda's Pocket English-Hebrew Hebrew-English

Dictionary the English equivalents of the preposition "?al" are, "on,

upon, concerning, toward, against, to." In the text used for this study

the equivalents, "at" and "of" were also found, "about" replaces

"concerning" and "against" was not found.

Formal and dynamic equivalence are terms used by Eugene Nida, Toward a Science of Translating (Leiden, 1964), pp. 159 ff.

^{32&}quot;The Linguistics of Translation," Aspects of Translation (London, 1958), 123-145, p. 134.

³³ Eugene Nida, "Principles of Translation as Exemplified by Bible Translating," On Translation, ed. Reuben Brower, p. 19.

ı.	on	25	
2.	about	22	
3.	to	2	
4.	at	2	
5.	upon	2	Figure 4
6.	of	1	
7.	nil	6	
8.	group rank equivalents	3	
9.	idioms	13	
	TOTAL	76	

The unconditioned equivalences of "?al" in terms of probabilities are as shown in Figure 5.

1.	on	. 3289	
2.	about	.2895	
3.	to	.0263	
4.	at	.0263	
5.	upon	.0263	Figure 5
6.	of	.0132	
7.	nil	.0789	
8.	group rank equivalents	.0395	
9.	idioms	.1711	

The degree of convergence between formal correspondence and textual equivalence of the Hebrew preposition "?al" and its English equivalents is .7105. For the total number of examples of "be" and "?al" found in the sample text it is .7889. These are unconditioned equivalences in terms of probabilities and the numbers would change with the use of different text samples or different prepositions. But there is no reason to believe that the variation would be great enough to nullify the statement that the degree of convergence between formal correspondence and textual equivalence of prepositions in Hebrew and English is high.

CHAPTER IV.

A COMPARISON OF THE SENSE CONCEPTS OF THE HEBREW
PREPOSITIONS "ba" AND "?al" AND THEIR ENGLISH
TRANSLATION EQUIVALENTS

Even a superficial examination of phrases in which the prepositions "bə" and "?al" occur shows that they represent more than one sense concept each. The phrases examined in this paper are classified according to the kinds of objects, events or abstracts which are associated with the preposition. This classification yields the various sense concepts of the preposition. Enough of the context will be given in the examples to give a clear picture of meanings. In most instances this means giving the prepositional phrase and sometimes a word or phrase preceding the prepositional phrase.

A. Sense Concepts of Hebrew "ba"

Translation equivalents are given in this list for the convenience of the reader; they are not meant to indicate sense concepts as such.

- 1. a. bəliškat ha?avoda (at the employment office)
 - b. péca gadol beroso (a large wound on his head)

³⁴ The sense concept of a word is its syntactic and semantic function. Cf. Madugula I. Sastri, "Prepositions in 'Chemical Abstracts:' A Sememic Study," <u>Linguistics</u>, XXXVIII, April 1968, 42-51, who found that "...most of the common prepositions in present day English represent more than one sense concept." p. 42.

³⁵The terms "object," "event," "abstract" and "relational" are the four principal function classes according to Eugene Nida, Toward a Science of Translating (Leiden, 1964), p. 63.

The word following the preposition in both examples is an object; a. is a geographical location and b. is a location on a body. The sense concept of "be" in both examples is "relational specifying a point in space."

2. bayom šeni³⁶ (on Monday)

The word following "bə" is an event, a period of time within conventional limits. The sense concept of "bə" is "relational specifying a point in time."

3. bəša?a šmóne (at eight o'clock)

The word following "bə" is an event, a point in time identified by convention. The sense concept of "bə" is "relational specifying a point in time."

4. uvətiyulim³⁷ (and on excursions)

The word following "bə" is an event, a designation of an activity.

The sense concept of "bə" is "relational specifying a point in a range of activities."

5. rak hagiborim šebahem (only the heroes who were among them)

The word following "bə" is an object, a group of people within specific limits. The sense concept of "bə" is "relational specifying environment." The boundaries of the environment in this example are not spatial nor temporal as such but rather the limitations of the

The vowel "a" in "bayom" is the exponent of the definite article "ha." The rule is, be $+ \text{ ha} + \text{ noun} \rightarrow \text{ ba} + \text{ noun}$.

³⁷The preposition "bə" is here realized as "və" because of a phonological rule which changes certain stops to homorganic fricatives after a vowel.

membership of a set, in this case, the set of "Jews living in Jerusalem in 1860."

