

ROMANIZATION OF THE HEBREW ALPHABET

BY

HESKEL SHABATH

THESIS PRESENTED TO THE SCHOOL OF GRADUATE
STUDIES AS PARTIAL FULFILMENT FOR THE DEGREE
OF MASTER OF LIBRARY SCIENCE



UNIVERSITY OF OTTAWA, CANADA, 1973



UMI Number: EC56155

INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.



UMI Microform EC56155
Copyright 2011 by ProQuest LLC
All rights reserved. This microform edition is protected against
unauthorized copying under Title 17, United States Code.

ProQuest LLC
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106-1346

ACKNOWLEDGEMENTS

This thesis, written for the Library School of Ottawa University, seeks to apply to the world of Western linguistics and to the librarianship profession. The scholarly tradition which I hitherto sought to acquire in my Semitics and Middle-Eastern studies while in the Middle-East, has proven a basic and complex experience in adjustment and in learning.

In this process — and specifically in this thesis — I have been fortunate to have the guidance and the discipline of Dr. George Gerych, LLD, MLS, professor at the Library School of Ottawa University whose high and very particular qualifications for such guidance it would be inappropriate for me to elaborate, except to acknowledge as thesis director. I am also indebted and thankful to Father F.B. Wallis, omi, Coordinator of the School, for his guidance.

I wish to thank for his considerable help in the preparation of this thesis Mr. Neil Miller who brought a fresh eye and hand to the task of repeated retyping.

TABLE OF CONTENTS

Chapter	page
INTRODUCTION	iv
I. - HEBREW ALPHABET	1
1. Historical Notes on the Hebrew Alphabet	1
2. Relations to Phoenician, Greek and Roman Alphabets	17
3. Equating Hebrew and Roman	30
4. Relations Between Hebrew and Arabic	43
II. - TRANSLITERATION	52
1. General Principles of Transliteration	52
2. Bibliographic importance of Transliteration	61
3. Early Attempts at Transliteration	76
4. ALA Attempts at Standardization	86
5. Other American Practices	95
6. British Standards and Sources	101
7. Other European Standards and Systems	109
8. Modern Israeli Systems of Romanization	123
9. International System	155
III. - HISTORICAL TABLES	168
IV. - PRONUNCIATION TABLE	179
V. - TRANSLITERATION TABLES	185
VI. - CONCLUSION	203
BIBLIOGRAPHY	217

INTRODUCTION

People communicate with each other in order to exchange ideas and to spread knowledge through language. This communication can be done orally by speaking the language and literally by writing.

The existence of about three thousand different tongues in the world¹ (exclusive of minor dialects whose number has never been exactly determined) constitutes a serious barrier to exchanging knowledge and progress in the sciences. The existence of many different writing systems constitutes an additional impediment.

Throughout history, people dealing with written texts in one language have attempted to cross the language barrier first by translations and then, where appropriate, by transcription into their own writing system.

The development of transportation means, the growth of international organizations, and the development of education have increased the communication among different nations, religions, languages and cultures and have brought a new awakening and eventually political independence to

1. Mario Pei, Talking your Way Around the World, N.Y., Harper, 1959, p. 16 and p. 203, also his Story of Language, N.Y., Lippincott (1949) p. 205-286 and p. 457.

certain developing nations. Many of these nations now use languages and dialects in which there has been little scientific or literary production in the past.

In communication between cultures today there are innumerable occasions when readers need to refer to names and words which are originally derived from other cultures or other civilizations whose language is normally written in other alphabets.

This has gone so far that in many cases it has been suggested that people using certain little known and geographically circumscribed alphabets - including, as we shall see, the Hebrew - should change to an alphabet which is more widely utilized, or even to that of the politically dominant culture.

Certainly, the problem arises of conveying at least those names and words in the alphabetic writing of the reader or scholar. This arises frequently in the library world where names of authors, titles and geographic names need to be integrated into the alphabetical system of catalogs, bibliographies, etc.

This problem of conversion of names from one civilization into another alphabetic system is a central element in establishing the universality of science.

The mass production of scientific books and periodicals in many different languages - including those using other than the Roman scripts, such as Russian, Japanese, Chinese, Hindi, Greek, Arabic, Hebrew, etc. - in the last fifty years has increased the need for reading these languages.

The development of modern libraries increased their capacity for material written in different languages and different scripts. But, the difficulties of handling such material have increased the need for universal inter-alphabetic communication based on established principles.

The idea of decreasing the number of different writing systems seems at first glance reasonable as a practical solution. But attempts to develop an international alphabet which would include characters representing all the sounds used in all languages and which would at the same time be accepted by all nations have not yet succeeded.

In the nineteenth and the early twentieth centuries there occurred new developments and new approaches, based on the science of linguistics, to transliteration or romanization of different scripts in accordance with the Roman alphabet. The general approach was to transliterate letter

by letter and to use diacritic signs when needed for Cyrillic, Arabic, Hebrew, etc.

Transliteration is the transcription of words letter by letter, from any alphabetic writing to any other alphabetic writing, taking into consideration the sound of the letters.

Romanization is the conversion of any writing into the Roman alphabet.

Romanization can be identical to transliteration as when we convert from alphabetic writing, such as Greek, Cyrillic, Hebrew, Arabic, etc. It could be identical to transcription as when we convert from the Chinese or Japanese. Romanization of these latter languages is based on the sound of the whole word since they have no alphabetic writing.

Another difference between transliteration and romanization is that transliteration can be done from any alphabetic writing to any other. It could be done from Hebrew into Roman, from Hebrew into Greek, into Cyrillic, etc., and vice versa, while romanization is done only into Roman and also from writings which do not have an alphabet.

For Hebrew and Arabic the tendency was to follow a system of compromise between phonetic transcription and

transliteration. This system of compromise is an attempt to represent the 'imaginated' or the 'oral' vowels¹ of these languages by written ones. Thus, the romanization of Hebrew and Arabic can be considered as transliteration in the proper sense.

At the beginning of the twentieth century an important development in creating a universal alphabet was the international phonetic alphabet which was intended to use a transliteration of the exact sounds of all languages.

A more practical, if limited attempt at a universal alphabet could be undertaken for bibliographic and catalog needs. But such an attempt could face many difficulties such as whether or not to differentiate between characters sounding differently in several languages. French, English, and Arabic "L"'s and "R"'s are an example of many others.

Most successful of the attempts towards lessening the barriers was the creation of a series of different romanized systems for different languages and writing

1. By 'imaginated' or 'oral' vowels are meant the vowels which are not represented by letters, but are written over or under the letter by a type of diacritic mark.

In the Bible, in poetry and in books written for beginners in the language, these diacritic vowels are printed, but in books for adults they are left to the language knowledge of the reader who has to deduce the vowelings of the word, and therefore its meaning and pronunciation.

systems, such as one for Hebrew, another for Arabic, a third for Japanese, etc.

At present the scholarly universe of the Western World which is based mainly on Western Europe and the Americas, is generally accepted as the universal standard. The scholars of China, Russia, the Arab World, Black Africa are accepting this Western World as the core of communication between civilizations.

This Western World is the heir of the Latin civilization which has deeded the Roman alphabet to English, French, Italian, Spanish, Portuguese, German, the Baltic languages, Rumanian, Croatian, the Czechoslovak languages, etc. In most of Eastern and South Eastern Europe and in some Asian countries (Outer Mongolia for instance) the Cyrillic is the current alphabet. In Greece it is the Greek writing. In China it is the Chinese ideographic word writing. In Japan it is the Japanese syllabic writing. In Arab countries, in Iran, Afganistan, West Pakistan and in part of Malaysia the Arabic alphabet is used and in Israel the Hebrew alphabet is the basis of writing.

In the context of communication between cultures the Hebrew language and literature occupy an important place. The ancient Hebrew heritage going back to the Bible has been a subject of the most intense concern for histor-

ians and students of religion and literature and has been developed through the millenia of the post-Biblical period. All of this is tremendously documented in many types of writing.

In recent years the revival of Hebrew largely in Israel has put Hebrew again in the category of living modern languages. So that like Russian, Japanese, Chinese and other languages of today its literature of science and current events needs to be integrated into the universal library of contemporary knowledge.

Since the beginning of the nineteenth century the English speaking countries have been the most interested in developing scientific transliteration of Hebrew, Arabic, Greek, Cyrillic and many other alphabets as well. They have progressed considerably in the transliteration of these scripts.

The international activities toward romanization of the different scripts had success in some countries. Albania which used three different scripts - Arabic, Cyrillic and Roman - decided to unify its writing and in 1909 adopted and adapted the Latin alphabet. Turkey, which had not adapted the Arabic script well enough for its own language, in 1928 accepted and supplemented the Roman alphabet with a considerable number of diacritic marks. Indo-

nesia which too has used several scripts - including Arabic - in its various regions, decided after it won its independence in 1950, to adapt the Roman alphabet to its single national language. Many nations in the Asiatic portion of the Soviet Union have adopted the Roman alphabet. In addition, most of the African nations, which have recently obtained their independence, have also adopted this alphabet.

But this trend towards romanization has been hindered in part by national pride and in part by the fact that many earlier scripts fit the languages they serve well and are interwoven with their cultures. The languages have been using these scripts for a very long period, have a rich literature written in them. Such is the case of the Arabic and the Hebrew.

En ce qui concerne l'hébreu des efforts analogues ont été poursuivis, toutefois les résultats obtenus ne sont pas encore considérables. Les milieux intéressés ont l'esprit conservateur et sont d'avis que l'adoption de caractères latins serait un acte de profanation et de destruction envers l'esprit de la race¹.

1. Institut International de Coopération Intellectuelle, L'Adoption universelle des caractères latins, Paris, Société des Nations, 1934, p. 183.

However, between 1920 and the Second World War, there were trends of romanization in many countries of the world such as China, Persia, Egypt and Israel (then Palestine). But, these were mainly minor movements.

Progress in transliterating Hebrew has been well reflected in the A.L.A. Catalog Rules of 1908¹ which included a comprehensive table of transliteration of Semitic alphabets based on the system to be found in The Jewish Encyclopedia of 1901². It used more diacritic signs than digraphs for representing those Semitic characters which have no single equivalent in the Roman alphabet.

A similar approach is found in the later edition of the A.L.A. Cataloguing Rules³, in the U.S. Transliteration Guide⁴ and in the U.S. Romanization Guide⁵.

1. A.L.A. Catalog Rules, Author and Title Entries (Anglo American), Chicago, A.L.A., 1908, p. 65-73.

2. "System of Transliteration and of Citation of Proper Names", in The Jewish Encyclopedia, N.Y., 1901, Vol. II, p. ix-x.

3. A.L.A. Cataloguing Rules for Author and Title Entries, Chicago, A.L.A., 1949, p. 248-249.

4. U.S. Board on Geographic Names, Transliteration Guide, (1961).

5. U.S. Department of State, Office of the Geographer, Romanization Guide, (1964).

After the First World War the increase in the international exchange of bibliographical publications raised the need for a universal system of romanization of the different scripts. Thus, the International Committee of Intellectual Cooperation discussed the matter several times from 1929 until 1933. Eventually it was decided that the Roman alphabet should be accepted as the universal basis for all nations.

In 1928 the International Standard Association (I.S.A.) was established as a special section of the Fédération Internationale de Documentation (F.I.D.). Its main aim was to establish standards in many fields of international communication and to prepare schemes for transliteration and romanization of many scripts, including the Hebrew. But until the Second World War it did not make much progress. It began to prepare a scheme for the transliteration of Cyrillic but the outbreak of the war paralyzed its activities.

During the eleventh session of the International Commission of Intellectual Cooperation, in July 1929, a proposal was made for a single alphabet which would lead to the 'rapprochement' of the intellectual world of the West to that of the Orient. The matter was referred to the Sub-Committee of Science and Bibliography which recommended

to all the interested nations to study the adoption of
Roman characters for their national writing¹ .

During the discussion about the practical application of the Roman alphabet to the several languages many difficulties were raised including the limitations of this alphabet, such as: 1) it has only five basic vowels a, e, i, o, u. 2) The use of its characters in different manners for the same pronunciation, i.e. a single sound will be spelled in different ways in the already romanized alphabets by different traditions. For instance the name Chicherin appears Tchitchérine in French, Cicern in Italian,² Tsjitsjerin or Tjitjern in Danish, etc.

In spite of these difficulties, the sub-committee recommended that the Roman alphabet be adopted universally and the limits be resolved by diacritic marks, digraphs and even new characters if necessary for adjusting it to the requirements and the philological character of each language.

After the Second World War, in 1946, a new organ-

1. Institut International de Coopération Intellectuelle, op. cit., p. 9.

2. Ibid., p. 16-17.

ization, the International Organization for Standardization (I.S.O.), replaced the International Standard Association in the area of transliteration and romanization. It has supplied comprehensive schemes for the transliteration of the Cyrillic alphabet, the romanization of Chinese ideograms, of the Japanese syllabic writing and of the Hebrew and Arabic alphabets.

In 1962 it published, after seven years of preparation, its scheme for the romanization of the Hebrew alphabet which is known as ISO/R259, Transliteration of Hebrew. This was the most comprehensive and the most scientific work done on the transliteration of Hebrew to the present time. It provided character symbols for "29 consonants and 16 vowels used in the Hebraic language"¹.

To prevent ambiguity and to render the scheme global, each Hebrew character has been represented by one Latin character. There was no use of digraphs for representing any of the Hebrew characters. Instead the scheme used diacritic marks to represent Hebrew characters which have no equivalent in the Latin alphabet. It used few signs which were not found on the Latin typewriter key-

1. "ISO Technical Committee produces Hebrew transliteration standard", in Library Journal, December 1963, Vol. 88, p. 4601-4602.

board.

But, because Hebrew is pronounced differently in different Jewish communities and because there is no universally accepted pronunciation of Hebrew, the transliteration of Hebrew will probably pass several revisions and changes before being definitely accepted.

CHAPTER I

HEBREW ALPHABET

1. HISTORICAL NOTES ON THE HEBREW ALPHABET

The alphabet is considered as the latest and the most developed stage in the history of writing. It saves human beings a considerable amount of time and effort in learning language. Instead of learning hundreds of different symbols for the different word-roots in a language, as was the case in ancient times - before the invention of the alphabet - and as is the case with the Chinese language today, one needs to learn about two dozen characters and some diacritical marks.

Most authorities like M. Cohen¹, D. Diringer², G. Février³ and K. Irwin⁴ conclude that alphabetic writing originated in the area of Phoenicia and Palestine around 2,000 B.C.

1. Marcel Cohen, La grande invention de l'écriture et son évolution, Paris, Imprimerie Nationale, 1958, p. 112-114.

2. David Diringer, The Alphabet, a Key to the History of Mankind, 3rd ed., Vol. 1, London, Hutchinson (1968), p. 162-163.

3. James G. Février, Histoire de l'écriture, Nouvelle ed., refondue, Paris, Payot, 1959.

4. K.G. Irwin, The Romance of Writing from Egyptian Hieroglyphics to Modern Letters, Numbers and Signs, N.Y., Viking Pr., 1956.

Its invention shows that an adequate intellectual maturity was attained there at that time. An important part in this development is the Hebrew alphabet.

Let us first consider the origin of the Hebrew alphabet. The term Hebrew is not mentioned in the Old Testament nor is the Hebrew language and script, but many other names were given to this language in its early history. In II Kgs.XVIII.26 as well as in Is.XXXVI.11 and in the condensed narrative in 2 Chron.XXXII.18 and Neh.13:24 it is called יהודית -Yehūdīt, i.e., Jewish or the language of the Jews¹, while in the תרגום ירושלמי -Targūm Yerūshalmī it is called לשון הקודש -lešōn haqqōdeš, i.e., holy tongue². This latter term has continued to be used, for a long time until the present day. In Is.XIX.18 it is called שפת כנען -šefat Kēna'an "the lip (or language) of Canaan"³.

1. A.E. Breen, A General Introduction to the Study of Holy Scriptures, 2d ed., N.Y., Smith, 1908, p. 626; also Edward Ullendorff, "The Knowledge of Language in the Old Testament", in Bulletin of John Rylands Library, Manchester, March 1962, Vol. 44, no. 2, p. 456.

2. Ibid., p. 456; also Godfrey Rolles Driver, "Hebrew Language", in Encyclopedia Britannica, Toronto, Encyclopedia Brit., Inc., (1966), Vol. II, p. 279.

3. Edward Ullendorff, op. cit., p. 456; also Godfrey Rolles Driver, op. cit., p. 279.

The term עִבְרִית ('ibrīt=Hebrew) as indicating the language appeared first in the prologue to Sirach. Then it appeared in the New Testament as ἑβραϊστὶ (John V.2). The English term Hebrew comes from the Greek ἑβραῖος, which is a translation of the Aramaic עִבְרַי ('ibray)¹.

The history of the Hebrew alphabet can be divided into two main periods: Early Hebrew and Square Hebrew.

Early Hebrew script, which is also called Paleo-Hebrew, was adopted by the Hebrew people from the Canaanites in the twelfth or the eleventh century B.C. The Hebrews followed this script until the ninth century B.C., when they began to develop their own national script².

The use of the Paleo-Hebrew script did not cease after the Babylonian exile. It was used by the people who remained in Judah. In addition, from the fifth century onward, when the Aramaic language and script became an official means of communication, the Paleo-Hebrew script continued in use for writing Hebrew both in Judah and Samaria. It was preserved mainly for biblical texts and survived, within limited groups, during the

1. A.E. Breen, op. cit., p. 626; also Godfrey Rolles Driver, op. cit., p. 279.

2. Jacob Maimon, "Alphabet, Hebrew", Encyclopaedia Judaica, Jerusalem, The Macmillan Co., 1971, Vol.2, p. 682.

entire period of the Second Temple. So as late as Qumran we found that the archaic Proto-Hebrew writing was still used to write the divine names יהוה (YHWH) and מלכות (ml'wt) and even a whole Exodus scroll¹.

The Talmudic tradition (Sanh.21b) ascribes the adoption of the Aramaic script (Assyrian Script), which eventually became the Square Hebrew after adaptation, to Ezra who brought it from Babylonian captivity. However, Aramaic language and script also arrived to Judea through the Babylonians and then through the Persians who succeeded the Babylonians. It became the colloquial language, first of the educated elite and then of the wider classes².

Diringer gives a more specific account: "Early Hebrew" - he wrote - "is the writing used by Israel from 1000 B.C. onwards, roughly in the pre-exilic period, that is, until the sixth century B.C."³ It originated in the common Semitic alphabet which was

1. Jacob Maimon, op. cit., p. 683-688; also Jonathan P. Siegel, "The Employment of Paleo-Hebrew characters for the Divine Names at Qumran in the Light of Tannaitic Sources", Hebrew Union College Annual, 1971, Vol. XLII, p. 159-172; also Patrick W. Skehan, "The Text of Isaiah at Qumran", The Catholic Biblical Quarterly, April 1955, Vol. XVII, No. 2, p. 38-43.