6. ha?is baxalifa ha?afura (the man in the grey suit)

The word following "bə" is an object, a feature of description in this phrase. The sense concept of "bə" is "relational specifying a descriptive—and limiting—feature." The prepositional phrase shows that this particular member of the set "men" is also a member of the subset "men who wear grey suits."

7. ra?ita b@?enexa (you saw it with your own eyes)

The word following "bə" is an object, the means used to perform the action. The sense concept of "bə" is "relational specifying the means by which an action is accomplished."

8. ləhikare bəsem ?ivrit (to be called by a Hebrew name)

The word following "bə" is an abstract, the means by which an action is performed. The sense concept of "bə" is "relational specifying the means by which an action is accomplished."

9. panu lamemšala biš?ela (they turned to the government with a question)

The word following "bə" is an event which accompanies the action specified by the event word before the preposition. The sense concept of "bə" is "relational showing accompaniment of one event by another event."

The foregoing list of sense concepts of "bə" can be classified in four main sets, two of which can be divided into subsets of finer senses depending on the context. 38 The subsets of each set are in complementary distribution. The sense concepts of "bə" found in this study are:

- Relational specifying a point which may have spatial, temporal or abstract boundaries.
 Examples 1, 2, 3, 4, 5.
- 2. Relational specifying a descriptive or limiting feature.

 Example 6.

The limits which are specified are the features which set apart the members of a subset from the rest of the members of the given set.

- 3. Relational specifying the means by which an action is accomplished. The means may be an object, i.e., "eyes" or an abstract entity, i.e. "name." Examples 7, 8.
- 4. Relational showing accompaniment of one event by another event. Example 9.

In all the above examples the prepositions occurred with nouns.

They also occur in Hebrew with pronominal suffixes which agree with their antecedents in gender and number, and are interpreted as though

^{38&}lt;sub>Cf. David C. Bennett, "English prepositions: a stratificational approach," <u>Journal of Linguistics</u>, IV, No. 2, October 1968, 153-172, p. 156.</sub>

actually occurring with the antecedent.

B. Sense Concepts of the English Translation

Equivalents of the Hebrew Preposition "be".

The Hebrew item "bə" is a relational which according to the findings in chapter III is translated as "in" almost fifty percent of the time. The first impression that an English speaker gets when he thinks of the sense concept of "in" is that it specifies the boundaries within which an object or event is found. ³⁹ This is, in fact, true for the "in" which is one of the translation equivalents of the Hebrew preposition "bə".

The fact that a certain number of English prepositions can be translation equivalents of "bə" in various contexts does not necessarily indicate that each one corresponds to a particular sense concept of "bə". 40 The converse is also not necessarily true, i.e., that all the English translation equivalents of "bə" have a sense concept in common. The sense concepts of prepositions in any particular language are independent of those of any other language.

The language we speak forces us to select and group elements of our experience of the world in ways which it dictates. It provides a kind of grid

³⁹Bennett (1968, p. 156) cites Lindkvist's example which shows "in" specifying points in a space with three dimensions, in an area with two dimensions and in a line with one dimension.

⁴⁰Cf. Bennett (1968, p. 164) on coextensiveness of "in" and "on" in certain situations. Professor T. Hill also suggested an example of two prepositions which are exact synonyms in the language of some English speakers, i.e., "among" and "amongst".

or series of grids, through which we 'see' the world, dissected along lines laid down by the systems of the language. 41

The systems of prepositions in Hebrew and English must be investigated independently of one another and after the grids which delineate the sense concepts of the prepositions for each language have been found by using intralingual criteria an interlingual comparison can be made. This is done by finding the preposition in the two languages which are "interchangeable in a given situation;" i.e., they are translation equivalents. 42

In examining the translation equivalents of "be" to discover their sense concepts the criterion will be (as for the examination of "be" above) the collocation of the preposition with distinguishable lexical sets.

1. Phrases in which the preposition "in" is the English equivalent of "be".

a. bevate séfer in the schools

b. babóker in the morning

c. baxalukat in newspaper distribution

d. bicva?im 43 in color(s)

e. bagola in exile

J. C. Catford, "The Teaching of English as a Foreign Language" (A lecture given at the Communications Research Centre, University College, London, February 1958), p. 14. (Mimeographed).

⁴²J. C. Catford, <u>A Linguistic Theory of Translation</u> (London, 1965), p. 49.

The vowel "i" instead of "ə" is explained by the rule, $\#C\Rightarrow + C\Rightarrow + X\Rightarrow \#Ci + C\phi + X$.

The sense concepts of "in" in these examples are:

- a. relational specifying a point in space
- b. relational specifying a point in time
- c. relational specifying a point in a range of activities
- d. relational specifying a descriptive or limiting feature
- e. relational specifying a point in space

Example e was listed separately from example a because in the combination of preposition and following noun the sense seems to be one of exclusion rather than inclusion. However, the relational "in" specifies a location the boundaries of which are defined by the word following the relational. It just happens that in the example "in exile" the location is relatively large, in fact, larger than the part that is left of the universe or part of the universe which is tacitly accepted as the whole. Example e can therefore be classified together with example a. In Hebrew the expression "outside" is "baxuc" which is literally "in the outside." This is a similar case to the example "in exile."

- 2. Phrases in which "at" is the English equivalent of "be":
- a. bəliškat ha?avoda at the employment office
- b. bəša?a xameš at five o'clock
- c. hayu ?asukim tamid balimudim they were always busy at their studies

The sense concepts of the preposition "at" in these examples are:

- a. relational specifying a point in space
- b. relational specifying a point in time
- c. relational specifying a point in a range of activities
- 3. Phrases in which "on" is the English equivalent of "be":
- a. barəxov

on the street

b. bayom šeni

on Monday

c. péca gadol berošo

a large wound on his head

d. uvətiyulim

and on excursions

The sense concepts of the preposition "on" in these examples are:

- a. relational specifying a point in space (geographical)
- b. relational specifying a point in time
- c. relational specifying a point in space (on a body)
- d. relational specifying a point in a range of activities

David C. Bennett, in his paper on English prepositions, gives an example in English of the coextensiveness of the prepositions "in" and "on".

There are certain situations in reality that can be perceived by a speaker of English as involving either on-ness or in-ness. One such situation is the boarding of a train, which can be perceived as getting onto it or getting into it.

In Hebrew there is no need to speak of coextensiveness of two different

HH Bennett (1968), p. 164.

prepositions in this situation in reality because the preposition "be" covers the concepts of in-ness and on-ness in the sense of the example of the train.

One of the above examples, "on the street," could also be cited as a situation in reality that can be perceived as involving either in-ness or on-ness—with a qualification. This phrase will be used in a sentence to illustrate the discussion.

The children are playing on the street.

The children are playing in the street.

The denotative meanings of these sentences seem to be the same but the connotative meanings are different. In Hebrew there is only one way of saying both sentences, i.e. "hayeladim mesaxekim barexov."

When a person says, "The children are playing on the street," he is making a statement of fact and the emotional content of the statement is neutral. But if he says, "The children are playing in the street," the emotional content of the statement is one of disapproval. 45

- 4. Phrases in which "by" is the English equivalent of "be":
- a. nos?im berakévet travelling by train
- b. lahikare basem ?ivrit to be called by a Hebrew name

Working Papers in Linguistics (Ohio State University, 1967) makes the statement, "...it may well be that certain aspects of the meanings of many specific words in a language are every bit as well 'explained' by a handful of examples and an anecdote as by a theory."

- 5. Phrases in which "with" is the English equivalent of "bə":
- a. ra?íta bə?enéxa you saw [it] with your own eyes
- b. hexlitu lifnot lamemšala they determined to go to the bevakaša46 government with a request

The sense concepts of the preposition "with" in these examples are:

- a. relational specifying the means by which an action is accomplished
- relational showing accompaniment of one event by another event
- 6. A phrase in which "during" is the English equivalent of "be":

ma ?osim bayom what do they do during the day?

The sense concept is "relational specifying a point in time."

7. A phrase in which "among" is the English equivalent of "be".

rak hagiborim sebahem only the heroes among them

^{46&}quot;bəvakaša" is here used as an ordinary prepositional phrase whereas it usually has the meaning "please" as one lexical item. (Cf. p.46 of this paper.)

The sense concept is "relational specifying the environment which, in this case, consists of the membership of a set, rather than one having spatial or temporal dimensions.

8. A phrase in which "for" is the English equivalent of "be".

roce ?ani laherašem bator I want to be registered for la?avoda the work line

The sense concept of the preposition "for" in this example is "relational specifying environment.