2. Jacob Maimon, op. cit., p. 688.

3. David Diringer, The Alphabet, p. 186.

used by the Moabites, the Hebrews, the Phoenicians and the Aramaeans, but gradually it took special shape and became an independent offshoot of the Canaanite branch.

It originally included, as did Phoenician, only twenty-two characters all consonants. Then by influence from Aramaic three of these letters: א-א ('alef), ו-ו (wāw) and ז-ז (yōd) came to be used also as vowels¹.

These three letters have been called by historians and linguists by several names such as: Vowel-consonants, weak-consonants, semi-vowels and matres lectionis אמנות הקריאה ('imāhōt haqēri'āh). The latter term is sometimes used to designate all vowels when they are written in the text, including the diacritical marks.

The differentiation between letters of the Hebrew

1. Cross and Freedman state that some time after the tenth century B.C. (probably the middle of ninth) a system of final matres lectionis was introduced and since then all final vowels were indicated in the orthography.

Medial matres lectionis began to appear in Hebrew only since the sixth century B.C. - Frank Moore Cross and David Noel Freedman, Early Hebrew Orthography, a Study of the Epigraphic Evidence, New Haven, Connecticut, American Oriental Society, 1952, p. 56-57.

alphabet are known and are still used, especially in prayer, by one or the other of the several Jewish communities of the world¹, except for the distinction between *w-w*(śin) and (*sāmek*) which has been completely lost.

Our main sources for the pronunciation of the Hebrew characters are the following: 1) The traditional pronunciation of most Jewish communities which used Hebrew as their language of prayer throughout history and which attempted to conserve the original pronunciation as much as possible. 2) Transliteration of Hebrew words into the classical alphabets such as Greek and Latin. 3) Plays on words in Hebrew literature. 4) Variant spellings of Hebrew words.

According to all sources the traditional order of

1. The opinion of writers such as Diringer¹ (The Alphabet, p. 188) and Levias² (op. cit., p. 198-200), that the original pronunciation of *א-נ*(hêt), *א-נ*(têt), *א-נ* ('ayin) *א-נ*(śādê), *א-נ*(qōf) and *א-נ*(tāw) has been completely lost, is not correct.

In fact, these letters are still pronounced correctly by Middle-Eastern as well as North-African Jews during their prayer. *א-נ*(tāw) is pronounced correctly only by the Yemenite and the Iraqi Jews.

Moreover, the Middle Eastern-North African pronunciation of three of these letters: *א-נ*(hêt), *א-נ*(têt) and *א-נ* ('ayin) has been recognized as the official pronunciation in Israel.

the original letters was as follows: א-א ('āleḥ), in early Hebrew and Square Hebrew respectively, ב-ב (bêṭ) 7-7 (gīmel or gīmal)¹, ד-ד (dāleṭ), ה-ה (hē), ו-ו (wāw), ז-ז (zāyin), ח-ח (ḥêṭ), ט-ט (ṭêṭ), י-י (yōd), כ-כ (kāf), ל-ל (lāmed), מ-מ (mēm), נ-נ (nūn), ס-ס (sāmek), ע-ע ('āyin), פ-פ (pē), צ-צ (ṣādê), ק-ק (qōf), ר-ר (reš or roš)², ש-ש (šīn), ת-ת (tāw).

There is common consent among all Jewish communities about this traditional order. According to it, all characters bearing a קלמנצפצק (dāgeš qāl - light dot) come before their similar characters which do not bear one, such as: ב (bêṭ) before ב (bêṭ or vēṭ), ג (gīmal) before ג (gīmal), ד (dāleṭ) before ד (dāleṭ), ה (pē) before ה (fē) and

1. This character is called גמל (gīmel) by Aškenazim and גמל (gīmal) by Sefardim. The Aškenazic appellation is closer to the Aramaic appellation, while the Sefardic one is closer to Early Hebrew and Phoenician appellations.

2. This character is called reš by Aškenazim and roš by Sefardim. The Aškenazic appellation is closer to the Aramaic appellation, while the Sefardic one is closer to Early Hebrew and Phoenician appellations.

ת (tāw) before ט (tāw)¹.

The order would seem more reasonable if the undotted characters had appeared as original ones, i.e., if they had been placed before the dotted ones. However, none of the historians has mentioned how this classical order of the Hebrew alphabet was developed.

However, the twenty-two letters adopted from Phoenician were not sufficient to cover all the phonetic requirements of the Hebrew language. Thus, the Hebrew people made a special adaptation by using seven of the letters for two different sounds. In a later stage they added a dot to one of the two letters, representing two different sounds for distinction. In six of these letters, ב (bêt), ג (gīmal), ד (dālet), כ (kāf), פ (pē) and ת (tāw), the dot is put inside the letter; while in the seventh one the dot is used for the two similar letters - it is put on the right side of the character in the case of the letter ש (śīn) and on the left side of the character in the case of the letter שׁ (śīn).

The ניקוד (Niqquḏ=pointing) for differentiating between

1. Only one modern source has deviated from the traditional order of Hebrew alphabet and put the undotted characters before their dotted "brothers". This is the A.L.A. Cataloguing Rules for Author and Titles Entries, edited by Clara Beetle, Chicago, 1949, p.248.

sounds was not used during the period of Early Hebrew nor in the early use of Square Hebrew in the fifth century B.C. According to Harrelson the ןיקוד-Niqqud has been introduced by the "Masoretes" (Massoretes) scholars, "in the period from A.D. 500-800"¹.

At that time all the non-letter vowels, i.e., sign and dot vowels, were introduced to the Hebrew texts to make Hebrew writing a complete alphabetical one.

Early Hebrew script remained in popular use by the Hebrew people until the Babylonian exile in the sixth century B.C.² During this exile the Jews began to adopt the Aramaic script which was the ancestor of Square Hebrew. According to most sources dealing with alphabets Square Hebrew was not a mere adoption of Aramaic scripts, but was also a gradual adaptation. It was also influenced to some extent by Early Hebrew.

Early Hebrew script was called כתב עברי (kětāb 'ibrī= Hebrew script); כתב רעך (kětāb ra'āš = broken script) because

1. Walter Harrelson, Interpreting the Old Testament, Holt, Rinehart and Winston, N.Y., (1964), p. 19.

2. David Diringer, The Alphabet, op. cit., p. 186; also David Diringer, Writing, London, Thomas and Hudson, (1962), p. 125 and p. 128; also James G. Février, op. cit., 1959; also Hans Jenson, Sign, Symbol and Script, an Account of Man's Efforts to Write, 3rd rev. and enlarged ed., transl. from the German by George Unwin, N.Y., Putnam's, 1969, p. 305.

it has a broken shape; **כתב דעץ** (kěṭāḇ da'as = mint script) because it was used on coins¹.

The classical Hebrew script was called **כתב מרובע** (kěṭāḇ mērūbā' = Square Script) because of its straight lines. It was also called **כתב אשורי** (kěṭāḇ ašūrī = Assyrian Script)².

In addition to the new shapes in Square Hebrew, five of the Square Hebrew letters - **כ** (kāf), **מ** (mēm), **נ** (nūn), **פ** (pē) and **צ** (ṣādē) - have also acquired final forms. These were introduced by the Arameans mainly as a means of separation between the words in the sentence. Another means of separation which was used between words is a dot.

The tendency in Square Hebrew script, as in Aramaic, is not to break the words at the end of the line. Following this tendency, the scribes used extending letters for five Hebrew characters - **א** ('ālef), **ה** (hē), **ל** (lāmed), **ם** (final mēm) and **ת** (tāw) - when they appear at the end of a line.

The modern Hebrew script which we find in the Holy

1. Caspar Levias, op. cit., p. 200; also Mark Lidzbarsky, "Alphabet, the Hebrew" in The Jewish Encyclopedia, N.Y., Funk and Wagnalls, 1901, Vol. 1, p. 445, also Hans Jensen, op. cit., p. 305.

2. The term Assyrian is ascribed to the North East of Palestine, which, after becoming the main part of the Assyrian Empire, was no longer called "Aram", but "Āshur" (Assyria) - in Greek *ASSYRIA*, *ΣΥΡΙΑ* (hence the modern geographic name Syria) - and Ašūrīt meant Syriac, Aramaic. - Mark Lidzbarsky, op. cit., p. 445.

Scriptures, the scrolls of the Law and most reading matter from modern Israel is the same Square Hebrew script which was introduced during the fifth century B.C. It still consists of the ancient twenty-two Semitic characters which are mainly consonants. The letters are bold and well proportioned, although there exist certain but superficial resemblances between nine of the letters:- כ (bêṭ) and כּ (kāf); ד (dāleṭ), ך (final kāf) and ךּ (reš); ג (gīmal) and ך (nūn); ו (wāw), ז (zāyin), ך (yōḏ) and ך (final nūn); ה (hē), ך (ḥêṭ) and ת (tāw); ך (ṭêṭ) and ך (mēm); ך (final mēm) and ך (sāmek); ך ('āyin) and ך (ṣādê)¹.

The Hebrew alphabet is also used for numbers. They are arranged in decimal system based on the order of the letters of the alphabet:- א (ālef) to ך (ṭêṭ) are one to nine; ך (yōḏ) to ך (qōf) are ten to one hundred and ך (reš) to ת (tāw) are two hundred to four hundred. Combinations of the letters can be made to get different numbers, except that ך״ך (yōḏ-hē) is replaced by ך״ו (ṭêṭ-wāw) for the number fifteen; and ך״ז (yōḏ-wāw) by ך״ז (ṭêṭ-zāyin) for the number sixteen. This substitution is made because the former combination of letters is too close to the divine name and, therefore, according to Jewish tradition, should not be used for secular purposes.

1. G.F.Ostermann, Manual of Foreign Languages, 4th ed., N.Y., Central Book Co., 1952, p.121.

The use of the Hebrew alphabet as numerals appeared for the first time on Maccabean coins¹. In modern times it is used on Israeli coins to denote the Hebrew date and at the side of the Arabic numerals on the calendar to denote the Hebrew year.

Although Square Hebrew script was well proportioned and a neat type of writing, it was not possible to use it as a cursive for manuscripts and other non-formal writing:-

- 1) It is not an economic script. It is large and takes up much space.
- 2) It is, to some extent, complicated and therefore hard to trace by hand.
- 3) Ligatures are not permitted, nor additions or changes in shape because it is considered a holy script.
- 4) Because of its sanctity there was a strong restraint on using it for secular affairs and possibly also from writing in foreign languages.

To overcome these barriers the Jews developed a cursive script for ordinary correspondence. Its development began gradually in ancient times; the exact period is not known. It grew mainly out of the Syrian script, but it shows some traces of the ancient Hebrew characteristics in certain letters¹.

1. Caspar Levias, op. cit, p. 204.

The main difference between Square Script and Cursive Script was in size. Cursive Script was smaller and thus it was called כתיבה דקה (kěṭībāh daqqāh = Small Script), while Square Script was called כתיבה גסה (kěṭībāh gassāh = Large Script)¹. The Cursive Script took different shapes in various Jewish communities.

The two main offshoots of the Cursive Script are the Rabbinic or Raši Script and the Jüdisch-Deutsch or Weiber-Deutsch script.

The Rabbinic Script is so called, because it was used frequently by the mediaeval Jewish Rabbis² for manuscripts and for notes and commentaries in the margin of the sacred books, while the original text was in Square Hebrew³.

It is also called Raši Script because it served so frequently for the commentaries to the Bible and the Talmud by Rabbi Shelomo Is/ḥaqī (Raši), a famous commentator who lived in Troyes in France during the eleventh century⁴.

1. Mark Lidzbarsky, op. cit., p.446.

2. David Diringer, op. cit., p. 205.

3. James G. Fevrier, op. cit., p.244.

4. Marcel Cohen, op. cit., p.187; also qēriāh biktāb Raši, Qontres liqūṭīm letalmidē bêt sefer lehargilām liqro' biktāb Raši, N.Y., Śilah, (n.d.).

Rašī or Rabbinic Script is more economical and easier to write than the Square Script. It has also been used as cursive script, with slight differences in every community, by the several Sefardic communities ever since the Middle Ages. Today it is still used in some classical religious publications, but it has lost its currency as cursive writing by the Sefardic communities. Its place was taken by the Polish-German form which became the official handwriting of Israel.

The Judisch-Deutsch or Weiber-Deutsch was developed in Germany during the fourteenth century. It is easier, thinner, and its shape is more round than the shape of Square Hebrew and even than Rašī. It has been used by Aškenazic communities in Central and Eastern Europe for correspondence in the vernacular languages. Its main branch is the Polish-German form.

The Jews have used the Hebrew alphabet for writing the languages of the peoples among whom they have lived and whose tongues they have adopted. They have made special adaptations of the Hebrew script to these languages by adding diacritical marks to Hebrew letters to represent sounds existing in these languages and not occurring in Hebrew. They have even published literary works in these languages written with the Hebrew alphabet¹, e.g., An Arabic Tafsir of the Song of Deborah, by

1. Marcel Cohen, op. cit., p. 187.

J. Shunamy, was written in Hebrew characters, in the Arabic language.

In particular Jews used the Hebrew characters in writing the language dialects which they created out of the languages of the people among whom they lived. Thus, not only are Yiddish (out of German) and Ladino (out of Spanish) written with these Hebrew characters, but Judeo-Persian, Judeo-Greek and Judeo-Arabic are also so written. A classic example is the Biblia Polyglota or as it is known The 1547 Constantinople Pentateuch, published by Eleasar ben Gershon in 1547 in Constantinople, in four languages: Hebrew, Aramaic, Judeo-Greek and Judeo-Spanish, all written in Hebrew characters. Another example is the book: ... חייאת אל רוח רוח חיים ..by Siman Tov Melamed, written with Hebrew characters, mainly in the Judeo-Persian language with a small portion in Hebrew, published in Jerusalem, in 1898.

They also developed three minor alphabets out of Hebrew. During the Middle Ages Arabic works were frequently written in Hebrew letters that were equated to the Arabic letters. The Spanish Jews, after being expelled from the Iberian Peninsula at the end of the fifteenth century, used the Hebrew alphabet for writing in their Ladino dialect. They also used signs to indicate additional letters.

Later Yiddish developed an alphabet based on Hebrew letters, but differing from the Hebrew alphabet in that: װ ('āyin) is used for "e," א ('ālef) with various vowel signs for the shorter vowels, and different combinations of the letters for sounds that do not occur in Hebrew itself¹.

In the twentieth century there was some tendency to reverse this process. Yiddish is now often printed in Roman characters in Europe, while in Palestine Ittamar ben-Avi headed during the second and third decades of the twentieth century a movement to use Roman characters for Hebrew itself¹.

But this tendency of using Roman characters for Hebrew itself is supported only by a minor group of young scholars and some immigrants from Europe, while the majority of the people of Israel are in favor of keeping the Hebrew alphabet as the official writing of the Hebrew language, because this writing has accompanied the latter language during its long history and has acquired a sacred character.

The Bible, the Talmud and most other works of the Hebrew language were written originally in this script. Thus, to supplant this ancient script by any other alphabet would hinder future generations from reading and understanding this rich literature in its original.

1. Caspar Levias, op. cit., p. 205.

However, Hebrew language and script have always been considered by the scholars of all nations as vital and of great importance. So tables of Hebrew scripts have always been included in books dealing with writing systems, books of geographic names and books on cataloguing.

The creation of the State of Israel in 1947 and the revival of Hebrew as its official language have increased the importance of the Hebrew script if only because of the increase in modern publications, including modern literature and scientific works. Thus, access to reading material in Hebrew became more important.

The International Organization for Standardization recognized this importance. In May 1962 it published its recommendation known as R259, Transliteration of Hebrew¹, one of the most comprehensive works on transliteration of Hebrew which has appeared to date.

2. RELATIONS TO PHOENICIAN, GREEK AND ROMAN ALPHABETS

Hebrew, Phoenician, Greek and Roman are "sisters" and "cousins". They are related to each other because the latter

1. International Organization for Standardization (ISO), ISO Recommendation R259, Transliteration of Hebrew, 1st ed., May 1962, Geneva, 1962.

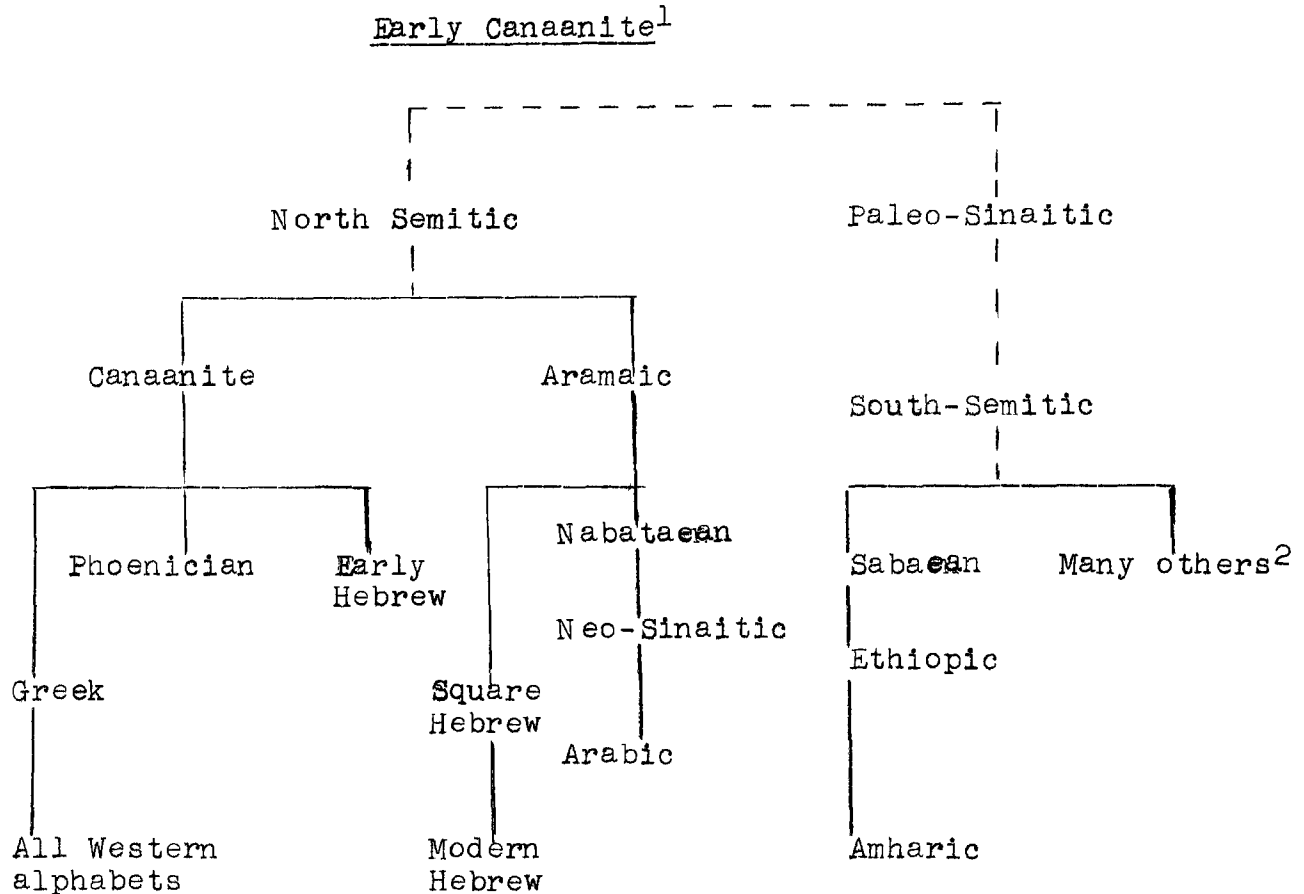
developed from the former ones and was influenced by them. Thus, a knowledge of the historical development of Greek and Roman is essential for tracing the origin of each Roman character for a more accurate and suitable equation between Hebrew and Roman. For instance - knowing the relationship between the Hebrew and the Phoenician p (qōf) with the Roman Q will enable us to romanize the p (qōf) into Q.