- 9. Phrases in which the English equivalent of the Hebrew preposition "be" is nil:
- a. haməkomot še?anáxnu məvakrim the places which we visit bahem * (them) 47
- b. vəhitxil başi?ur şelo and he began * his lesson
- c. kara bamixtav he read * the letter

Although the English equivalent of "bə" is nil in these examples the sense concepts of "bə" can be classified under "relational specifying a point in space or in a range of activities" because the events are considered as taking place within the boundaries of the object or event specified by the noun after the preposition. In example c

In Hebrew the relative pronoun does not replace the pronoun of the underlying clause. In English the clause "we visit them," when it is relativized, becomes "which we visit" but in Hebrew both pronouns remain in the surface structure.

the use of the preposition "be" indicates that the act of reading was being done in the letter and not in a book or newspaper or other reading material. If the Hebrew speaker meant to say, "He read the (complete contents of the) letter," he would say, "kara ?et hamixtav," not using the preposition "be" but the marker of the objective case, "?et."

- 10. Phrases in which "of" is the English translation equivalent of "ba":
- a. barexov hamerkazi ba?ir on the main street of the city
- b. hagadol benimle hamizrax the largest of the ports of the hakarovNear East

The sense concepts of the preposition "of" in these examples are:

- a. relational specifying a point in space
- b. relational specifying the environment

The boundaries of the environment in example b are not spatial or temporal as such but the limitations of the membership of the set of all ports in the Near East.

ll. A phrase in which "into" is the English equivalent of "be",

lehikanes bo Sulxan to bring a table into it

(i.e., into the room)

The sense concept of "into" in this example is "relational specifying a point in space." The movement toward a point in space is in the verb, not in the preposition. 48 In the examples found in the

Cf. the phrase, "hašulxan baxéder" which means, "the table is in the room."

text sample in this study the preposition "into" as a translation equivalent is probably not absolutely necessary for the sentence in which it is found to make sense. Catford suggests that English speakers have a tendency to use the static form "in" rather than the approach form "into," "...whenever the idea of directed motion, implying approach or arrival, is already covered by the accompanying verb." 49

The foregoing list of sense concepts of English translation equivalents of Hebrew "be" can be classified in four sets, two of which can be divided into subsets with finer senses depending on the context.

- 1. Relational specifying a point (or location) which may have spatial, temporal or abstract boundaries.

 Examples 1 (except d), 2, 3, 6, 7, 10, 11.
- Relational specifying a descriptive or limiting feature.
 Example 1d.
- 3. Relational specifying means by which an action is accomplished.

 The means can be an object or an abstract. Examples 4, 5a.
- 4. Relational showing accompaniment of one event by another event. Example 5b.

It is evident from the examination of the sense concepts of
English translation equivalents of Hebrew "be" that several English
prepositions may have a sense concept (or several concepts in

⁴⁹ Catford (1958), p. 17.

a more delicate division) in common. e.g.,

at the employment office

on the street

in the schools

In these phrases the prepositions "at," "on" and "in" specify a location in space.

at five o'clock

en Monday

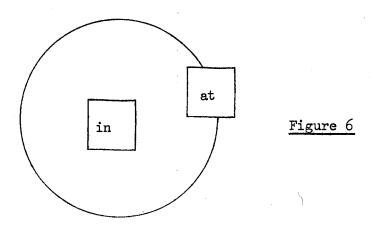
in the morning

In these phrases the prepositions "at," "on" and "in" specify a point in time.

It would be helpful to the translator if features of the Hebrew prepositional phrase would give an indication of the translation equivalent which is necessary in each particular case. Fillmore tentatively proposes for English that locative and temporal prepositions "...are either semantically nonempty (in which case they are introduced as optional choices from the lexicon), or they are selected by the particular associated noun....⁵⁰ The above examples of temporal phrases illustrate the preposition being "selected by the particular associated noun." The examples of locative phrases illustrate the prepositions which are "semantically nonempty." There is a difference, for example, between the phrases, "at the office" and "in the office." The difference can be explained as follows. "In" can only be used when the object or event before the preposition is within the boundaries

Theory, Emmon Bach and Robert T. Harms, eds., (New York, 1968), 1-88, p. 32.

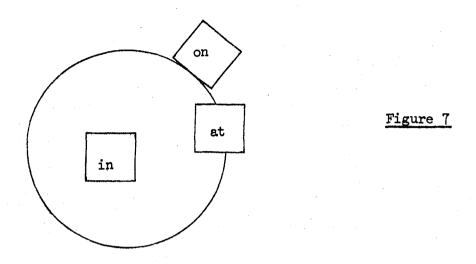
defined by the object after the preposition. "At" is used when the object or event before the preposition is considered to be in the proximity of the object after the preposition but not necessarily within any defined boundaries. 51 These explanations can be represented graphically as in Figure 6.



The circle represents the boundaries defined by the object after the preposition. The squares represent the objects or events before the preposition. For example, in the sentence, "John is in the house," the use of the preposition "in" specifies that John's location is within the boundaries (walls, roof and floor) of the house. In the sentence, "John is at the house," the use of the preposition "at" specifies only that John's location is in the proximity of the house, which could be on the inside or close to the house on the outside.

⁵¹ Catford (1958, p. 15), said that the relations of "in" "...hold towards the interior of something," whereas the relations of "at" "... are indifferent with regard to the...interiority of the end term."

If the preposition "on" is added to this comparison the picture will be as in Figure 7.



In the sentence, "John is on the house," the use of the preposition "on" specifies that John's location is contiguous with the boundaries of the house (in this case the roof) and on the outside.

Perhaps the emotional content of the sentence, "The children are playing in the street," is related to the fact that "in" specifies the location of the children within the same boundaries which also limit the location of traffic which is dangerous to children. On the other hand, "The children are playing on the street," does not have the connotation of danger because "on" specifies only that the location of the children is contiguous with a certain part of the surface of the ground which is called "the street."

Fillmore further proposes (concerning the choice of prepositions) that, "specific verbs may have associated with them certain requirements for preposition choice..." The verb "register," for example,

⁵²Fillmore (1968), p. 32.

chooses the preposition "for" in example 8 above. If adjectives are considered a subset of verbs (as is done by Fillmore, citing the "Postal-Lakoff doctrine")⁵³ then examples 2c and 10b can also be given as verbs which choose the preposition. The verb "be busy" chooses the preposition "at." The verb "be largest" chooses the preposition "of."

From these findings it is seen that the temporal prepositions "in," "at" and "on" are chosen by the associated noun and the locative prepositions "in," "at" and "on" are selected partly by the associated noun and are partly "...introduced as optional choices from the lexicon." Other prepositions are chosen by the associated verb. In all three cases, although the Hebrew phrase may contain the marker which selects a temporal, locative, instrumental or other kind of preposition, it does not contain the marker which selects among the possible translation equivalents. It is the English noun or verb associated with the preposition and/or the semantic differences in the English prepositions which select the correct translation equivalent.

- C. Sense Concepts of Hebrew "?al"
- 1. a. yašvu ?al haricpa (they sat on the floor)
 - b. bo?u ?alénu yamim šel (the time of the gathering of kibuc gluyot the exiles has come upon us)

⁵³Fillmore (1968), p. 27, fn. 36.

⁵⁴Fillmore (1968), p. 32.

The word following the preposition in both examples is an object.

The sense concept of "?al" in these examples is:

- a. relational specifying a point in space
- b. relational specifying a point in time

The sense concept of example b is interpreted as it is because temporal dimensions are treated as analogous to spatial dimensions.

- 2. a. saper lanu ?al hakótel (tell us about the wall)
 - b. siper ?al halimudim (he told [them] about his studies)

The word following the preposition in example a is an object; in example b it is an event. The sense concept of "?al" in both examples is "relational specifying the topic of a communicative event."

- 3. a. meta ?alav ?išto (his wife died on him)
 - b. təvakeš raxamim 7al (she will ask for mercy on her banéha children)

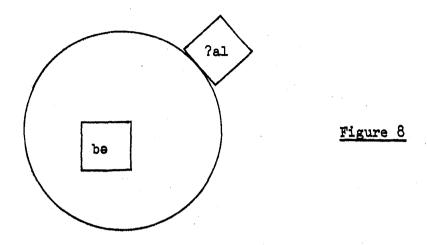
The word following the preposition in these examples is an object, a person. The sense concept of "?al" is "relational specifying the person for whom an event is [+] beneficial."

4. ha?ahuvim ?al kol hayəladim (the favorites of all the children)

The word following the preposition is an object, a person. The

sense concept of "?al" is "relational specifying the person who performs
an event."

A comparison of the sense concepts of "bə" and "?al" can be graphically represented as in Figure 8.



"?al" is used when the object or event before the preposition is contiguous with and on the outside of the boundaries of the object after the preposition. "be" is used when the object or event before the preposition is within the boundaries of the object after the preposition.

- D. Sense Concepts of the English Translation

 Equivalents of the Hebrew preposition "?al"
- 1. Phrases in which "on" is the English equivalent of "?al":
- a. yośvim ?al hasafsal sitting on the bench
- b. harəca?a ?al hamacav the lecture was on the agricultural situation

The sense concept of the preposition "on" in these examples is:

- a. relational specifying a point in space
- b. relational specifying the topic of a communicative event

2. A phrase in which "about" is the English equivalent of "?al", sixa ?al hašikun a conversation about government housing

The sense concept of "about" in this example is "relational specifying the topic of a communicative event."