Historians in the field of alphabetic writing have clearly traced the Hebrew, Phoenician, Greek, Etruscan and Roman alphabets to a common origin and have thus established a relationship between them.

Diringer¹ illustrates this development of alphabetic writing from Early Canaanite with a diagram. According to this scheme North Semitic writing developed from Early Canaanite. This writing in turn gave birth to two offshoots: the Canaanite and the Aramaic. From Canaanite were derived Phoenician, Early Hebrew and Early Greek; from Western Greek were derived all Western alphabets. From the Aramaic were derived, directly, Square Hebrew and indirectly, through Nabataean Arabic.

1. David Diringer, Writing, op. cit., p.124.

The geneology of alphabets is as follows:



The Phoenician alphabet is very similar to the Early Hebrew alphabet. Both adopted the twenty-two North Semitic characters which were all consonants. Both have retained the original names of the characters which have similar meaning in both languages, with slight adjustments to their own accent and dialect.

1. North-Semitic and South-Semitic main branches... represent uncertainty of connection.

2. David Diringer, Writing, op. cit., p.124.

The style of writing in both Early Hebrew and Phoenician was originally the same. But in the course of time some differences developed in some of the characters¹.

The relations between the Hebrew and Greek alphabet were mainly indirect, because the Greeks did not adopt the Hebrew writing but its closest "sister", the Phoenician. The Phoenicians were a trading people. Their major contacts were during the period 1200-800 B.C., when they were trading in the ports of the Black Sea. During this period they learned the Semitic alphabet².

Most sources mention the Greek legend that Kadmus (from קדמ =qedem, which means East in Hebrew, Phoenician and Aramaic), the man from the East, taught the Greeks the alphabet. Irwin goes further by mentioning that a Phoenician prince who came to the Greeks to rescue his daughter who had been captured in raids, taught the alphabet to the Greeks to repay them for their aid³.

1. 1) Hebrew letters and especially ז (zāyin) and ח (ṣādê) are wider, shorter and more squat. 2) The main stems of the letters - ב (bêt), כ (kāf), ל (lāmed), מ (mēm), נ (nūn) and פ (pē) - are curved and rounded at the bottom, bending towards the left. 3) The vertical strokes of the ה (hêt) extend beyond the horizontal ones. 4) The upper horizontal stroke of the ע (hē) extends beyond the vertical one. 5) The short vertical strokes of the מ (mēm) and the נ (nūn) are often not joined to the main stem. - David Diringer, op. cit., p. 127.

2. Keith Gordon Irwin, op. cit., p. 51-52.

3. Ibid, p.52.

Although this legend does not have a very strong basis, it seems very reasonable that the Greeks did not invent their alphabet but adopted and adapted the Semitic which they received through the Phoenicians. There is much evidence in support of this: 1) The Greeks called their alphabet *ΚΑΔΜΗΙΑ ΓΡΑΜΜΑΤΑ* = Kadmeia grammata (Herodotus, v. 39); also they called it *ΠΥΘΙΝΙΚΕΙΑ ΓΡΑΜΜΑΤΑ* = Phoinikeia grammata¹. 2) Early Greek script was very similar in shape and structure to the Phoenician (see table 2, page 171 and table 4, page 173). 3) It was, like the Phoenician and other Semitic scripts, written from right to left (see table 2, page 171 and table 4, page 173). 4) The names of the Greek letters *Α* (Alpha), *Β* (Beta), *Γ* (Gamma), *Δ* (Delta), etc., mean nothing in the Greek language. Their sounding was merely an adjustment of the Semitic pronunciation of the letters to Greek ears. While in Hebrew and Phoenician these letters are associated with certain names, e.g., *א* ('ālef) means an ox's head and its original representation was an ox's head (); *ב* (bêt) means house and its original graphic representation was a picture of a house (); *ג* (gîmel or gîmal) means camel and its original graphic representation was a camel's head (); *ד* (dālet) means door and its original graphic representation was of a tent door (); etc., etc.

1. David Diringer, The Alphabet, op. cit., p.358.

After adapting the Phoenician alphabet, the Greeks made several changes in order to adjust it to the phonetic requirements of their language. At the beginning they wrote from right to left. Then they wrote, successively, one line from right to left and the next from left to right, as the ox ploughs the field. Thus this system of writing was called "boustrophedon", i.e., ox-ploughing, by the Greeks. Within five hundred years of its first adoption the writing was oriented consistently from left to right¹.

The names of the Semitic characters have also undergone some changes. They have been adjusted to the ears of the Greek people and their language².

1. From the graphical and phonetic points of view the process of adaptation and adjustment of the Phoenician letters to the Greek language has experienced gradual, slow changes. At the beginning of the adoption many of the Greek letters remained very similar to the Phoenician, as was the case of Early Greek. Then they passed through several changes until they assumed the shape of classical Greek which is very similar to the capital letters of modern Greek.— See comparative chart of Greek and West Semitic writing in I.J.Gelb, *A Study of Writing*, Rev. ed. Chicago, Univ. of Chicago Pr. (1969), fig. 89, p.177; also Charles Higounet, *L'écriture*, 4e ed. Paris, Pr. Univ. de France, 1969, fig. 27, p.65; also David Diringer, *The Alphabet*, op. cit., Vol. 2, figs. 19.5, 19.6, 22.1, p.306-307 and p.373.

2. * ('ālef) became A (alpha), ʾ (bêt) became β (beta), ʿ (gīmal or gīmel) became Γ (gamma), ʔ (dālet) became Δ (delta), ʕ (hē) became E (epsilon), ʔ (wāw) became F (digamma) and later was omitted, ʔ (zāyin) became Z (dzeta), ʔ (hêt) became H (eta), ʔ (têt) became θ (theta), ʔ (yōd) became I (iota), ʔ (kāf) became K (kappa), ʔ (lāmed) became Λ (lambda), ʔ (mēm) became M (mu), ʔ (nūn) became N (nu), ʔ (sāmek) became Ξ (xi), ʔ ('āyin) became O (omikron), ʔ (pē) became Π (pi), ʔ (qōf) became Ϙ (koppa) then was omitted, ʔ (roš or reš) became ϙ (ro), ʔ (šīn) became Σ (sigma) and ʔ or + (tāw) became Τ (tau).

The letters ב (bêt), ג (gīmal), ד (dālet), ז (zāyin), כ (kāf), ל (lāmed), מ (mēm), נ (nūn), פ (pē), ר (roš) and ט (tāw), which expressed sounds common to the Semitic and the Greek languages, were taken over without change in their phonetic usage. Other Semitic letters were adopted for Greek sounds which were considerably different. The letter ט (têt) which represents the hard ("thick" in sounding) Semitic "t" was adopted for the Greek θ (theta), the φ (qōf) which expressed the Semitic emphatic "k" was adopted as φ (koppa). By the fifth century B.C. φ (koppa) had disappeared from the Eastern Greek alphabet because the language did not require it.

Several letters survived in numerical usage¹.

The most remarkable changes and adaptation the Greeks

1. Georg F. Osterman notes that ancient characters of the primitive Greek alphabet were used as numerals and that a relic of this remains in the survival of these characters being used "F (digamma) or 5 (stigma) used for 6, 9 (koppa) used for 90 and 9 (sampi) used for 900". He also notes that "the only other occasion for the use of these characters is in palaeography". - Manual of Foreign Languages, op. cit., p.103.

Dávid Diringer in his Writing, p.152, and in his The Alphabet, p.361, also notes the use of F (digamma) as the numerical 6 and of φ (koppa) as 90. He quotes K.Regling, author of Di Antike Munze als Kunstwerk, as proof that this practice survived, at least on coins, to the mid-fourth century B.C.

made were: 1) The introduction of complete vowel representation. 2) The different arrangement of sibilant and hissing sounds such as Ξ (xi) for ש (sāmek) and ס (san) for שׁ (šādê). 3) The addition of certain letters for the representation of sounds not expressed by any of the Semitic letters such as Φ (phi), χ (khi), Ψ (psi) and Ω (omega)².

In all Greek alphabets the Semitic vowel-consonants - א ('ālef), ה (hē), ו (wāw) and י (yō) and the consonant ע ('āyin) were adopted to represent only vowels. א ('ālef), a smooth breathing in the Semitic alphabet, has been used by the Greeks as the vowel Α (alpha) for the sound "a". ה (hē) has been converted to the Greek Ε (epsilon). It was used as the long and short "e" in the Western Greek alphabet in which the Semitic ח (hêt), a guttural rough breathing sound "h", was adopted to denote the rough breathing, spiritus asper; while in the Eastern Greek alphabet Ε (epsilon) was adopted to represent the short "e" and Η (eta) the long "e".

The letter ו (wāw) was adopted to express the Greek Ϝ (digamma). This is a consonantal "u" akin to the English "w", which gradually disappeared from the Greek alphabet. Another

1. David Diringer, Writing, op. cit., p.360; also Caspar Levi, op. cit., p.204; also James G. Février, op. cit., p.388-389.

form of the Semitic Υ (wāw) which was used by the Greeks was the vowel Υ (upsilon). It was placed at the end of the Greek alphabet after τ (tau)¹.

The Semitic guttural consonant $\aleph$ ('āyin) was taken over as the Greek $\omicron$ (omikron), i.e., small "o" to represent the vowel "o". In the Eastern Greek alphabet the $\omicron$ (omikron) represented only the short "o". Another vowel, the ω (omega), i.e., large "o", was created and added at the end of the Greek alphabet to represent the long "o"².

The Greeks needed to convert some Semitic consonants into vowels because of the phonetic and structural differences between their language and the Semitic languages. In Semitic languages the basic words are constituted from three permanent consonantal letters which constitute the skeleton of the term. The vowels are added to these words mainly orally by the readers, according to their meaning in the context. In Greek the usage of vowels is more comprehensive. They are an integral part of the basic terms of the language. Thus, they have to be represented comprehensively.

1. David Diringer, The Alphabet, op. cit., p.361.

2. Ibid, p.360; also op. cit., Writing, op. cit., p.152; also Caspar Levis, op. cit., p.204.

As Semitic languages are rich in sibilant sounds the Greeks made drastic changes in adapting them to their sounds¹.

Even though the early Greek alphabet used all the Semitic letters the Greeks needed to add some new characters to represent additional sounds not existing in the Semitic alphabet. The letter ϕ (phi), used to express the unvoiced labial aspirate "ph", was the earliest addition and placed in the alphabet after the letter υ (upsilon). It was followed, in the alphabet, by the letter χ (khi)². The letter ψ (psi) was added to express the sound "ps". This letter was used in the Western alphabet to denote the sound "kh"³.

In the fourth century B.C. the Greek alphabet took its final classical shape. In this alphabet the letters

1. The Greek voiced sibilant ζ (dzeta) was expressed by the Semitic ז (zayin). The Semitic ז (sāmek) which still existed in the Thera and Etruscan alphabets was retained as Ξ (xei) with the value of "x" in the Eastern Ionic alphabet; while the letter ו (šîn) became Σ (sigma). In various Greek alphabets the Greek sound "s" was represented by symbols derived from one of two Semitic letters, that is, either by signs descended from ש (šādê) - ס (san), or by the prototype of the classical sigma derived from the Semitic ו (šîn - 'sîn). ש (šādê) and ז (sāmek) do not appear together in any Greek alphabet, but they do in the Etruscan. The letter ש (šādê) - ס (san) appeared mainly in Crete, Thera, Melos and the Peloponnesus.

2. This character expressed the "x" sound in the Western Greek alphabet.

3. Charles Higounet, op. cit., p.65; also British Standard Institution, Transliteration of Cyrillic and Greek Characters, London, 1958, p.20.

Ɔ (digamma), Ϻ (san) and Ϙ (koppa) were omitted. The total¹ number of this alphabet was fixed at twenty-four.

The Latin alphabet, according to most historical sources, has been developed from the Western Greek alphabet through the Etruscan during the seventh century B.C. Like Greek and Etruscan, the Latin alphabet was written, at the beginning, from right to left.

Of the twenty-six Etruscan letters the Romans adopted only twenty-one. Another three were converted into numbers; ϑ (theta) became ϸ or Ϲ, i.e., 100; ϕ (phi) became ϡ or ϣ, i.e., 1000; and ϗ (chi) became Ϛ or ϛ, i.e., 50. The Greek ζ (zeta), which did not represent any Latin sound, was dropped.

The Etruscans added the letter "H" to the Greek Ɔ (digamma), which represented the ϣ (wāw) sound, to make the "ef" sound. The Latins dropped the "H" and used the Ɔ (digamma) alone and kept it in its original place in the alphabet for the "ef" sound. These last two nations also adopted the Greek υ (upsilon) for both the consonant "v" and the vowel "u". The third letter of the Greek alphabet γ (gamma) which derived from the Phoenician 𐤂 (gimel), became "j" (or c) in the Etruscan alphabet with the

1. Charles Higounet, op. cit., p. 65; also British Standard Institution, Transliteration of Cyrillic and Greek Characters, London, 1958, p. 20.

sound "K". It retained this sound in the Latin alphabet, but it served there for both "K" and "G". The Romans inherited this lack of differentiation, but at a later stage they realized it and added a bar (or a queue) to the character "C" for the "G" sound. They put it, not at the third place of the order of the alphabet as was the Semitic ג (gimel), but in the seventh place replacing the Semitic ז (zayin)¹.

However, most scholars in the field of writing have stated that the addition of a bar to the "C" to make the "G" took place in 312 B.C. They have also noted that the Etruscans used the "C" as "K" only before "E" and "I". The Etruscans also adopted from archaic Greek the "K" and the "Q" and transmitted them to Latin. They could not differentiate between them in pronunciation as the Semitic did. They decided, not as classical Greeks did, to drop the "Q", but to use "K" only before "A" and "Q" only before "U"².

The Etruscans, because they retained the "F", gave the "V" its original sound and retained the "H" as a consonant close

1. David Diringer, The Alphabet, op. cit., p.419; also op. cit., Writing, op. cit., p.165; also Charles Higounet, op. cit., p.77.

2. David Diringer, The Alphabet, op. cit., p.419; also op. cit., Writing, op. cit., p.165-167; also Charles Higounet, op. cit., p.74-75; also B.L.Ullman, Ancient Writing and Their Influence, N.Y., Cooper, 1963, p.35-36.

to its Semitic ancestor $\aleph$ (hêt). They and their heirs, the Latins, can be considered more conservative than the classical Greeks in this respect.

The early Latin alphabet was a mixture of Semitic, Greek and Etruscan alphabets. It had the following order: A, B, C (with the sound k), D, E, F, I (the Greek zeta), H, I, K, L, M, N, O, P, Q, P (which was the original shape of R),¹ S, T, V, X. The shape of the letters was slightly modified.

After the conquest of Greece by the Romans, the latter adopted the characters Y and Z respectively for the sounds "Y" and "Z" to ease the transliteration of Greek words into Latin. They placed them at the end of their alphabet. They also adopted the letter "X" for the combined sound "KS". With these adoptions the Latin alphabet reached the number of twenty-three letters.

But, even after these adoptions the Latin alphabet remained with many lacunae such as the usage of "I" and "U" for both consonantal and vocalic sounds (which may confuse the reader). In medieval times the form "J" was created from "I" to be used as a consonant and "I" was retained only as a vowel.

1. The Semitic-Greek Δ (delta) took the shape of "D", the Greek Σ (sigma) became "S". Then "R" was differentiated from "P" by adding a bar (or a queue). At a later stage, the seventh letter, that is the Greek Z (zeta) was dropped and the new letter "G" put in its place. - D. Diringer, The Alphabet, op. cit., p. 420.

In the eleventh century the "W" was created from "V" for sounds equivalent to the Semitic ו (*wāw*) which occurred in English and in a few other European languages.

Clearly the Romans were the first to introduce radical changes. Although they adapted the characters inherited from the Semites to their language, their alphabet was not without lacunae.

The Romans accepted from the Etruscans the names of the letters of the alphabet, simplified them and made them closer to the sound of these letters.

3. EQUATING HEBREW AND ROMAN

The basic differences between the structure of the Hebrew language and script and the Roman language and script make the equating of the Hebrew characters to the Roman quite difficult.

First, Hebrew, like Arabic and other Semitic languages, is a consonantal one. Many grammarians after an analysis of the languages, conclude that its basic roots are constituted of three consonantal letters, e.g. קטל - $\text{Q}^{\text{a}}\text{T}^{\text{a}}\text{L}$, Arabic قتل - $\text{Q}^{\text{a}}\text{T}^{\text{a}}\text{L}^{\text{a}}$ (to kill); עמד - $\text{'aM}^{\text{a}}\text{D}$, Arabic وقف - $\text{W}^{\text{a}}\text{Q}^{\text{a}}\text{F}^{\text{a}}$ (to stand); חלם - $\text{H}^{\text{a}}\text{L}^{\text{a}}\text{M}$, Arabic حلم - $\text{H}^{\text{a}}\text{L}^{\text{a}}\text{M}^{\text{a}}$ (to dream); etc.

In Hebrew the vowels are not fixed. They vary

according to the grammatical role in the sentence. This lends itself, according to some Western observers, to word play which may appear as gymnastical; while in Latin the vowels are essential and constitute an integral and permanent part of the words.

The cultural forms of literary expression in Hebrew centre on this flexibility of the terms. A classic illustrative example is a sentence in Aboth 2:6 and in Succah 53A where the Sage Hillel, upon seeing a body floating down a river, said, "Because you have drowned others, you have been drowned, and the fate of those who drowned you is that they shall be drowned in their turn." The original sentence consists of four words each a morphological form of the same root. "על דאשפת אטפון וסוף מטיפך יטפון"

On the other hand the vowel phonemes in Hebrew, unlike the Arabic¹, are more developed than in most Roman writings. Hebrew has short, medium and long pronunciations of a, é, i, o and u (English oo). In general the long

1. In Arabic there exist only three vowel phonemes a, i and u (oo) - long and short. The long vowels are represented by letters such as: ا ('alif) = ā, ي (ya) = ī, and و (wāw) = ū (English ōo). The short vowels are represented by diacritic signs such as: َ (fat/hah) = a, ِ (kasrāh) = i, and ُ (dammah) = u.

The lack of the vowels o and French é renders the vowel system of Arabic very simple; but it also leads to confusion when words with these vowels enter into Arabic from other languages.

pronunciations of vowels are written with letters bearing their equivalent appropriate diacritic signs; while the short vowels are indicated only by vowel points¹. As Latin has only the five basic letter vowels the romanization of Hebrew vowels requires a number of diacritic marks to represent all its seventeen vowel phonemes.

Secondly, there is a great difference between Hebrew and Roman consonants, especially in the groups of sibilants and affricates. Also, Hebrew has many guttural and hard sounded affricates and sibilants which do not exist in the Roman alphabet. Thus, it is very difficult to harmonize the two. In addition, some of the hard and the guttural consonants are pronounced differently by the different Jewish communities although a moderate Sefardic pronunciation is considered as the official one in Israel. These differences are more noticeable in the prayer dialects².

1. Except ֿ (qāmeṣ gadōl) which is only a diacritic sign, but represents a long vowel.

2. The Middle-Eastern and North-African communities pronounce the character ב as hard and "thick" b. They pronounce ב as light and soft b. Other communities pronounce ב as b and ב as v.

Most Sefardic communities pronounce ג as g and ג as g while all Aškenazic communities pronounce both as g.

The distinction between ד (d) and ד (d or dh) has been lost except by the Yemenites. ד without a dot was historically pronounced as Arabic ḏ and as English th in "the".

Thirdly, Hebrew writing, like other Semitic writings, is based on pronunciation and is much more phonetic than Roman. Thus, it does not accept digraphs nor doubling of letters for gemination. Instead of digraphs it uses dāgeṣ

Footnote 2 from p. 32 continued.

The Middle-Eastern and North-African pronounce "ו" as wāw, while European communities pronounce it as vāv.

ח which is a guttural and pronounced hard "h", equivalent to Arabic ح, is pronounced by most European communities as kh, i.e., like German ch, and is pronounced in its historical manner, as het, by Middle-Eastern and North-African.

ט (ṭêṭ) which is a hard and "thick" t, is pronounced by most European communities as a light "t".

The differentiation between ט (sāmek) and ו (śin) has been lost completely since ancient times.

א (‘āyin) which is a hard "a", equivalent to Arabic ع, is pronounced by most European communities as a light "a".

ס (ṣādê) which was originally a hard "s", equivalent to Arabic س, is pronounced by Ashkenazic communities "ts" combined together. The latter pronunciation has become more common and more accepted in Israel because it is easier than the original.

The letter ק (qōf or kōf), equivalent to Arabic ق, is pronounced commonly in Israel as soft k because it is easier and considered as more delicate than the historical pronunciation. Its original pronunciation has been conserved by Middle-Eastern and North-African in their prayers.

The character ת (thāw or tāw), equivalent to Arabic ث, is pronounced by Ashkenazic communities as the character s, by Iraqi and Yemenite communities as t, i.e. like English th in thousand. This latter pronunciation matches its original form; but the official pronunciation of this character used in Israel is identical to a soft t and derives from the pronunciation of the Western part of Sefardic communities.

qal (.) for creating an additional character such as 𐤑 from 𐤐, 𐤒 from 𐤑, etc., and a dāgeš kāḇeḏ (.) for doubling a letter such as 𐤒, 𐤓, 𐤔, etc.

In spite of these differences, fourteen of the twenty-nine letters of the Hebrew alphabet are transliterated identically in every Roman alphabet, because they have their exact phonetic equivalent in the Roman alphabet. These letters are:

𐤑 = g; 𐤔 = d; 𐤕 = h; 𐤖 = z; 𐤗 = y;
 𐤘 = k; 𐤙 = l; 𐤚 = m; 𐤛 = n; 𐤜 = s;
 𐤝 = p; 𐤞, 𐤟 = f; 𐤠 = r; 𐤡 = t.

The problem must now be raised about the transliteration of the fifteen other letters which have no equivalent in pronunciation in the Roman alphabet. These characters are transliterated differently by the different transliteration schemes because of certain phonetic considerations.

𐤀, a deep guttural sound which is used as a vowel and as a consonant, is omitted or transliterated as "a" in older schemes and transliterated by a special character identical to a comma (,) in all recent schemes.

𐤁 without dāgeš, which was originally a soft type of "b" (in contrast to 𐤂, with dāgeš, which was a hard i.e. "thick" type of "b") is transliterated simply as "b" in some

sources and bh or v in others.

ך without dāgeš^v is not distinguished from ך̄ with dāgeš^v in many sources. It is transliterated as gh or ḡ (abovelined) in other sources.

ד̄, which had originally the sound of th in "the" is transliterated as d (like ד) in some sources and dh or d (underlined) in others.

ח, which has a palatal "thick" sound between h and kh is transliterated as h, ch, kh, ḥ, etc.

ט, a "thick" and a hard sound of t, is equated to t or ṭ.

כ, which has a palatal, hard and "thick" sound like German ch, is equated to k in some systems and kh, k, h, ḥ in others.

ק, a consonant which has a hard and "thick" pronunciation of "a" like in 'ōd̄ = קד̄ and 'ōlām = קלām, is equated in some sources simply to an "a" and in most others to a special character similar to an inverted comma (‘).

צ, which has a sharp and a "thick" pronunciation of "s", is transliterated to ts, z, z, ṣ, s and ṣ̣ by the different sources.

פ, which is a hard and a "thick" pronunciation of "k",

is equated to k, ḳ and q by the different sources.

ו̣, which has equivalent pronunciation to English sh and French ch, is transliterated as sh, ch, sch, s and š by the different standards.

ו, whose original pronunciation is not known, is pronounced like s, and equated to s or ¹ś.

ת, of which the original pronunciation is equivalent to "th" in the English words like "thin" and "thick", is transliterated as t, th, ²ṭ and ṭ.

1. The equation of ו to ś (with accent) is more accurate, because it distinguishes it from ו which has a sound equivalent to that of s.

2. "System of Transliteration and of Citation of Proper Names", in The Jewish Encyclopedia, N.Y., 1902, Vol. II, p. IX-X; also Casper Levias, op. cit., p. 198-200; also John Henry Bridges, ed., The 'opus majus' of Roger Bacon, Oxford, W and N, 1900, p. 90; also U.S. Board on Geographic Names, Transliteration Guide (Washington, 1961), section IV, p. 1; also G.F. Ostermann, Manual of Foreign Languages, 4th ed., N.Y., Central Book Co., 1952, p. 120; also U.S. Department of State, Office of the Geographer, Romanization Guide, 1964, p. 7; also U.S. Government Printing Office, Style Manual, Washington, 1959, p. 415; also Godfrey Rolles Driver, op. cit., p. 279; also International Organization for Standardization (ISO), ISO Recommendation, R/259, Transliteration of Hebrew, 1st ed., May 1962, Geneva, 1962, p. 4; also "La transliteración de alfabetos no Latinos", in Boletín de Bibliotecas y Bibliografía, July-September 1935, Vol. 2, p. 238; also The Vatican Library, Rules for Catalog of Printed Books, transl. from the 2d Italian ed. by T.J. Shanahan, Chicago, Ill., A.L.A. 1948, p. 407; also C.A. Cutter, Rules for Dictionary Catalog, Washington, GPO, 1904, p. 152; also A.L.A. Cataloguing Rules, Author and Title Entries, Chicago, A.L.A. 1908, p. 69; also A.L.A. Cataloguing Rules for Author and Title Entries, Chicago, A.L.A. 1949, p. 248; also Lord Edward Gleichen and John H. Reynolds, Alphabets of Foreign Languages, 2d ed. London, Royal Geographical Society, 1933, p. 70-71.

The romanization of Hebrew vowels is no less difficult than of the Hebrew consonants. The Roman alphabet offers only five letter-vowels, while Hebrew has seventeen vowel-points. Some of these vowels are combination of letters with diacritic marks. Others are combination of two types of diacritic marks. In addition, there exist in Hebrew : (šēwā nāḥ), which indicates the absence of a vowel and is not indicated in transliteration. The פִתְחָה גְּנוּזָה (furtive pataḥ), which is a pataḥ put under a final ן, is not pronounced ḥa but aḥ by Aškenazic communities; and yaḥ, when it is preceded by ך (yōḏ) and waḥ when it is preceded by ך (wāw), by Sefardic ones. The former pronunciation is accepted as standard by most transliteration schemes until now.

Because of the complexities of the Hebrew vowels, some transliteration schemes, including Cutter table of 1904, did not bother to romanize them. Other schemes transliterated them superficially or partially. There are differences in romanization among the various schemes concerning some of the vowels.

— (pataḥ), a short pronunciation of "a", is equated to "a" in all considerable sources.

— (ḥātef pataḥ), a very short pronunciation of "a", is equated simply to "a" in the table given by The Jewish Encyclopedia of 1901, in the

Transliteration Guide of U.S. Board on Geographic Names of 1961 and in the Romanization Guide of U.S. Department of State of 1965. It is not transliterated in the Manual of Foreign Languages by Ostermann, nor in the A.L.A. Cataloguing Rules of 1949. It is equated to a short $\check{a}$ in The Encyclopedia Britannica, in Alphabets of Foreign Languages, by Gleichen and in ISO/R259, Transliteration of Hebrew.

(qāmeṣ), a long pronunciation of $\bar{a}$, is transliterated as "a" in The Jewish Encyclopedia, in the U.S. Romanization Guide, in the U.S. Transliteration Guide and in Manual of Foreign Languages by Ostermann. It is transliterated as $\bar{a}$ in Britannica and in Gleichen and as $\grave{a}$ in ISO/R259, Transliteration of Hebrew. It is ignored in some schemes and is transliterated as $\hat{a}$ in many bibliographic sources.

(qāmeṣ qāṭān), a short pronunciation of "o", is transliterated as "o" in The Jewish Encyclopedia of 1901, in the U.S. Transliteration Guide and in Manual of Foreign Languages by Ostermann. It is transliterated ϕ in ISO/R259, Transliteration of Hebrew and ignored in many other sources.

(ḥātef qāmeṣ), a very short and rare type of pronunciation of "o", is equated to "o" in The Jewish Encyclopedia of 1901, in U.S. Transliteration Guide

and in U.S. Romanization Guide. It is equated to "ō" in Britannica, in Alphabets of Foreign Languages by Gleichen and in ISO/R259, Transliteration of Hebrew. It is ignored in the A.L.A. Cataloguing Rules of 1949.

· (ḥōlem), a medium type of pronunciation of "o", is equated to "o" in most sources, to "ō" in Britannica and ignored in many others.

י (wāw ḥōlem), a long type of pronunciation of "o", is equated to "o" in The Jewish Encyclopedia of 1901, in the A.L.A. Cataloguing Rules of 1949, in Manual of Foreign Languages by Ostermann and in the U.S. Romanization and Transliteration Guides. It is equated to ô in Britannica and in ISO/R259, Transliteration of Hebrew and is equated to ō in the Vatican Code.

װ (qibbūṣ), a short pronunciation of English "oo", is equated to "u" in all schemes.

ו (wāw šūreq), a long pronunciation of English "oo", is equated to "u" in The Jewish Encyclopedia of 1901, in A.L.A. Cataloguing Rules of 1949, in U.S. Romanization and Transliteration Guides. It is equated to "oo" in Manual of Foreign Languages by Ostermann, to "ū" in the Vatican Code, and to "û" in Britannica and in ISO/R259, Trans-

literation of Hebrew.

(ḥāṭef segōl), a very short and rare type of pronunciation of French "e", is equated simply to "e" in The Jewish Encyclopedia of 1901 and in U.S. Transliteration and Romanization Guides. It is equated to ě in Britannica and in Alphabets of Foreign Languages by Gleichen and to ě in ISO/R259, Transliteration of Hebrew. It is ignored in many other tables.

(segōl), a medium pronunciation of French "e", is equated to "e" in The Jewish Encyclopedia, in Ostermann, in Britannica, in the U.S. Romanization and Transliteration Guides, in Alphabets of Foreign Languages by Gleichen, in the Vatican Code and in the A.L.A. Cataloguing Rules of 1949. It is equated to ę in ISO/R259, Transliteration of Hebrew.

(yōḏ segōl), a long pronunciation of French "e", is equated to ê in ISO/R259, Transliteration of Hebrew and ignored in all other sources.

(ṣērê), a medium pronunciation of French "é", is equated to "e" in The Jewish Encyclopedia, in the U.S. Romanization and Transliteration Guides, in the A.L.A. Cataloguing Rules of 1949 and in ISO/R259, Transliteration of Hebrew. It is

equated to "ē" in Alphabets of Foreign Languages by Gleichen and in the Encyclopedia Britannica, and to "ei" in Manual of Foreign Languages by Ostermann.

(yōḏ ṣērê), a long pronunciation of French "ê", is equated to "e" in the U.S. Romanization Guide, to "ei" in the U.S. Transliteration Guide, to "ê" in the Encyclopedia Britannica and in ISO/R259, Transliteration of Hebrew and is ignored in other schemes.

(ḥīreq), a short pronunciation of "i", is equated to "i" in The Jewish Encyclopedia, in the Encyclopedia Britannica, in Manual of Foreign Languages by Ostermann, in the U.S. Transliteration and Romanization Guides, in the Vatican Code and in ISO/R259, Transliteration of Hebrew.

(yōḏ ḥīreq), a long pronunciation of "i", is equated to "ie" in Manual of Foreign Languages by Ostermann; to "i" in The Jewish Encyclopedia, in the U.S. Transliteration and Romanization Guides and in the A.L.A. Cataloguing Rules of 1949. It is also equated to "i" in the Vatican Code and to "î" in Britannica and in ISO/R259, Transliteration of Hebrew.

The most comprehensive scheme of romanizing Hebrew vowels was the ISO/R259, Transliteration of Hebrew, which combined the Roman vowel-letters with many diacritic signs to represent the seventeen Hebrew vowels. A second comprehensive scheme is the Encyclopedia Britannica. It gives sixteen different signs. It has omitted only יִ. (yōd segōl). A third important scheme is the Vatican Code which covers thirteen Hebrew vowels. All other sources offer ten or less romanized characters.

The differences in representing many of the Hebrew consonants and vowels, by Roman characters, by the different sources, produce great difficulties in catalog and bibliographic usage of Hebrew terms and especially in respect to Hebrew personal and geographic names.

For instance, the Hebrew name חַיִּים has appeared as Chaim in German sources, as Haïm in French sources and Hayim or Hayyim in other sources. If we transliterate it letter by letter we have to write Ḥayym without i after the second y. But the most correct representation which can render the sound of this term as it was originally in classical Hebrew is Ḥayyim. The Hebrew name יִדְיָהּ can be transliterated Tsādôḵ, Tsādôc, Tsādôq, Ṣādôḵ, Ṣādôc, Ṣādôq, Zādôḵ, Zādôc, Zādôq, Zādôḵ, Zādôc, and Zādôq. If we transliterate it letter by letter, as it is pronounced in Modern Hebrew, it has to be written Tsdôḵ or Zdôq; if we transliterate it

letter by letter as it is pronounced traditionally it has to be written Ṣdôq. But with adding the missing vowel it will be written Ṣādôq.

Thus, to avoid confusion there must be, first, a single scientific and uniform equation of the Hebrew characters to the Roman ones. This scheme of transliteration must take into consideration the relation between Hebrew and other Semitic characters such as Arabic, Syriac and Aramaic, especially in respect to the pronunciation of these characters.

Secondly, in equating the letters, the origin of the Roman letters in relation to the Hebrew ones, such as q from ṣ, has to be taken into consideration.

Thirdly, Hebrew oral vowels and other oral Semitic vowels must be equated consistently into Roman.

Fourthly, each Hebrew letter has to be equated to one letter of the Latin alphabet and not to digraph nor polygraph.

Fifth, the diacritic marks have to be used as little as possible and must not be complicated.

4. RELATIONS BETWEEN HEBREW AND ARABIC

Arabic is the only Semitic language which remained

alive throughout its history, with but a short break, until modern times. It has retained its guttural pronunciation.

A knowledge of its background and of the development of its characters would also help trace the exact pronunciation of Hebrew characters. The transliteration of Hebrew into Roman can therefore be more accurate. Furthermore, this similarity promotes uniformity in romanizing similar guttural and 'extra'-sibilant pronunciations from both Hebrew and Arabic.

Arabic is a Semitic language very closely-related to Hebrew in its vocabulary, structure and pronunciation. Many basic terms, as in Hebrew, are composed of three consonant letters such as כָּלִי ($\text{'K}^{\text{a}}\text{L}^{\text{a}}$), שָׂרִיב ($\text{Š}^{\text{a}}\text{R}^{\text{i}}\text{B}^{\text{a}}$), صَد ($\text{S}^{\text{a}}\text{D}^{\text{a}}$), etc.

The basic terms of the Arabic language such as the parts of the body, the members of the family and the names of most domestic animals are very similar in both languages and generally consist of three similar consonantal letters. For instance, head is רֹשׁ (rōš) in Hebrew and رأس (ra's) in Arabic. Eye is עַיִן ('ayin) in Hebrew and عين ('ayn) in Arabic. Father is אָב ('āb or 'āv) in Hebrew and أب ('ab) in Arabic. Dog is כֶּלֶב ($\text{K}^{\text{e}}\text{L}^{\text{e}}\text{B}$ or $\text{K}^{\text{e}}\text{L}^{\text{e}}\text{V}$) in Hebrew and كلب ($\text{K}^{\text{a}}\text{LB}$) in Arabic. Camel is גַּמֶּל ($\text{G}^{\text{ā}}\text{M}^{\text{ā}}\text{L}$) in Hebrew and جمل ($\text{J}^{\text{ā}}\text{M}^{\text{ā}}\text{L}$) in Arabic, etc.

Arabic also has the guttural and the 'extra'-sibilant sounds which are found in Hebrew. It has also two additional guttural sounds which do not exist in Hebrew. These are represented by the characters $\text{ʕ}(\text{ḍ})$ and $\text{ẓ}(\text{z})$.

In contrast to Hebrew, Arabic does not have the pronunciation of $\text{ג}(\text{g})$ nor of $\text{פ}(\text{p})$. The Hebrew $\text{ג}(\text{gīmel})$ has been substituted by $\text{ج}(\text{jīm})$ which is pronounced as English "j" except in Egypt, part of Sudan and Yemen where this letter is pronounced "g" as in the word garden.

Arabic writing is a consonantal writing which together with square Hebrew remained in usage up to the present day. It is, also, as Hebrew, written from right to left.