3. A phrase in which "to" is the English equivalent of "?al",
ma ?efšar la?anot ?al še?elot rabot kol kax
What can one answer to so many questions?

The sense concept of "to" in this example is "relational specifying the topic of a communicative event."

- 4. A phrase in which "at" is the English equivalent of "?al",

 hem hibitu ?al ha?ir they looked at the city

 The sense concept of "at" in this example is "relational specifying a point in space."
 - 5. A phrase in which "upon" is the English equivalent of "?al",

 hacarot šeba?u ?al hašamen vəharaze the troubles which
 came upon Laurel and
 Hardy

The sense concept of "upon" in this example is "relational specifying the person for whom an event is [†] beneficial."

6. A phrase in which "of" is the English equivalent of "?al",

ha?ahuvim ?al kol hayeladim the favorites of all the

children

The sense concept of the preposition "of" in this example is "relational specifying the person who performs an event."

- 7. Phrases in which the English equivalent of "?al" is nil:
- a. šomrim ?al haméšek they are guarding * the farm
- b. raxel mayaka ?al banéha Rachel laments * her children
- c. xazru ?al hadvarim šelamdu they reviewed * the things they had learned

The verb in Hebrew in example a must have the preposition "?al" accompanying it. In examples b, c and d the sense concept of the preposition "?al" is "relational specifying the topic of a communicative event."

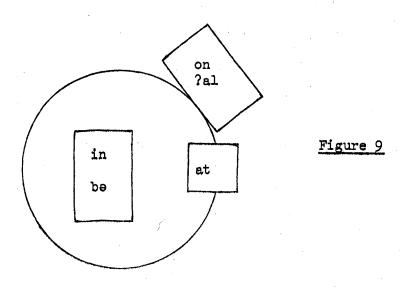
The foregoing list of sense concepts of English translation equivalents of Hebrew "?al" can be classified in four sets, two of which can be divided into subsets.

- 1. Relational specifying a point which may have spatial or temporal boundaries. Examples 1a, 4.
- 2. Relational specifying the topic of a communicative event.

 Examples 1b, 2, 3.
- 3. Relational specifying the person for whom an event is [†] beneficial. Example 5.
- 4. Relational specifying the person who performs an event.

 Example 6.

A comparison of the sense concepts of the Hebrew locative prepositions, "be" and "?al", with the sense concepts of the English locative prepositions, "in," "on" and "at," can be made by combining Figure 8 with Figure 7 as in Figure 9.



This is a comparison of sense concepts; not a representation of translation equivalents. The locative preposition "be" is sometimes translated as "on" (although this does not show in Figure 9), but this is because of the difference in meaning of the nouns after the preposition in Hebrew and English. Equivalent nouns do not belong to parallel lexical sets in the two languages. For example, in the sentence, "hayeladim mesaxakim barexov" (the children are playing on/in the street) the noun "rexov" is considered a location within specific boundaries whereas the English noun "street" can be considered a location within specific boundaries or a certain part of the ground surface. When "at" is used to translate "be" or "?al" it shows that English does not specify the location as exactly as Hebrew does.

E. Equivalents Found at Group Rank.

The translations of prepositional phrases in the foregoing section are equivalents at word rank (word for word translations). Sometimes, however, it is not possible to find equivalents at word rank. It may be that a translation of a phrase at word rank does not have the same meaning as the phrase in the source language or it may be that it has no discoverable meaning at all—as is the case with idioms. In either case a translation at word rank is undesirable and translation equivalents must be sought at a higher rank. A good translation is one "...in which equivalences shift freely up and down the rank scale...."55 In the following phrases equivalents are given at group rank. Although the word for word English translations of these phrases could be considered as equivalent in denotative meaning they are not equivalent in connotative meaning. Nida quotes Joos as stating as the first law of semantics, "That meaning is best which adds least to the total meaning of the context."56 Translating the Hebrew statement, "?amar bəlibo," into English, "he said in his heart," adds to the total meaning. The English speaker feels that he is reading or hearing poetry whereas the Hebrew speaker uses "?amar bəlibo" in the register of everyday speech.

⁵⁵Catford (1965), p. 25.