According to most scholars, Arabic writing has developed gradually from Aramaic through Nabataean and Neo-Sinaitic alphabets. The Nabataeans and other Arab tribes who first came from Arabia to the "Fertile Crescent", used Aramaic and Hebrew writing. They adjusted the letters of these writings to their phonemes.¹

1. The Arabs used, for instance, the letter $\text{ג}(\text{gīmel})$ for both g and ġ, the letter $\text{ד}(\text{dālet})$ for both $\text{ד}(\text{dāl})$ and $\text{ד}(\text{dal})$, the letter $\text{ה}(\text{hēt})$ for both $\text{ה}(\text{hā})$ and $\text{ה}(\text{hā})$, the letter $\text{ט}(\text{tēt})$ for both $\text{ט}(\text{tā})$ and $\text{ט}(\text{zā})$, the letter $\text{ע}(\text{‘āyin})$ for both $\text{ע}(\text{‘ayn})$ and $\text{ע}(\text{ġayn})$, etc. - David Diringer, The Alphabet, op. cit., p. 205.

Before the seventh century of our era Arabic writing had no vowel-signs nor dots for differentiating between characters written similarly. But between the fourth and the sixth century A.D. Arabic writing took on a special characteristic shape. The א ('ālef) has been reduced to a vertical line, the ה (hē) has been reduced to a line, the ג (gīmel) and the ח (ḥêṭ) have become confused just as ב (bêṭ) and ת (tāw). The ע ('āyin), the ש (šīn) and the ל (lāmālif) took on their pure Arabic shape.

During the seventh century Arabic writing assumed its final shape. The number of the characters was fixed at twenty-eight and the order of the characters was changed. Letters which became similar were put together in sequence and were differentiated by dots (Arabic تنقيط - Tanqīṭ). Also, the diacritic vowels حركات (Ḥarakāt) were introduced.

The introduction of dots and diacritic marks in Arabic took place at about the time when the Massoretes developed ןיקוד (Niqqūd) for the Hebrew alphabet. This proximity in time was not without reason. In fact, Hebrew and Arab grammarians have influenced each other and on some occasions worked together to develop the grammar of their

1. James G. Fevrier, op. cit., p. 265.

languages. According to Fevrier¹, Arab grammarians have first introduced a system of dots not only for differentiating between letters but also for representing the oral vowels. They wrote these vowel-dots above or under the letters, similar to the Hebrew practice. To prevent confusion they wrote the vowel-dots with red or green ink. Then, they invented the special diacritic signs fat/hā^k, kasrā^k, dammā^k, jazmāh or sukūn to represent the absence of vowel, the nunation (Arabic تنوين - tanwīn) (un), (an) and (in) and the (šaddāh or tašdīd) for gemination which is deformation of the letter ش (šīn).

The spread of Islam in the seventh and the eighth centuries not only led to the spread of the Arabic language, but also to the introduction of Arabic writing to non-Semitic nations who became Moslem. According to Islamic rules the Qur'ān has to be read and written in its original text, i.e. in literary Arabic. Islamic nations therefore began to learn Arabic writing and to write their languages using the Arabic alphabet.

Despite the differences in their development, Hebrew and Arabic remained with great grammatical similarity. The same guttural letters א ('ālef) and א ('alif), ה (hē) and

1. James G. Fevrier, op. cit., p. 259-271.

ח(hā), נ(hêṭ) and ע(hā), א('āyin) and ע('ayn) , צ(ṣādê) and ס(ṣād), פ(qōf) and ק(qaf) exist in both. Both use diacritic marks to compensate for the lack of vowels and to equate gemination. Both use a special diacritic sign for¹ representing the absence of a vowel in a syllable.

In spite of the changes a considerable number of Arabic characters have kept their original Semitic names² with slight changes of accent.

Hebrew characters representing sounds similar to those represented by Arabic characters have to be equated to each other and to be represented by the same Roman characters for both, even though the pronunciation of those characters may have been deformed during the course of history by some of the people speaking Arabic or Hebrew.

The equation of consonants would be as follows:

1. Hebrew uses —̣ (šewā nāḥ) under the consonant which has no vowel while Arabic uses the —̣ jazma² (or sukūn) above it.

2. The name of Arabic ا ('alīf) derives from Hebrew א ('āleḥ), Arabic ع (ġīm) derives from Hebrew ג (gīmel), Arabic د (dāl) derives from Hebrew ד (dāleṭ), Arabic و (wāw) derives from Hebrew ו (wāw), Arabic ك (kaḥ) derives from Hebrew כ (kāf), Arabic ل (lām) derives from Hebrew ל (lāmed), Arabic מ (mīm) derives from Hebrew מ (mēm), Arabic ن (nūn) derives from Hebrew נ (nūn). Arabic ع ('ayn) derives from Hebrew א ('āyin). Arabic ס (ṣād) derives from Hebrew צ (ṣādê). Arabic ק (qaf) derives from Hebrew פ (qōf). Arabic س (sīn) and ش (šīn) derive from Hebrew ש (śīn) and ש (šīn).

<u>Arabic</u>	<u>Hebrew</u>	<u>Roman</u>
ا	א	'
آ	אָ	'a
ب	ב	b
ت	ת	t
ث	ת	<u>t</u>
ج	ג	ǧ
ح	ח	ḥ or <u>h</u>
خ	כ	ḥ or ḥ (for Arabic) <u>k</u> (for Hebrew)
د	ד	d
ذ	ז	<u>d</u>
ر	ר	r
ز	ז	z
س	ש	s
ش	שׁ	š
ص	ס	ṣ
ض	צ	ḏ
ط	ט	ṭ
ظ	צ	ṭ
ع	ע	'
غ	ג	g
ف	פ	f
ق	ק	q
ك	כ	k

<u>Arabic</u>	<u>Hebrew</u>	<u>Roman</u>
ﺝ	כּ	l
ﻡ	מ	m
ﻥ	נ	n
ﻩ	ה	h
ﻮ	הּ, תּ	h or t ^l
ﻭ	ו	w
ﻱ	י	y

The equation of Arabic vowels and diphthongs would be:

<u>Arabic</u>	<u>Hebrew</u>	<u>Roman</u>
اَ	אֲ	a
اُ	אֻ	u
إِ	אִ	i
اَءَ, اِءَ	אֶא	an
اَؤَ	אֶאֻ	un
اِءِ	אִא	in
اَؤَ	אֶאֻ	aw
اِؤَ	אִאֻ	ay

The equation of letters used in Arabic to represent non-Arabic sounds:

1. ö = transliterated by superior "h" in the absolute state like al-madina^h and transliterated by superior "t" above the line in the construct state like madina^t an-nabi.

<u>Arabic</u>	<u>Hebrew</u>	<u>Roman</u>
پ	פ	p
چ	צ	č
ز	ז	ž
ف, پ, و	ו	v
ك	כ	g
ش	ך	ñ

CHAPTER II

TRANSLITERATION

1. GENERAL PRINCIPLES OF TRANSLITERATION

The term transliteration has been used in English and in French lexicography since the second half of the nineteenth century. But it was not clearly distinguished from transcription. The Century Dictionary published in 1900, for instance, notes that "transliteration" is:

The rendering of a letter or letters of one alphabet by equivalents in another and that transliteration does not profess to give all the exact vocalic differences.

It also has under "transliterator":

It seems to have been the object of the transliterator to represent, at least approximately in Anglo-Saxon letters the¹ current pronunciation of the Greek words.

This can be interpreted as either a letter by letter operation or a phonetic operation. The first interpretation matches the present usage of the term while the second is identical to transcription.

Larousse du XXe siècle gives the following defini-

1. The Century Dictionary and Cyclopedia, N.Y., The Century Co., 1900; also G. Jerych, Transliteration of Cyrillic Alphabets, Ottawa, Ottawa University, April 1965, p. 1.

tion under "transliteration":

Transcription lettre pour lettre des mots d'une langue étrangère dans un alphabet préalablement choisi, sans la préoccupation de rendre compte des sons réellement prononcés: En ce qui concerne les langues étrangères, la transcription doit purement et simplement calquer l'alphabet original, c'est-à-dire être un simple translittération¹.

This definition is little clearer than that of The Century Dictionary. It emphasized the transcribing letter by letter. But its second part which concerns "les langues étrangères" cannot be applied to all foreign languages. For Greek and Cyrillic which have a complete system of vowels the transliteration is really done by transcribing the original characters, for Semitic writing such as Hebrew and Arabic the transliteration is not only transcription of the letters but is also addition of the non-written vowels. While for Chinese and Japanese which are also "langues étrangères" but have no alphabetic system of writing, there is no transliteration in the proper sense, there is only transcription of the sound of the whole word into the alphabet of another language.

The definitions given in later dictionaries were

1. Larousse du XXe siècle, publié sous la direction de Paul Augé, Paris, Librairie Larousse, 1933, Tome sixième, p. xxiii.

much more precise. The Oxford English Dictionary, for instance, defines transliteration:

The action or process of transliterating; the rendering of the letters or characters of one alphabet in those of another.

While under "transcription" it gives the following definition:

The action or process of transcribing or copying¹.

In our case transcription means: rendering sounds or words written in one alphabet by phonetic equivalent in another alphabet, i.e., we transcribe what we "hear" and not what we "see".

Robert gives under "translittération" the following definition:

Transcription lettre pour lettre, dans laquelle on fait correspondre à chaque signe d'un système d'écriture un signe dans un autre système².

1. The Oxford English Dictionary, Oxford, the Clarendon Pr., 1961, Vol. VIII, p. 267.

2. Robert, P., Dictionnaire alphabétique et analytique de la langue française, Paris, Société du Nouveau Littre, 1964, Tome sixième, p. 815

Frontard has developed adequately the distinction between transcription and transliteration. He wrote:

Etymologically, transcription means the shift from one mode or system of writing to another and in particular from writing in one alphabet to writing in another one. Transliteration consists in effecting this transcription 'letter by letter'¹.

From these definitions it can be concluded that when we transcribe we convert the sounds, i.e. what we hear, while when we transliterate we convert the letters, i.e. what we see, taking into account the sound of the character which we transliterate.

For Hebrew and Arabic the system of conversion includes both what we see, i.e. the written letters and what we can only hear, i.e. the unwritten vowels. Therefore, in the case of these writings the conversion is a system of between transliteration and transcription. For Chinese and Japanese there can be only transcription of the sounds of the entire words. Thus, it cannot be called transliteration.

The term romanization which means the conversion

1. R. Frontard, "Transliteration Codes and their Standardization", in UNESCO Bulletin for Librarians, March-April 1961, Vol. XV, no. 2, p. 80.

into Roman is much wider than transliteration. It can be applied to a complete alphabetic writing such as Greek and Cyrillic; it can be applied to incomplete alphabetic writing such as Hebrew and Arabic and can be applied to ideographic writing such as Japanese and Chinese.

Over a period of centuries, transcription was applied to inter-alphabetic operation for both bibliographic and non-bibliographic purposes. This system was not efficient because it was based only on the sound. But sound is an uncertain and unstable principle. Words can be sounded differently by different peoples and even by various persons. Therefore, differences and confusions arise from equating the letters and the words of one language to that of the other if this equation is based on the sound. The digraph *ch*, for instance, has its English phonetic value only in Spanish. To the French and Portuguese this digraph represents *sh*; to Germans, Poles and Welsh a guttural *h*. Thus, the name of the Russian poet Pushkin is spelled in French *Pouchkine*, in German *Puschkin*, in Polish *Puszkín*, in Hungarian *Puskin*, etc.

Therefore, the transliteration is much more accurate when it is based on what we "see" and not on what we "hear", i.e. when it is based on graphic principles and not on phonetic ones.

Ševčík, one of the advocates of transliteration in recent times, wrote:

Transcription est la reproduction phonétique qui varie selon la nationalité. Donc, une norme internationale phonétique est absolument impossible.

Pour les buts de documentation, il est moins important de savoir la prononciation du mot étranger que la manière d'écrire, de reproduire chaque caractère₁ par le caractère latin équivalent¹.

He differentiated between transcription as based on phonetic reproduction and transliteration as based on reproduction of each letter and emphasized that the latter is to be preferred.

This principle can be applied directly to alphabetic writing which has both written consonants and vowels. It has to be modified for those writing systems which have only partially or no vowels such as Hebrew and Arabic. Transliteration in this sense is not different from "practical" transcription. Thus, until the Second World War there was no generally accepted distinction between transliteration and transcription, although already in the

1. Alois Ševčík, "La translittération", in F.I.D. (Fédération International de Documentation), 1949, Vol. 16, p. C152.

1880's¹ A.L.A. determined general rules of transliteration and gave a comprehensive system of transliteration of the Cyrillic alphabet. These rules have been followed by the A.L.A. codes of 1941 and 1949².

This priority for transliteration has been advocated by specialists in the field and by representatives of several countries in ISO such as Francis Kent, R. Frontard and Jean Poulain. Their thinking as it appeared in the introductory note to ISO/R9, Transliteration of Cyrillic Characters and developed more comprehensively in the introductory note to ISO/R259, Transliteration of Hebrew, are basically similar. They are as follows:

Fundamentally, an equivalence is established between the letters of one alphabet and another. (The latter may be a Roman alphabet.) This equivalence is arrived at from a study of the phonology, etymology, history, national tradition, dialectology of the two alphabets and any other relevant elements. Once established and accepted as stand-

1. "Transliteration, Report of the A.L.A. Transliteration Committee, 1885", in Library Journal, 1885, Vol. 10, p. 302-309.

2. The Code of 1949 added rules for the transliteration of the reformed Russian orthography and gave transliteration tables for Slavic languages, Modern Greek, Arabic, Hebrew and Yiddish - A.L.A., A.L.A. Cataloguing Rules for Author and Title Entries, op. cit., p. 243-249.

ard the process of substitution or representation of letters from alphabet-to-alphabet on a letter-to-letter basis is transliteration.

To be practical and applicable the process should be automatic, available to anyone able to identify the language of the original; and it should be possible for anyone with an adequate knowledge of this language to re-establish the text in its original characters.

There should be no ambiguity: a given character or sign should be transliterated consistently and, in principle, a single character in one alphabet should always correspond to a single character in the other(s). The use of two letters for a single character is acceptable only when the Latin alphabet offers no other reasonable possibility (e.g. Cyrillic and Greek); and then it should be a two-letter combination ruling out any ambiguous interpretation.

Diacritics are added when necessary, but signs not available on (for instance) Latin-alphabet typewriter keyboard¹ should be used as little as possible¹.

This applies to the transliteration of non Latin-alphabets into the Latin one. It favors the use of diacritical marks instead of digraphs and polygraphs, and

1. International Organization for Standardization, ISO Recommendation R259, op. cit., p. 3.

limits the usage of such marks as much as possible.

A weakness in this approach is that although it aims at automatic transliteration, it presupposes an adequate knowledge of the original language to make possible the re-establishment of the transliterated text in the original language. It mentions that "For Hebrew. . . transliteration cannot be automatic unless done from a text in which the vowels and other omitted signs have been supplied."¹

There is in fact a contradiction between the concepts of, on the one hand, "automatic" and "ability to identify" and, on the other hand, "adequate knowledge". Secondly, even in writing with full vowels such as Greek and Cyrillic, the transliterator needs an adequate knowledge of the donor and the receiver alphabets in order to transliterate and to retransliterate scientifically. Thirdly, for Hebrew, transliteration cannot be automatic at all even if the oral vowels are supplied. The transliterator has to have a thorough knowledge of both the Hebrew and Roman alphabets, especially for retransliteration.

Transcription of any writing into Latin characters

1. International Organization for Standardization, ISO Recommendation R259, op. cit., p. 3 (footnote).

is romanization. This term is properly used for writing Hebrew, Arabic, Chinese and Japanese in Roman characters, because the system used for Hebrew and Arabic is, in fact, neither transliteration nor transcription as these terms are defined but a compromise between both. For Chinese and Japanese the term romanization is the only adequate one. Transliteration cannot apply to the writing of these two languages because their characters do not represent analytical phonetic elements of sound which are paralleled by Roman or other phonetically analytical letters.

The principles of ISO are acceptable, for they lead to accuracy and uniformity in transliteration. But in applying them the transliterator has to take into account, to some extent, the consistency and the long tradition in transliterating some of the characters. He also has to take into account the origin and the background of every character and its sound or sounds.

2. BIBLIOGRAPHIC IMPORTANCE OF TRANSLITERATION

Seekers for uniformity and consistency in romanizing Hebrew and other scripts point to the diversity in romanizing names in bibliographic sources. This diversity exists not only in romanizing geographic and personal names, but also in romanizing titles, imprints and texts

in general.

However, uniformity is particularly needed for names because of their greater importance in catalog entries and bibliographies.

A characteristic example has been noted by the British Standard for Transliteration of Cyrillic and Greek Characters,¹ concerning the transcription of the Russian name ЩЕДРИН, which is traditionally written, as follows, in different Roman alphabets:

Šćedrin (Croat and Czech)	Chtchêdrine (French)
Szczedrin (Polish)	Sjtsjedrin (Dutch)
Shchedrin (English)	Schtschedrin (German)

Thus, the representation of the Russian letter Щ (šč) requires as many as seven letters in some systems. This diversity makes the task of compiling bibliographies, entering catalog and searching the catalogue very difficult. This is all the more inconvenient as the complicating letter or element so often occurs at the beginning of words.

Such difficulty would be eliminated if the character was represented by one Roman character acceptable to all

1. British Standard for the Transliteration of Cyrillic and Greek Characters, BS. 2979: 1958, London, 1958, p. 4.

systems.

It is worth mentioning that Hebrew and Arabic are phonetic languages, i.e. their writing is based on pronunciation (except for the oral vowels which are not written in advanced texts). Thus, the romanizer has simultaneously to equate the letters one by one and to take into consideration the pronunciation of the word. He has to add the missing vowels, to double geminated letters and to add diacritical signs for distinguishing between long, medium and short vowels. In short, he has to equate consistently every element by a written one including the diacritical vowels. In this manner the romanization will be scientific, accurate and uniform and will facilitate retransliteration if needed.

Romanizing Hebrew and Arabic alphabets is much more complicated than the Cyrillic, although the representation of any Hebrew or Arabic character did not reach the number of Roman characters used for equating some Cyrillic ones. It does not go beyond the two letters (digraph), except *wi* (šīn) which is represented sometimes by the polygraph *sch* in German and some French sources (especially encyclopedias).

But, the difficulty is in other aspects. Semitic languages are very rich in sibilants and guttural letters. Also they have non-written vowels. Thus, there are differ-

ences among the various systems in representing the guttural¹ and sibilant characters and in representing the vowels .

1. In Arabic there are additional difficulties, the oral vocalization of the last letter of a word changes according to the position of the word in the sentence (depending on whether it is subject, object or if it comes after a preposition). Also there is the "nunation" (Arabic تنوين - Tanwīn) which is pronounced but not written in advanced books.

In addition there is what are called ^{أحرف الشبه} (al-ḥurūf al-šamssiyāh - sun letters) , the article ^{أل} (al) which comes before them is written ^{أل} (al) but pronounced ^ا (a). This applies only to literary Arabic. But if one wants to follow the Arabic dialects spoken in the different Arab countries he is completely lost, because every Arab country, and even different regions, varies in the pronunciation of words and even of some of the characters of the Arabic alphabet. For instance the letter ^ج (jim) is pronounced as English "J" in Iraq, Jordan and Saudi Arabia. It is pronounced "G" (as in garden) in Egypt, Sudan and part of Yemen. It is pronounced as "Zh" (French "J") in Syria, Lebanon and North Africa. The letter ^ك (kaf) is pronounced "K" in Syria, Lebanon, Jordan and Egypt. It is pronounced as English "Ch" in Iraq and Saudi Arabia. The letter ^ق (qaf) is pronounced "G" in Iraq and Saudi Arabia, "A" in Egypt, "K" in Jordan, etc., etc.

It has been noted that the Arabic name Fakr al-Din (according to B.M.) occurs in the following forms:

"Fachr ed-din, Fakhr ul-Din, Faccardin, Fekhredin, Faccardine, Fekherdin, Facard, Fakhraddin, Fakroddin, Fechrredin, Fakkardin, etc." - G. Gerych, Transliteration of Cyrillic Alphabets, op. cit., p. 10.

This occurs because the different transliterators of this name have followed different pronunciations. The name is written in Arabic in one single manner, ^{فخر الدين}. If we transliterate it literally into Roman alphabet we get the following term: Fhr al Din. But, by adding the oral vowel "a" after "f" we have the romanization, Fahr al Din. If we also add the oral vowel at the end of the first word composing this name and the "nunation" at the end of the second we get

Transliterating Hebrew seems, at first glance, much easier than Arabic. The vocalization of the last letter of a word does not change as is the case in Arabic and there is no system of "nunation" at the end of the Hebrew words. Also, Hebrew has two guttural letters fewer than Arabic ض and ظ (ḍād and ṣāa). But Hebrew has one additional sibilant letter, the letter sāmek. It has similarly unwritten vowels which have to be added when romanizing. Also Hebrew vowels are much more developed than

Footnote 1 from p. 64, continued.

Fahr^ul Dīnⁱ or Fahr ^ud-dīnⁱ.

Another example is the name فضل الحق (Faḍl al Ḥaḡ). If we transliterate this name according to the different pronunciations there are the following possibilities of writing it in Roman alphabet:

Faḍl al Ḥaḡ, Faḍl al Ḥaḡ, Faḍlul Ḥaḡ, Faḍlul Ḥaḡ,
Fadhī al Ḥaḡ, Fadhī al Ḥaḡ, Fadhīlul Ḥaḡ, Fadhīlul
Ḥaḡ, Fazl al Ḥaḡ, Fazl al Ḥaḡ, Fazlul Ḥaḡ, Fazlul
Ḥaḡ, etc., etc.

If we transliterate the name سليم literally we have to write it Slym. This can be pronounced Salīm, Sulaym, and Sulayyim.

Thus, the transliterator has to know the language well and even the intention of the writer unless the name is known previously or diacritical vowels were added in the Arabic text itself.

Still more difficult for bibliographic purposes are the cases in which the controversial letter is the first letter of the name. For instance, the name خالد can be written Khālīd, Kālīd, Chālīd, Cālīd and Ḥālīd.

Arabic ones. Hebrew gutturals and sibilants are pronounced differently by the different Jewish communities and if the romanizer seeks to follow the sounds he will quickly be lost.

The name מַצְלִי'אָךְ for instance is pronounced Matsli'akh by Aškenazīm and Mašliyyah by most Sefardīm. It can also be written Mašliyah, Matzliach and Mazli'ah. If we follow the traditional pronunciation we have to write it Mašliyah, but if we follow modern Hebrew pronunciation we have to write it Mazli'ah.

The name צִדְקָה is pronounced Tsādōq by Aškenāzīm and Šādōq by Sefardīm. It can be written also Zādōk, Zādōq and Šādōk. If we follow traditional pronunciation we have to romanize it Šādōq. But if we follow the official pronunciation of Modern Israel Hebrew we have to write it Zādōq.

The word קָדוֹשׁ literally transliterated is qdōš. It can be written kādōsh, qādōsh, kādōš and qādōš.

The name חַיִּים appears in the Bibliographie linguistique as Haim, Haïm, Chaim and Hayyim. The problem is whether to enter it under "H" or "C" ¹.

1. Haim Zafrani, "La formation de l'Hebreu israelien, les fonds araméan et mishnique", in RENLO, 1966, Vol. III, p. 19-33; also Zeev Ben-Hayyim, "Studies in the Tradition of Hebrew Language", in JNES, 1957, Vol. XVI, p. 66-68; also Haim Blanc, "Dialect Research in Israel", in Obris, 1956, Vol. V, p. 185.

In the same source the word נָצַר (yāsār) is written jassa; the word שִׁפְחָה (šifhā^k) is written schiphchah, and the name נָאֲדִיָּה (sa'ādiāh) is written saadia, i.e. without ¹נ (āyin) and without ה (hē).

If transliteration from Hebrew and Arabic into Roman is difficult, retransliteration from the Latin alphabet into Hebrew or into Arabic constitutes a greater problem.

As with the Cyrillic alphabet languages, Hebrew and Arabic use phonetic alphabets. Every character of these alphabets represents a specific sound and is attached to it. Hebrews and Arabs do not transliterate foreign words entering into their languages but they transcribe them phonetically and according to the sounds which match their ears and their language. This is also the practice of the nations using the Cyrillic alphabets.

In Hebrew the following personal names: Napoleon,
Lawrence, Victor, Shakespeare, John and Churchill² are

1. H.A. Wolfson, "Arabic and Hebrew Terms for Matter and Element with Special Reference to Saadia", Jew QR, 1947-48, Vol. XXXVIII, p. 47-61; also Bibliographie linguistique, 1958, p. 276.

2. For John and Churchill see International Organization for Standardization (ISO), ISO Recommendation R/259, op. cit., p. 7.

transcribed as follows:

נפוליון, לורנס, ויקטור, שֶׁקֶסְפִּיר, גֶּוֹן, צֶרְצִיל

The literal retransliteration is: Npōlyōn, Lōrns, Wīqtōr, Šqspīr, Ğōn and Črčīl. Adding the missing vowels they become: Napōlyōn, Lōrans, Wīqtōr, Šeqěspīr, Ğōn and Čěrcīl. Victor and Shakespeare can be written according to Sefardic pronunciations as follows: וִיכְתוֹר and שֶׁקֶסְפִּיר (romanized Wiktōr and Šěkěspīr). According to traditional Yemenite and Iraqi pronunciations, Victor has to be Hebraized¹ בִּיקְתוֹר (romanized Biktōr).

The following geographic names: Washington, New York, Boston, California, London and Paris are transcribed into Hebrew as follows:

ושִׁינגטון, ניו-יורק, בוסטון, קליפורניה, לונדון, פריס.

The literal retransliteration of these names into Roman gives: Wśīngtōn, Nyū-Yōrq, Bōstōn, Qlifōrnyh, Lōndōn and Prīs; adding the missing vowels we get: Wāśīngtōn, Nyū-

1. The same names are written in Arabic as follows:

نابليون، لورانس، فكتور، شكسبير، جون، شرشل.

If we retransliterate these names into Roman, literally, using the ū as wāw, they get to be written as follows: Nāblyūn, Lōrāns, Fktōr, Škspīr, Ğōn and Šrśl. Adding the missing vowels they become: Nābulyūn, Lōrāns, Fiktōr, Šikisbir, Ğōn and Šīrśīl.

Yōrq, Bōstōn, Qalifōrnyāh, Lōndōn and Paris. Some Sefardi Jews write California and New York as follows: קליפורניה, ניו-יורק; adding the missing vowels this gives Kalifōrnyāh and Nyū-¹Yōrk .

The terms "encyclopedia" and "concordance" are Hebraized in Modern Hebrew: אַנציקלופדיה and קונקורדנציה . Their literal retransliteration is as follows: entsqlōpdyh and qōnqordantsyh. Adding the missing vowels we get intsiqlōpedyāh and qōnqōrdantsyāh. According to some Sefardi Jews they can be written אַנסיקלופדיה and קונקורדנציה . The retransliteration of these two gives: ensiklopedyah and konkordansyah. The latter term appears in Bibliographie² Linguistique as follows: Qonqordansiya .

Bibliographers must decide which system to follow and particularly how to enter a specific word and under

1. The same geographic names are written in Arabic as follows: واشنطن ونيويورك و بوسطن و كاليفورنيه و لندن و باريس

The literal retransliteration of these names into Latin characters gives: Wāšnṭn, Nyūyōrk, Bōstn, Klifōrnyh, Lndn, and Bāris; adding the missing vowels we get the following: Wāšintn, Nyūyōrk, Bōstn, Kalifornyāh, Landan and Bāris.

2. Le comité international de la philosophie et des sciences humaines, Bibliographie Linguistique, Hoevelaken, Spectrum, 1959, p. 271.

which letter. The reader also will have difficulties. He is obliged to search under several letters and to lose time. Many cross-references are needed. A uniform system based on representing each Hebrew, Arabic and other Semitic character by one Roman character will prevent this inconvenience.

For international requirements a uniform, internationally agreed upon system is preferred. But, at the same time, national systems can continue to be used for local purposes because they fit the language of the users. For instance, an Englishman who is accustomed to write every letter with the pronunciation of šîn, with the digraph "sh", naturally will find it easier to write the name שְׂאוּל (šā'ul) as Shaoole. A Frenchman who is accustomed to write the šîn pronunciation with the digraph "ch" will find it easier to write this name as follows: Chaoule, because it matches the spelling of similar words in his language. Similarly, a German may prefer to write it Schaul.

The names שְׁלוֹם and שְׁחֹר (šālōm and šāhōr) are further examples. In English they would be romanized: Shalom and Shahor; in French they would be romanized: Chalome and Chahore or Chalaume and Chahaure; and in German they would be romanized Schalom and Schachor, etc., etc.

In English, French, German and many other languages

using the Latin alphabet the spelling and not the pronunciation of a word is the determining factor in their writing. In transliterating from these languages into Hebrew or Arabic the names are converted phonetically according to standard pronunciation. In retransliterating these terms back to their original Latin system this process cannot be automatically phonetic, for this will result in terms very distant from the original. In such cases the retransliteration must take into account the spelling of the term in the original language, e.g. Leicester, Edinburgh, Paris, Huguenot, Walseley, etc.

By the same token, in converting from the Hebrew and Arabic to the Roman, we transliterate names phonetically as pronounced in the original language, e.g. Yadin, Yig'al, Alōn, Haifa, etc. Exceptions are made for terms which have long had accepted forms of transliteration, even though these transliterations do not correspond with the pronunciation in their original language, e.g. Jerusalem, Jericho, Jacob, Isaiah, Jesus, Moses, Ezekiel, Jehovah, Mordecai, Samson, etc.

It may be mentioned that in bibliographies and in filing systems in general the diacritic marks representing the guttural and the 'extra'-sibilant characters, as well as the signs representing א ('ālef) and ע ('āyin), are completely

ignored.

For this purpose, many books, catalogues and bibliographies have been checked, including the Catalogue of Arabic Books in the British Museum¹, The Encyclopedia of Islam², Encyclopedia Judaica³ and other bibliographic tools.

I have found, for instance, words beginning with ʕ (ṣādê), Arabic ʕ (ṣād) such as Ṣabbāgh, Ṣabrī, Ṣabīḥ, are intermingled with words beginning with an ordinary "s" and vice versa.

Also, words beginning in their transliteration with an "A", whether this "A" represents an ʔ (ʾāleph) such as ʾAḥmad or a ʔ (ʾāyin) such as ʾAbd, are intermingled in this alphabetizing with each other and with normal Roman alphabet words such as Albert.

Different authorities treat differently the definite article ʔ (hē) and the "service letters" - ʔ, ʔ, ʔ, ʔ.

The U.S. Transliteration Guide⁴ capitalizes the

1. A.G. Ellis, Catalogue of Arabic Books in the British Museum, London, (c1967).

2. The Encyclopedia of Islam, New ed., Leiden, Brill, 1971.

3. Encyclopedia Judaica, Jerusalem, Macmillan, 1971.

4. U.S. Board on Geographic Names, Transliteration Guide, op. cit., p. 2.

definite article ה (hē), combines it with the following word, but does not double the geminated first letter of the word as in הַכַּרְמֶל--Hakarmel. It does not mention the "service letters".

The U.S. Romanization Guide¹ capitalizes the definite article ה (hē) and also the first letter of the following word. It separates the two by a space and does not double the geminated letter at the beginning of the word, e.g Ha Yogev. This guide does not mention the "service letters".

The ISO/R259, Transliteration of Hebrew² separates the definite article ה (hē) and the "service letters" from the words following by a hyphen as in הָאָרֶז (hā-arez), וְעִדּוֹם (we-ēdôm) when the first letter of the word is not geminated. But when the first letter is geminated, it doubles it and breaks it into two parts. It attaches one of the doubled letters to the article or to the "service letter", while the other it retains with the body of the word. It joins the two parts by a hyphen, as in מִקְדֶּם (miq-qeḏem).

(In Arabic, conjunctions and most prepositions take

1. U.S. Department of State, Office of the Geographer, Romanization Guide, op. cit., rule no. 4.

2. International Organization for Standardization (ISO), ISO Recommendation R259, op. cit., p. 6-7.

the form of prefixes attached to words. Some prepositions are separate words. The British Standard 4280:1968, Transliteration of Arabic Characters¹ separates the prefixed prepositions and conjunctions by a hyphen as in wa-bi-šaraf.)

The Catalogue of Hebrew Books at Harvard University Library, is not consistent in regard to the definite article ה (hē). For example, in some cases the definite article ה (hē) is capitalized, while the first letter of the following word is not capitalized. They are separated by a hyphen, e.g. Ha-ḳibbutz Ha-me'uḥad². In other cases the definite article ה (hē) is not capitalized while the first letter of the first word in a sentence is capitalized, e.g. ha-Mo'atsah ha-pedagogit ha-merkazit.

In all cases this Catalogue of Hebrew Books does separate the definite article ה (hē) and the "service letters" from the following words by a hyphen. It does not double the geminated letter at the beginning of a word².

When the definite article ה (hē) becomes part of a personal name it is combined completely with the following

1. British Standard 4280:1968, Transliteration of Arabic Characters, London, 1968, p. 5.

2. Harvard University Library, Catalogue of Hebrew Books, Cambridge, Mass., 1968, Vol. 2, p. 94-

word, e.g. Hameiri.

In the Accessions List, Israel of the Library of Congress Public Law 480, the definite article ה (hē) and the "service letters" are not capitalized. Only the first letter of the first word which follows the definite article ה (hē) or the "service letter" is capitalized. Also proper names are capitalized after the definite article ה (hē) and after the "service letters". For instance ha-Ḥevrah ha-yehudit ha-'olamit la-TaNaKH; ha-Ḥevrah la-ḥakīrot Eretz-Yisrael ve-'atikotehah; ha-Dor ha-tsa'ir be-Yisrael¹.

When the "service letter" or the definite article occurs at the beginning of a title they are capitalized, e.g. Be-maḥanet Gadna'. This is necessary to facilitate alphabetizing and filing.

The Accessions List does not double the geminated letter which follows the definite article ה (hē) or the "service letter".

In the Dictionary Catalogue of the Klau Library, Cincinnati of the Hebrew Union College, Jewish Institute of

1. The Library of Congress Public Law 480 Project, Accessions List, Israel, Tel-Aviv, American Library Book Procurement Centre, 1964, Vol. 1, no. 1-9, p. viii-ix.

¹
Religion, the letter following the "service letter" or the definite article ה (hē) is generally capitalized, but is not doubled even when it is geminated, e.g. Juda ha-Kohen, Juda ha-Levi.

Probably the definite article ה (hē) and the "service letters" are separated, by most sources, from the words following them to prevent confusion. Westerners are not accustomed to definite articles, prepositions or conjunctions which are prefixed to the words following them. Thus they may consider them as an integral part of the words.

Doubling the geminated letter at the beginning of a word is avoided in most cases because the Western eye is not accustomed to it.

3. EARLY ATTEMPTS AT TRANSLITERATION

Before the development of the contemporary sciences of language and script each writer transliterated according to his own system, to what fitted his language, his ears or his own pronunciation. Translitterators of Hebrew also

1. Hebrew Union College, Jewish Institute of Religion, Dictionary Catalog of the Klau Library, Cincinnati, Boston, Mass., G.K. Hall, Vol. 11, 1964.

followed this procedure.

This led to inaccurate transliteration of Hebrew letters:

1) Until the Massoretic period (fifth to seventh century A.D.) the knowledge of the niceties and scientific exactitude of the Hebrew language and the differentiation in pronouncing a considerable number of the Hebrew characters such as *begeḏkefaṭ* and *śîn-šîn* was known to only a limited number of scholars who transmitted the lore orally. Thus, most writers ignored the various pronunciations of the Hebrew letters and transliterated these letters without differentiation. They transliterated the letter א only as "b", the letter ג only as "g", the letter ד only as "d", the letter ח only as "ch", the letter פ only as "p" and the letter ט only as "t" or only as "th". They also did not differentiate between ש and שׁ and transliterated both as "s"¹.

2) The science of linguistics and phonetics had not yet taught transliterators and transcribers the correct usage and pronunciation of all the characters of foreign

1. John Henry Bridges, ed., The "Opus majus" of Roger Bacon, op. cit., p. 90; also Robert Belle Burke, The "Opus majus" of Roger Bacon, Vol. 1, N. Y., R and R, 1962, p. 83.

writing or to differentiate between hard and soft, guttural and sibilant letters in other languages such as Hebrew. Therefore, they considered א ('āleḥ) and ע ('āyin) as vowels identical to Latin "a"¹. They considered the letter ה (hē), which is supposed to be equated to Latin "h", as "e"; they transliterated י (yōd) as "i" with the pronunciation of Latin "i" or "j"; they equated כ (kāf) and ך (kāf) to German "ch"; they equated ם (sāmek), ץ (ṣādê), ן (śīn) and ף (śīn) : all to "s" and ק (qōf) to "k"².

This non-scientific transliteration and equation of Hebrew letters led to many distortions and confusion in personal and geographic names. Thus Biblical terms and names which had been transliterated into the Latin alphabet and entered English and other European languages are very different from their original pronunciation in Hebrew.

There were various causes for these distortions of names:

Firstly, the traditional teaching of the Bible and other lores was largely transmitted from scholar to student orally because there was no printing at that time and writing

1. 'Āyin was also equated sometimes to "e" and to "o".

2. John Henry Bridges, op. cit., p. 90; also Robert Belle Burke, op. cit., p. 83.

materials were very expensive.

Secondly, many scholars deliberately changed or adapted these names and terms to their ambient languages in order to match the sound of these languages.

Thirdly, the transmission of these names was not directly from Hebrew to English, French, Spanish, Italian, German, etc., but passed through a series of alphabetic transliterations. The terms were transliterated from Hebrew to Aramaic then to Greek, to Etruscan, to Latin, to Arabic, to Spanish and then from these sources (especially from Greek and Latin) into modern European languages. Each one of these languages in the chain of the series had its own phonetic system and therefore its own impact.