⁵⁶Martin Joos, "Towards a First Theorem of Semantics" (A paper delivered before the Linguistic Society of America, December 29, 1953), cited by Eugene A. Nida (1964), p. 182.

Other phrases are best translated at group rank because, although they may be understandable, they are stilted or awkward in English if equivalents are given at word rank.

In the following examples the translation at word rank will be given in the first line of English and the equivalent at group rank in the second English line.

1. Phrases with the preposition "be":

a. ?amar bəlibo he said in his heart

he said to himself

b. ma hamacav bə?inyan ha?avoda What is the situation in the

matter of work?

What is the situation regarding

work?

c. bə?inyan ze bikru bəšikunim In this matter they visited

housing developments.

With this in mind they visited

housing developments.

d. kax lo moce xen be?enay Like this it does not find

favor in my eyes.

I don't like it like this.

e. behitragsut with excitement

excitedly

f. bə?isavlanut with impatience

impatiently

g. bəsimxa with joy, happiness, pleasure

joyfully, happily, gladly

h. bəkicur with curtness

curtly

i. bevaday with certainty

certainly, of course

j. bekarov in short (time)

shortly

k. be?emet⁵⁷ in truth

really

1. beséket in silence

silently, quietly

m. bediyuk with precision

precisely, exactly

n. baxuc la? arec in outside with regard to

the country

abroad

o. bəyaxad in togetherness

together

These phrases which are translated at group rank could be divided into two sets. The members of one set, examples a, b, c, d, and n, are given translation equivalents at group rank for stylistic reasons. The members of the other set, examples e, f, g, h, i, j, k, l, m, and o, have two obvious characteristics in common. They consist of the preposition "be" and an abstract, and they are translated by an adverbending in "ly" (except for example o). This does not indicate another

 $^{^{57}}$ The rule which changes "ə" to "e" in "be?emet" is, e + V_i / __ ?V_i.

sense concept for "be" but it does point out a marker in the Hebrew phrase which indicates that the translation equivalent in English will be an adverb. The sense concept is still "relational specifying a point with abstract boundaries."

- 2. Phrases with the preposition "?al":
- a. vədélet yisra?el ?aléha and the flag of Israel on it flying the flag of Israel
- b. lašévet ?al safsal halimudim to sit on the bench of learning to be a student
- c. ?avoténu hibítu ?al hakéver šel raxel bə?ahava

our ancestors looked at the tomb of Rachel with love

our ancestors regarded the tomb of Rachel with love

F. Idioms.

Some of the phrases which must be translated at group rank are idiomatic. An idiom may be defined as a string of words whose meaning is not predictable from the combined meanings of its constituents or from the structure of the string. Even if the appropriate equivalent of a given preposition can normally be predicted by its context in the SL together with the context of its several possible equivalents in the TL this would not be true of a preposition which is a constituent of an idiom. Bennett says of English prepositions:

This definition is adapted from the discussion of idioms in Charles F. Hockett, A Course in Modern Linguistics (New York, 1958), pp. 171-173, and Bennett (1968), p. 169.

Wherever a preposition occurs as a constituent of an idiom, it is sufficient merely to state this fact. The preposition as such has no connection to the higher levels of linguistic structure.59

This is also true of Hebrew prepositions and, for the purpose of translation, idioms in the source language and their translation equivalents in the target language must be given simply as a list of items. This is also the suggestion of Bar-Hillel for machine translation, i.e., "...to have an idiom dictionary, in addition to the regular word (or "stem") dictionary...."

1. Examples of prepositional phrases with "be" which are idioms:

a. levasof

to in the end

finally

b. uvexen

and in so

and therefore

c. bexol zot

in all this

in spite of this

d. beyoter

in more, with "more-ness"

most (superlative marker of an adjective or adverb)

e. beša?a tova

in a good hour

may the moment bring luck

f. bilvad

in apart, in alone

only

⁵⁹Bennett (1968), p. 169.

Yehoshua Bar-Hillel, Language and Information: Selected Essays on their Theory and Application (Reading, Massachusetts, Inc., 1964), p. 50.

g. bevakaša

with request

please

h. məxabédet ?et kulam

bəsukáriyot

She honors everyone with candies.