Fourthly, even when the more exact pronunciation and clearer writing of a specific name or term did become known there was restraint in correcting what had already been accepted because of religious and ideological interference based on the authority of predecessors.

As a result of this type of transliteration we find the name לְיִשְׂרָאֵל in European sources as Israel and not Yisrā'ēl as it is in Hebrew. The name יְרוּשָׁלַיִם appears as Jerusalem and not Yērūšālāyim. The personal names יַעֲקֹב , יִצְחָק , שָׁאוּל appear as Jacob, Isaac and Saul instead of

Ya'aqob, Yishhāq and Šā'ul as they are in Hebrew.

For instance, the name of Jesus¹ (Jē'zus), was originally in Hebrew יְהוֹשֻׁעַ (Ye=hōshua'). It had been transcribed into Greek to Ἰησοῦς (Iēsoús) and then, through Latin, reached English as Jesus. The name Mary (mā'ri) was originally מִרְיָם (miryām) in Hebrew. It had been transcribed into Greek as Μαρία (María), Μαριὰμ (Mariám). The change of the first syllable from "mi" to "ma" has been influenced by the popularity of Mariamne, the last representative of the Hasmonean family². The name Isaac³ was originally in Hebrew יִצְחָק or יִשְׁחָק (Yis/hāq or Yishhāq), transcribed into Greek Ἰσαάκ (Isaák) and then into Latin Izák . The name Isaiah⁴ was originally in Hebrew יְהוֹשָׁעַי and יְהוֹשָׁעַי (Yēsha'yāhū and Yēsha'yāh), transcribed into Greek Ἡσαΐας , Ἐσαΐς , into Latin Esaias and Isaias. The name Ishmael⁵ was originally in Hebrew יִשְׁמָעֵל (Yishmā'ē'l) transcribed Ἰσμαήλ

1. The International Standard Bible Encyclopedia, Chicago, Howard-Severance, 1915, Vol. III, p. 1624.

2. Ibid., p. 2001; also James Hastings, Dictionary of the Bible, dealing with Language, Literature and Contents, N.Y., Scribner's, 1902, Vol. III, p. 278-293.

3. The International Standard Bible Encyclopedia, op. cit., p. 2001.

4. Ibid., p. 1495.

5. " , p. 1509.

(Ismaél) into Greek. The name Jeremiah¹, originally in Hebrew יֵרֵמְיָהּ (Yirm^eyāhū) or shorter form יֵרֵמְיָה (Yirm^eyāh), was transcribed Ἰερμίας (Iermías) into Greek and then Jaremiās and Jeremiah into Latin. The name Joseph², originally in Hebrew יְהוֹשֻׁעַ (Yōsēph or Yōsēf), was transcribed Ἰωσῆφ (Iōsēph) into Greek and then Joseph into Latin. The name Job³, originally in Hebrew יוֹב (Yōb), was transcribed Ἰωβ (Iōb) into Greek. The name Jerusalem⁴, originally in Hebrew יְרוּשָׁלַיִם (Y^erūshālēm), then יְרוּשָׁלַיִם (Y^erūshālayim), was transcribed Ἱερουσαλήμ (Ierousalēm and Hierousalēm) into Greek. Then it appeared Ierosalem and Hierusalem in Latin sources, in 1611. The form Jerusalem appeared first, in French writing, in the twelfth century A.D.

The confusion in transliterating the Hebrew characters, and especially the gutturals and aspirates, into Latin arises because the Latin alphabet has no equivalent characters to these gutturals and aspirates. This was known to St. Jerome. He mentioned it in his prefatory remarks to the Liber Nominum Hebraicorum. "Names beginning in transliter-

1. Ibid., p. 1587.

2. Ibid., p. 1736.

3. Ibid., p. 1679.

4. Ibid., p. 1595-1596.

ation with A may begin in their Hebrew form, he says, with 'aleph or sometimes with 'ain, often with hē, sometimes with hēth, letters which interchange their aspirates and sounds"¹.

Knowing that each of the Hebrew gutturals and sibilants has a special pronunciation of its own, St. Jerome made an important step towards correct transliteration. But, his transliteration was still far from scientific in our sense because he did not invent or develop new Latin characters to equate these Hebrew gutturals and sibilants. Like his predecessors, he considered Ḷ ('āleph) as a vowel and not a weak consonant and equated it to Latin "a"¹. He also overlooked the fact that the letter ה (hē) was always pronounced as "hē" by the Hebrews. Thus he thought that they sometimes pronounced it as "a"².

His remarks concerning 'ayin were not consistent. On the one hand "he calls it littera vocalis and says it is not a consonant"². On the other hand, he wrote that 'āyin has a value of its own³. Then he wrote that 'ayin is pro-

1. Edmund F. Sutcliffe, op. cit., p. 117.

2. Ibid., p. 119.

3. Ibid., p. 120.

nounced with a guttural roughness (*rasura gulae*). This indicates that he knew that 'āyin is a guttural letter with a pronunciation of its own but he was not sure that it was a consonantal one.

St. Jerome also did not distinguish between 'sīn and shīn and represented both by "s". This, it seems, resulted in confusion which lasted until the Massoretic period. So, "he says that the word SAM may, according to the context, be either the verb meaning 'he placed' or the adverb 'there'; but, he does not say that the difference of meaning carried with it a phonetic change (i.e. 'SAM and ŠAM)¹". Similarly, he says that the Hebrew words for 'measure' and 'barley' are written with the same letters though pronounced respectively saarim and sorim².

He knew that the pronunciation of šādê is hard and not like that of a simple "s". But, he could not know its exact pronunciation and his description of it was not clear¹.

Concerning Begeḏkephat, St. Jerome followed his predecessors and did not make any considerable advance in

1. Ibid., p. 124.

2. Ibid., p. 121.

differentiating among them. He equated bêt, gîmel and¹ dālet only to "b", "g" and "d" without any comments .

As regards the spirant pronunciation of פ (pē) he mentioned twice that it does not exist in Hebrew. Thus we inherited in English, as in French, the names of Pharoah, Phineas, Philistine and Pharez from the Hebrews who retained the traditional initial "P" in these names.

He equated the letter כ (kāf) to "ch", remarking that the pronunciation has an added aspiration as in the² Greek letter χ², while he reserved the hard sound of "c" to represent the letter ק (qōf). He does not use the letters "K" and "Q" in transliteration. Similarly, as many of his predecessors had done, he reserves "t" to represent ט (têt)² and transliterates נ (tāw) to "th"².

St. Jerome in his transliteration of Hebrew may have accomodated himself to earlier transliterations developed by Greeks or Romans.

(Parenthetically, we might often note that, as a result of this morphological history, names come down the centuries to modern languages where they are now pronounced in

1. Ibid., p. 124.

2. Ibid., p. 125.

accordance with this transliteration in a manner completely different from the original. For example, whatever may have been the original phonetic system of the Jebusites, they certainly did not call their city with the "J" sound of French or the English Jerusalem, and certainly neither King David nor the Prophet Samuel called Saul with the "S" and "O" sounding. These names came to us in their present form by the accident that the Romans decided to differentiate between the vowel "I" and consonantal "I" by shaping this letter differently into a "J" to represent a consonant. By the same token because the Greeks had no ω (ō) sound they used the ω which in time became Σ (sigma) for both the "s" and the "sh".)

However, transliteration of Hebrew remained inexact until the second half of the nineteenth century¹. At this time a modern search for accuracy, standardization and systematic transliteration began. But the influence of the very early transliteration still persists, especially in respect to Hebrew names appearing in the Bible. What had been transliterated over the centuries, into languages using the Latin alphabet has become an integral part of the literature of these languages and it is very difficult

1. "Report of the A.L.A. Transliteration Committee, 1885", in Library Journal, 1885, Vol. 10, p. 302-309.

to change it. But, modern Hebrew names are transliterated today much more accurately and scientifically as in the case of the name יְרֻחָם which is transliterated Y^ḥrūḥām and not Jerucham.

4. A.L.A. ATTEMPTS AT STANDARDIZATION

The confusion in transliteration has led many American linguists and librarians to seek reasonable systems for transliteration of non-Roman alphabets. Among these pioneers were Melvil Dewey, Charles Cutter, Toy, Lanman and Heilprin.

During the A.L.A. conference at Lake George in 1885, these pioneers discussed transliteration schemes for a number of non-Roman alphabets. But these early schemes were far from perfect. However, more important was the very attempt to work out such standards.

Cutter, who headed the conference, reported on three transliteration tables: one for Semitic languages prepared by Toy, one for Sanskrit prepared by Lanman and one for Russian prepared by Heilprin. He told the conference that transliteration must be a compromise which can be easily available both to scholars and to ordinary readers. It has to be "a compromise between the claims of

learning and logic on the one hand, and of ignorance,
error and customs on the other"¹.

At this conference there was some tendency to transliterate letter by letter, but on this they were not unanimous. The issue has remained undetermined. But it is important that many basic principles for transliteration were decided in this conference. These became the foundation of most later schemes of transliteration:

To adopt the continental value of the vowels, representing the "ou" sound not by "ou" nor by "oo" but by "u". For instance, to write Butan, not Boutan nor Bootan, Turgenef not Tourgueneff nor Toorgueneff; using "a" for the sound of French "a", as in the words: rather, father, etc.; using the "i" for the English "e" sound.

To adopt the English value of sounds for the consonants. For instance, the iching sound has to be represented by English "ch", the shIn sound by English "sh", etc.

For the transliteration of names, the conference adopted the following rules:

1. "Report of the A.L.A. Transliteration Committee, 1885", op. cit., p. 302; also G. Gerych, op. cit., p. 17.

1) To use the Latin form for ancient Greek names, e.g., Homerus not Homeros (in Greek: Ὅμηρος, *o* with spiritus asper), Plato not Platon, Philippus not Philippos. But when two forms are in common use to choose that which is nearest the Greek.

2) For Egyptian names which entered Roman alphabet languages through Greek, both the Greek and the Egyptian forms can be used (as Cheops and Shufu). But a reference has to be given to each from the other.

3) Biblical names are to be written as they are found in the English Version of the Bible, and the names of post-Biblical Jews, if derived from the Scriptures, should retain their anglicized form. On the other hand a strict transliteration is demanded for rabbinical and other more or less pure Hebrew names which are not taken from Scriptures, and therefore have no popular English forms - to which, again, there is an exception in the case of a few celebrated Jewish authors, such as Maimonides, where a Greek form has been fully adopted in English literature.

Concerning East Indian names, the conference recommended following the established Hunter's Great Statistical Dictionary of Bengal. Thus, it recommended Kashmir, Multan, Jalal ud Din, Panjab, not Cashmere, Mooltan,

Jelaleddin, Punjaub, although the latter spelling had been accepted for a long time in English literature.

In addition, the conference reaffirmed the rules of the Royal Geographical Society formulated in its Proceedings of August 1885, p.p. 535-536:

1) No change will be made in the orthography of foreign names in countries using the Roman letters such as Spanish, Portuguese, Dutch, etc. These names will be spelled as by the respective nations.

2) Neither will any change be made in the spelling of names written with non-Roman alphabet long accepted in English usage such as: Calcutta, Cutch, Celebes, Mecca,
¹
etc. .

The pioneers of the A.L.A. Conference illustrated their principles as follows:

u - to be used for the "oo" sound, like in the word flute. Thus, muqadam, for instance, has to be written such and not mooqadam nor mouqadam.

a - to be used for "a" in father or in papa and

1. "Report of the A.L.A. Transliteration Committee, 1885", op. cit., p. 302-303.

not like "a" in face.

i - to be used for "i" as in magazine.

o - to be used for "o" as in role.

e - to be used for "e" as in bed or red.

ai - to be used for "i" as in ice. Thus, Shanghai, Samurai.

au - to be used for "ow" as in now. Thus, Fuchau.

ei - to be used for "ey" as in they. So, Beirūt, Beilūl.

Most consonants have been given their English value in transliteration.

ch - has been given the value of itch like "ch" in chin. It should not be represented by the Polish "cz" nor by the German "tsch".

g - to be used only for hard sounds like the Semitic gīmal such as the "g" in garden.

h - to be used for the soft guttural sound of Semitic "h" like in hard.

j - to be used always for English "j" as in jar. It should not be substituted by the French "dj",

English "dg" nor German "dsch".

k - to be used for the hard "c", equivalent to Semitic kaf. It is to be used also for qof. Thus, to write Korea and not Corea.

kh - to be used for all guttural sounds of Semitic and Oriental khaf. Thus, Khan, Khalifa, Bekhor and not Chan, Chalifa, Bechor.

gh - to be used for all guttural sounds of "g" like Baghdad, Beghadīm.

zh - to be used for the soft "j" as in the French jardin, jargon.

sh - to be used for Semitic and other transliterated sounds of שׁ (šīn). Thus, Sharon and not Charon, Shāhīn and not Chāhīn.

tz, ts - to use "tz" for Slavic and Semitic sounds of צ (tsādiq or ṣādê) and "ts" for Chinese and Japanese ones.

y - to be used for the Semitic yōḏ. It should not be substituted by German "j". Some exceptions have been decided upon including Russian names ending in "ay", "ey", "oy", "uy". They have to be written with "ei", such as Aleksei not Aleksey.

w,v - "w" to be used for Arabic waw such as walid not valid, Wahid not Vahid. While for Slavic languages, which do not contain such sounds, "v" has to be used. Thus, we write Paskevitch, Vasili not Paskewitch nor Wasili.

v,f - For the last syllable of Russian place-names the endings "ev" and "ov" have to be used because the Russians use the corresponding letter though they pronounce "ef" and "of". Thus, Azov, Kiev and not Azof, Kief. While in the last syllable of family names, similarly pronounced, "of" or "off", "ef" or "eff" may be used, because the Russians write them "off", "eff" when they use Roman characters¹.

Although the rules of the A.L.A. conference at Lake George were not perfect and were not adopted by all North American libraries, they were pioneering and reasonable. The Cutter table of 1904² was a summary of the rules determined in this conference. The A.L.A. Catalog Rules of 1908³,

1. Ibid., p. 304-305 and p. 18-19.

2. C.A. Cutter, Rules for a Dictionary Catalog, Washington, GOP, 1904, p. 152.

3. A.L.A. Catalog Rules, Author and Title Entries, op. cit., 1908, p. 65.

the table in The Jewish Encyclopedia of 1901¹ and the A.L.A. Cataloguing Rules of 1949² were based or have been influenced by regulations determined by this conference.

The Semitic transliteration in Cutter's Rules for a Dictionary Catalog of 1904³ and the table of Semitic transliteration in A.L.A. Catalog Rules of 1908⁴ were very similar. Both are a compromise between phonetic and letter for letter transliteration.

Both have many lacunae especially in respect to Hebrew alphabet. Firstly, they both used Arabic alphabet as the basis for transliterating other Semitic alphabets. Thus, the Hebrew characters were not placed in their ordinary order. Secondly, neither differentiated between the two different sounds of begedkefat. Thirdly, neither transliterated the character א ('ālef). Fourthly, they did not transliterate Hebrew and other Semitic diacritic

1. "Systems of Transliteration and of Citation of Proper Names", op. cit., p. xxv.

2. A.L.A. Cataloguing Rules for Author and Title Entries, op. cit., 1949, p. 248.

3. C.A. Cutter, op. cit., p. 154.

4. A.L.A. Catalog Rules, Author and Title Entries, op. cit., 1908, p. 65.

vowels.

Two developments have been made in the A.L.A. table of 1908 in comparison with the Cutter table of 1904. The first is that the letter *š* (šīn) is equated in the A.L.A. table of 1908 to "sh" or to "š", and the letter *q* (qōf) to "k" or to "q" ("q" is derived historically from qōf), while in the Cutter table of 1904 *š* (šīn) was equated to "s" or to "sh" and *q* (qōf) only to "k".

In the table in The Jewish Encyclopedia of 1901¹ there is further progress in transliterating Hebrew. Firstly the transliteration of Hebrew characters was given separately from the Arabic. Secondly, *ʾ* (ʾāleḥ) is equated to the special character (ʾ) when it occurs in the middle of a word. Thirdly, the differentiation between *p* (pē) and *f* (fē) is mentioned clearly. Fourthly, the diacritic vowels are transliterated and not ignored. Fifthly, the rules for transliterating Hebrew Biblical and non-Biblical names are given more clearly and with examples.

But the transliteration of the Hebrew characters in The Jewish Encyclopedia of 1901 was still not perfect. The differentiation between the two sounds of begedkefat was

1. "System of Transliteration and of Citation of Proper Names", op. cit., p. xxv.

established only between פ (pē) and פ (fē), while other begedkefaṭ letters were not given an appropriate equivalent. In addition, the transliteration of Hebrew diacritic vowels was not complete. There was no distinction between ק (qāmeṣ) and - (paṭaḥ). Both were represented by "a". ם (ṣērê), ם (segōl), ם (ḥāṭef segōl) and ם (šēwā nā‘) all were represented by "e". ם (qibbūṣ) and ם (wāw-šūreq) were both represented by "u". ם (wāw-ḥōlem) and ק (qāmeṣ-ḥaṭūf) both were represented simply by "o". ם (ḥīreq) and ם (yōd-ḥīreq) both were represented by "i". Moreover, ם (ḥōlem) and ם (šēwā nāḥ) were not represented and even not mentioned at all.

In spite of all this, these attempts are long steps on the road to standardization. They were the basis for many later research works in transliteration and for several national and international standards which have been developed later.

5. OTHER AMERICAN PRACTICES

Many specialists in various languages who immigrated to the U.S., which became a great power since the second half of the nineteenth century, took part in the transliteration. Thus, transliteration schemes have developed faster in the U.S. than in any other country. Among these

were U.S. Board on Geographic Names, Transliteration Guide, 1961 and U.S. Department of State, Office of the Geographer, Romanization Guide, 1964. In addition, there were also the works of G.F. Ostermann, Manual of Foreign Languages, 4th ed., N.Y., Central Books, 1952; and of the U.S. Government Printing Office, Style Manual, Washington,¹ 1959 .

1. The Manual of Foreign Languages by Ostermann includes table and explanation of Hebrew alphabet. In comparison with many earlier works, Ostermann made great progress in transliterating Hebrew. He gave representation to Hebrew vowels and divided them into long and short ones. Nor did he neglect the furtive paṭaḥ nor the : (šēwā).

But his scheme was not scientific enough. He did not include the dotted characters of begedkefaṭ, but only the undotted ones in the body of his table. He did the same with the letter װ (šīn) and used it only for the sound "s" (but, in a later paragraph, he mentioned the dotted ones of begedkefaṭ). Secondly, he did not give any representation to ׀ (ʾālef) and considered it as silent. Thirdly, he transliterated the װ (wāw) to the English "w". Fourthly, he equated the character ף (ṭêṭ) which is traditionally an emphatic "ṭ", with the ordinary "t". Fifthly, he equated the character ץ (kāf) with the German "ch" as he did with ן (ḥêṭ) without any distinction between the two. Sixthly, he equated the character ף (sāmek) simply with "s", as he did with the character װ (šīn) without distinction between the two. Seventhly, he indicated that the character װ (ʾāyin) is silent and did not equate it. In a later paragraph he mentioned that "ʾāyin is a guttural not generally pronounced and is usually transliterated by '." - G.F. Ostermann, op. cit., p. 121-.