She serves candies to everyone.

i. bicxok

with a laugh, in laughter

for a joke

j. betox

in interior

inside

- 2. Examples of prepositional phrases with "?al" which are idioms:
- a. ?af ?al pi ken moše yoter yafe lexa

 even on mouth thus Moshe is a better [name] for you

 nevertheless Moshe is a better [name] for you
- b. xaval ?al hazman a pity about the time it's a shame to waste time
- c. kše?amda yavan ?al ?amxa when Greece stood on your nation when Greece threatened your nation
- d. ?al ken lo nafal upon thus it did not fall for that reason it did not fall
- e. Škunat yəmin moše ?al šem moše montifióri

 the Yemin Moshe quarter upon name of Moshe Montefiore

 the Yemin Moshe quarter named after Moshe Montefiore
- f. ki ?aravim hitnaflu ?alehem because Arabs fell on them because Arabs attacked them
- g. šev ?al yad xána sit on hand of Hanna sit beside Hanna

h. me?al hagag

from on the roof
above the roof

Assuming that words have meanings by themselves, these examples of idiomatic prepositional phrases have been given translation equivalents at word rank to show the impossibility of finding any meaning for the whole phrase in this way.

The groups "betox" (example 1j), "?al yad" (example 2g), and "me?al" (example 2h) are compound prepositions. This fact would be significant in a statistical study such as is given in chapter III of this paper. One would have to decide whether to list the groups under idioms with "be" and "?al" or as separate items.

CONCLUSION

From this study of a subset of Hebrew prepositions several significant facts for translation from Hebrew to English were found. The probability of a Hebrew preposition being translated by an English preposition is high, but there is no one-to-one relationship such as "Hebrew preposition x = English preposition y." Each language has its own semology or system of division of reality into units. This is clearly illustrated by the systems of spatial relations of the two languages treated in this paper. Even within a particular language there is no one-to-one relationship between semological units and lexical items. One word may be the exponent of several sense concepts and one sense concept may have several words as exponents.

To find translation equivalents of prepositions:

- choose from the list of possible translation equivalents starting with the item which has the highest probability value,
- find which item may be chosen by the associated noun and/or verb.
- choose the preposition for its meaning,
- 4. choose the appropriate item from the list of idioms.

These steps are not a description of the actual procedure but rather a theoretical and systematic method of finding translation equivalents of prepositions; and, of course, only those steps which apply to any particular case are taken. None of these steps involve interlingual criteria. The criteria involved in step 1 are extralinguistic and those in steps 2, 3 and 4 are intralingual.

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פפרים אחיאפר במים (שלר פּלים: הוצאת יום-יום (שלק שׁנִי) ירשלים: הוצאת הוצ אחיאפר אָלְר פִלִים: לְּחַיִּר

APPENDIX

Transcription

Examples is similar to that of Haiim Rosén, A Textbook of Israeli

Hebrew, 2nd corrected edition, (Chicago: The University of Chicago

Press, 1966), p. 6. It may be called roughly a phonetic transcription

of an Israeli speaking slowly. Rosén's transcription omits the

glottal stop where X and Y are found in Hebrew spelling and

have the same vowel after them as before, thus giving a lengthened

vowel. The glottal stop is kept in that environment in this paper.

Stress in Hebrew is normally on the ultimate syllable of a word and

is marked in the transcription only where it is not ultimate.

Hebrew alphabet	Transcription symbol	Phonetic description
×	?	glottal stop
3	b	voiced bilabial stop
ב	· v	voiced labio-dental fricative
λ	g	voiced velar stop
7	đ	voiced alveolar stop
51	h	voiceless glottal fricative
)	v	voiced labio-dental fricative
7	Z	voiced alveolar groove fricative
П	x	voiceless velar fricative
υ	t	voiceless alveolar stop
٩.	· y	glide (high front to adjoining vowel)

Э	k ,	voiceless velar stop
2	x	voiceless velar fricative
ا کے	ı	clear lateral
A	m	bilabial nasal
3	n	alveolar nasal
7	s ,	voiceless alveolar groove fricative
Ŋ	?	glottal stop
3	p	voiceless bilabial stop
3	f	voiceless labio-dental fricative
ጟ	c	voiceless alveolar affricate
P	k	voiceless velar stop
٦	r	uvular trill (or apical trill)
ิ พ่	Š	alveo-palatal groove fricative
'n	s	alveolar groove fricative
j)	t	voiceless alveolar stop

Vowels are represented in Hebrew orthography by symbols below, beside, or above the consonant symbol which they follow. In the following description X represents the consonant preceding the vowel being described.

Не	brew	symbols	Transcription symbol	Phonetic description
X	and	t.X	i	high front
X	and	X	е	mid front
<u>x</u>	and	X	a.	low
. x	and	iх	0	mid back
X	and	ìх	u	high back
X			Ð	central-neutral