It seems that Ostermann did not know that װ (ʾāyin) is still pronounced correctly by most Middle Eastern and North African Jews. Eighthly, he equated ץ (šādê) to the digraph "ts" which corresponds only to its modern pronunciation without any reference to its traditional pronunciation.

The table on Hebrew in the Style Manual of U.S. Government Printing Office is more developed than that of Ostermann¹.

Footnote 1 from p. 96, continued.

With all these weaknesses, Ostermann made progress in representing the Hebrew vowels. He gave representation to ten vowels in addition to : (š'wā). He divided these vowels into long and short. But he did not mention the combination of : (š'wā) with other vowel-points for constituting the shorter vowels such as ˆ: (hāṭef qāmeš), -ˆ: (hāṭef paṭah) and ˆˆ: (hāṭef segōl).

1. Firstly, it represents, by Latin character, the second sound of begedkefat characters, except ָ (gīmal) and ַ (dāleṭ), and this appears also in the explanation which follows it. Secondly, א (āleṭ) which had not been given any representation in Ostermann, is represented, here, by a character similar to a comma ('). Thirdly, the character ו (wāw) is represented by both "w" and "v". Fourthly, ה (hēṭ) and ט (ṭēṭ) are represented by special characters: ḥ, ṭ. Fifthly, the character כ (kāf) is represented by the digraph "kh". Sixthly, ע (āyin) is represented by a character similar to an inverted ' . Seventhly, the character צ (ṣādē) is represented by the character "j". Eighthly, the letter פ (qōf) is represented by "q" and not by "k". Ninthly, the character ש (śin) is differentiated from (sāmek) by adding an accute accent on the "s" of śin.

But in the transliteration of Hebrew consonants, this Style Manual has remained imperfect. In the row of "Phonetic value" of its Hebrew table, the phonetic value of ט (ṭēṭ) and ע (āyin) are given superficially. In the case of ט (ṭēṭ), for instance, the compilers of the U.S. Government Printing Office, Style Manual do not indicate that this character is still pronounced emphatically by at least the Middle Eastern and North African Jews. Similar failures appear in remarks concerning other laryngeal and guttural characters such as ע (āyin), צ (ṣādē), פ (qōf) and נ (ṭāw).

The vowels in Style Manual of U.S. Government Printing Office, as in Ostermann, are divided into long and

U.S. Transliteration Guide of 1961¹ and U.S. Romanization Guide of 1964² are very similar. The latter constitutes a recent impression of the former. They are comprehensive American national standards and are used as official standards by the Department of State as well as by many other American institutions. They are both more comprehensive than any earlier American source. They both include in their Hebrew tables the two characters of begedkefat letters i.e., the dotted and the undotted ones, and both give representation in Roman characters to the two sounds of some of these begedkefat characters except for ך (gīmal) and ך (gīmal), ף (dālet) and ף (dālet), ף (tāw) and ף (tāw).³ In addition, the character ף (tēt) is represented by a simple "t" and therefore is not differentiated from the character ף (tāw) in both tables.⁴

Footnote 1 from p. 97, continued.

short, the vowels of medium length, here too, are considered as short ones, and the real short vowels i.e. the ones with the ḥatefs, are ignored here too.

1. U.S. Board on Geographic Names, Transliteration Guide, op. cit., Section IV, p.1.

2. U.S. Department of State, Office of the Geographer, Romanization Guide, op. cit., p.7.

3. U.S. Board on Geographic Names, op. cit., p.1.

4. U.S. Department of State, op. cit., p.7.

Despite similarities there are some differences between the two guides. One of these differences is that the Transliteration Guide of 1961 equates the character $\text{צ}(\text{ṣādê})$ to "ts", while the Romanization Guide of 1964 equates it to "z". Another difference: the Transliteration Guide does not equate $\aleph$ ('ālef) and generally omits it, except when vowelled by : (šewā nā') or following : (šewā nāḥ). In the latter cases it represents it by a hyphen as in $\text{יִרְאֵן} = \text{yir-on}$, while the Romanization Guide represents $\aleph$ ('ālef) by the special character "ʾ" as in $\text{גַּלְעָאֵן} (\text{gal'ōn})$, $\text{נֶדָר} (\text{ne'dār})$, $\text{בְּעֵר-שֶׁבַע} (\text{Be'er-Sheva'})$, etc. These differences can be considered as a considerable progress towards scientific approach and precision in the Romanization Guide of 1964 in comparison with the Transliteration Guide of 1961.

However, both have made additional progress towards comprehensiveness in comparison with the previous manuals by including Latin transliteration of characters representing foreign pronunciation which entered Hebrew and equating them to Roman ones such as $\text{'ג} = \text{ğ}$, $\text{'י} = \text{ž}$ and $\text{'י} = \text{č}$.¹ Also they both stabilized their representation of the letter $\text{ק} (\text{qōf})$ only to Latin "q".

1. U.S. Board on Geographic Names, op. cit., p.1.

U.S. Romanization Guide went further and gave special representation for all Hebrew characters representing Arabic characters either existing or not existing in Hebrew. It equates ך to "j" and not to "g" as the U.S. Transliteration Guide did. It represents ך (Arabic ځ) by "dh", ך (Arabic ځ) by "q", ך (Arabic ځ) by "dh", ך (Arabic ځ) by "kh", ך (Arabic ځ) by gh, ך (Arabic ځ) by "s" and ך (Arabic ځ) by "th".¹

But their representation of the vowels and begedkefat is quite superficial and far from precise. Neither differentiated between long, medium length, short and very short vowels. Thus, they both represent - (paṭaḥ), -: (ḥāṭef-paṭaḥ) and ך (qāmeṣ) by an ordinary "a"; ך (qāmeṣ-qāṭān), ך: (ḥāṭef-qāmeṣ), ך (ḥōlem) and ך (wāw-ḥōlem) simply by "o"; ך (segōl), ך: (ḥāṭef-segōl), ך (ṣērê) and ך (yōd-ṣērê) all by "e", ך (ḥīreq) and ך (yōd-ḥīreq) both by "i", ך (qibbūṣ) and ך (wāw-ṣūreq) both by "u". They did not differentiate between ך (gīmal) and ך (gīmal), ך (dāleṭ) and ך (dāleṭ), ך (tāw) and ך (tāw) and they maintain the idea which appeared in Ostermann and in U.S. Govt. Printing Office, Style Manual, that the differentiation in pronunciation between these characters

1. U.S. Department of State, op. cit., p.9.

are completely lost. This is far from being accurate. Neither differentiated between *ī* (śīn) and *ū* (sāmek) in transliteration.¹

6. BRITISH STANDARDS AND SOURCES

Because of its wide empire which included different nations speaking different languages and different scripts, Britain was among the leading countries in searching for and determining standards for transliterating the different scripts used in its empire. Thus, its linguists and researchers in the field of writings were among the earliest pioneers to prepare scientific standards of transliteration.

One of these pioneers was Lord Edward Gleichen. He prepared and published a manual of Alphabets of Foreign Languages² to be used as a standard for official British institutions. A general characteristic of this manual is that its authors knew the traditional pronunciation of

1. U.S. Board on Geographic Names, op. cit., p.1; also U.S. Department of State, op. cit., p. 7-8.

2. Lord Edward Gleichen, and John H. Reynolds, Alphabets of Foreign Languages, 2d ed., London, The Royal Geographical Society, 1933, p. 69-71.

most of the guttural letters and how they are pronounced by different groups and in different geographic regions. This was true of Arabic and Hebrew. One interesting characteristic of its Hebrew table is its development in representing the Hebrew diacritic vowels. It gave representation in Latin characters to long, short and very short vowels¹, which has not been done by any earlier scholar.

But many lacunas still exist in the Gleichen manual. Although Gleichen has mentioned the historical value of א (ʾālef) he did not give it any representation. For the character ג (gīmal) he mentioned that it was originally "gh" i.e. he knew its original pronunciation, but he has represented it by a simple "s" and has not differentiated it from א (gīmal). It seems also that he did not know that at least the Middle Eastern and North African Jewish communities are still pronouncing א (gīmal) correctly in prayer. Gleichen had a similar approach to the character ד (dālet), i.e. he did not differentiate it from א (dālet).

But Gleichen did differentiate between other

1. Ibid., p. 71.

begeḏkefat characters. He equated פ (pē) to "p" and פ (fē) to "f", as most other sources did. He equated כ (kāf) to the digraph "kh" to distinguish it from כ (kāf). His scheme differentiated between ת (tāw) and ת (tāw) by equating ת (tāw) to "th".¹ Gleichen also knew the value of the character ת (hēt) but he equated it to an ordinary "h" as he did with ת (hē). He had a similar approach to ו (tēt) and did not differentiate it from ת (tāw). In his manual he equated צ (ṣādē) to an ordinary "z" although he knew its original pronunciation. His scheme, as all earlier ones, did not distinguish between ו (śin) and ו (sāmek). But the approach of Gleichen to י ('āyin) was correct by considering it a complete consonant and by giving it a special representation. The equation of ק (qōf) to "q" was also correct.²

The main contribution of Gleichen to the advancement of transliteration of Hebrew alphabet was his equation of the Hebrew vowels. One of his best innovations was the insertion into the alphabet of the long vowels and the representation of these vowels by Roman characters.

1. Ibid., p. 70-71.

2. Ibid., p. 71.

After the letter ך (wāw=vāv), Gleichen put ם (wāw-ḥōlem), the long "o" and represented it by "ō". But, he called it ḥōlem and not wāw-ḥōlem as it is supposed to be called. The ך (wāw-šūreq) i.e. the long "oo" he represented by "ū". But he called it šūreq and not wāw-šūreq as it is supposed to be called.¹ After the character ם (yōḏ) he inserted three vowels derived from ם (yōḏ), the first was ם (yōḏ-ḥīreq), a long "i" which he called ḥīreq gādōl i.e. big ḥīreq and he represented it by "ī", the second was ם (yōḏ-pataḥ) which has the sound of English "ay" and he represented it by "ai", the third was ם (yōḏ-šērê) which sounds like a long French "ê" and he represented it by "ei".¹

The second important innovation of Gleichen was the division of the diacritic vowels i.e. the vowel-points, into long, short and very short ones. He also gave correct value to most of them. He equated - (pataḥ) to a short "a", -: (ḥāṭef-pataḥ) to a very short "ă", ך (qāmeṣ) to a long "ā", :: (segōl) to short "e", ::: (ḥāṭef-segōl) to a very short "ě", .. (šērê) to a long "ē", — (ḥīreq) to a

1. Ibid., p. 70.

short "i", but he added that $\text{—}(\text{ḥīreq})$ can rarely be long. In his scheme $\text{—}(\text{ḥōlem})$ is equated to a short "o", but it has been mentioned that $\text{—}(\text{ḥōlem})$ can rarely be long.

$\text{r}:(\text{ḥāṭef-qāmeṣ})$ is equated to a very short "ö", $\text{ṣ}:(\text{qibbūṣ})$ to short "u", $\text{:}(\text{šewā})$ to a very short "ě".¹

Among the shortcomings in Gleichen transliteration of the Hebrew vowels are: Firstly, $\text{r}:\text{r}(\text{qāmeṣ-ḥaṭūf})$, a first qāmeṣ which is followed by šewā followed by another qāmeṣ, like the first qāmeṣ in $\text{וְיָרֵד}(\text{'ofrāh})$, is pronounced a shorter "o" than $\text{—}(\text{ḥōlem})$, is represented by an ordinary "o" like the $\text{—}(\text{ḥōlem})$ itself. Secondly, the distinction between $\text{..}(\text{šērê})$ and $\text{ṣ}:(\text{yōḏ-šērê})$ is not accurate enough;

$\text{..}(\text{šērê})$ is supposed to be a medium type of "ē" in its length while $\text{ṣ}:(\text{yōḏ-šērê})$ a longer "ê". Thirdly, no distinction has been made between $\text{::}(\text{segōl})$ and $\text{ṣ}:(\text{yōḏ segōl})$. More accurately $\text{ṣ}:(\text{yōḏ-segōl})$ is not mentioned at all.

For clear distinction, $\text{::}(\text{segōl})$ could be represented by "ë" and $\text{ṣ}:(\text{yōḏ segōl})$ by "ê". Forthly, there is no distinction between $\text{:}(\text{šewā nā'})$ and $\text{::}(\text{ḥāṭef segōl})$. Both are represented by "ě", or more accurately $\text{:}(\text{šewā nā'})$ is represented by an italic printed "ě". To distinguish

1. Ibid., p. 71.

between the two, :: (hāṭef-segōl) could be represented by "ě" and : (šěwā-nā') by "ē".

Another worth mentioning British source of transliteration of Hebrew is the article in the Encyclopedia Britannica.¹ It gives a comprehensive reflection of all guttural Hebrew characters and also of long, short and very short vowels. The transliteration table of Hebrew,² in this article, is divided into two parts. Part one is devoted to the characters, i.e. the letters, and part two to the vowel-points i.e. the diacritic vowels. In the part on characters it gives a column for exact transliteration and a column for simplified transliteration.²

The transliteration in the first part is very comprehensive. It covers every Hebrew character well. X ('ālef) and U ('āyin) are represented by special characters. All guttural and sibilant characters are represented. Y (šādê) is represented by "š", the most correct and the closest to its original representation. ʔ (qōf) is equated to "q" which is correct too. The differentiation between ʕ (śin) and ʊ (sāmek) is given.

1. Godfrey Rolles Driver, op. cit., p. 279-281.

2. Ibid., p. 280.

But the transliteration of most begedkefat characters is still conservative and matches more English language concepts than Semitic ones. These characters are still equated by digraphs i.e. by adding an "h" to the occlusive ones¹ of begedkefat, for representing the fricative ones,² instead of using diacritic marks. Thus, א (bêṭ) is equated to "v" and also to "bh", ג (gīmal) is equated to "gh", ד (dāleṭ) to "dh", כ (kāf) to "kh", פ (fē) to "f" and also to "ph" and ת (tāw) to "th". But an important step towards accuracy and uniformity was the transliteration of the letter ש (šīn) which is equated to "s" and not to the digraph "sh" in the transliteration column.³

However, when it transliterates a term the Encyclopedia Britannica does not follow its table of transliteration in respect to the gutturals, the sibilants and most of begedkefat letters but neglects the distinction between them. It simplifies them to match the English language pronunciation. For instance קלוק is written

-
1. Occlusive characters means here the dotted ones.
 2. Fricative characters means here the undotted ones.
 3. Godfrey Rolles Driver, op. cit., p. 280.

hālōk not hālōkh nor hālōk̄, מְלוֹכָה is written m̄lōkāh not m̄lōkhāh nor m̄lōk̄āh, etc.¹

The vowels section in the table in the Encyclopedia Britannica are divided also into three columns, one for the Hebrew vowel-points, the second for their scientific transliteration and the third for simplified transliteration. The simplified column groups the vowel points into five sections. Every section is equated to one simplified Roman vowel.¹

The transliteration of the Hebrew vowels in the Encyclopedia Britanica was very comprehensive. ∴ (segōl), .. (sērê), ı (yōd sērê), ∴ (hāṭef segōl), and : (šewā) were equated to an "e" combined with different diacritic marks to indicate whether it is long, ordinary, short or very short. ı (qāmeṣ), -(paṭaḥ) and ∴ (hāṭef paṭaḥ) were equated successively to a long, to an ordinary and to a short "a". ı (yōd hīreq) and — (hīreq) were equated successively to a long and to an ordinary "i". ı (wāw hōlem), ∴ (hōlem), ı (qāmeṣ qāṭān) and ∴ (hāṭef-qāmeṣ) were equated successively to a very long, a long, an ordinary and a short "o". ı (wāw šūreq) and ∴ (qibbūṣ) were equated successively to a long and to an ordinary "u".¹

1. Godfrey Rolles Driver, op. cit., p. 280.

Some lacunae exist in the transliteration of the vowels in the Encyclopedia Britannica. The most important are: 1) ף (yōḏ-seḡōl) has not been represented and not mentioned at all. 2) ױ (hōlem) could be better to equate to an ordinary Roman "o", ף (qāmeṣ-qāṭān) to a short one and ף: (hāṭef-qāmeṣ) to a very short one. 3) No distinction has been made between : (šēwā nā') and : (šēwā nāḥ).

7. OTHER EUROPEAN STANDARDS AND SYSTEMS

Other Europeans have introduced rules and regulations for the transliteration of alien characters and of foreign forenames and surnames. But most of them have dealt with Greek and with Cyrillic. Only few have also dealt with Hebrew and Arabic. The code of the British Museum,¹ for instance, has dealt with Slavic languages, but not with Hebrew nor Arabic.

However, one important agency which encompassed most alphabetic writings was the Vatican Library and its

1. Rules for Compiling the Catalog of Printed Books, Maps and Music in the British Museum, rev. ed., London, British Museum, 1936.

Rules for the Catalog of Printed Books.¹ In its first part, this code gave detailed rules for transliterating names which originated in languages written in non-Roman characters. But, even these rules and the examples explaining them, are concerned mainly with languages written in the Cyrillic and in the Greek alphabets.

For instance only article 46,² which deals with forenames and surnames, considers in its part a (which is a general part) names from all non Roman characters. But, in parts b, c and d takes all its examples from Russian and other Slavic Languages. A similar approach is to be seen in article 47³ and elsewhere i.e. all the examples which explain the rules are mainly for names written in Cyrillic or in Greek.

To illustrate this we quote parts a and b of article 46.

a) Forenames and surnames in
languages written with non-Roman

1. Vatican Library, Rules for the Catalog of Printed Books, translated from the 2d Italian ed. by Thomas J. Shanahan (and others), edited by Wyllis E. Wright, Chicago, A.L.A., 1948.

2. Ibid., p. 41-42.

3. Ibid., p. 42.

characters are rendered in the heading by the corresponding letters of the Latin alphabet according to the rules of transliteration given in appendix IV.

b) If different forms of the same name are found in the works to be catalogued, the form resulting from the rules for transliteration is adopted, with reference from the other form.

Čekov, Anton.

Refer from: Tcekov, Antoine.
Tschekow, Anton.
Tschechow.

Turgenev, Ivan.

Refer from; Tourgueneff.
Turgenjew, Iwan.¹

However, the Vatican Code has given, in appendix IV,² comprehensive tables for the transliteration of Arabic, Persian, Turkish, Armenian, Coptic, Ethiopic, Gaelic, Greek, Hebrew, the Slavic languages and Syriac.

The Hebrew transliteration table³ of the Vatican Code was quite comprehensive in comparison with many earlier ones; in spite of this, it is still not perfect. It is divided systematically into two main parts. One part

1. Ibid., p. 42.

2. Ibid., p. 401-409.

3. Ibid., p. 407.

is devoted to the consonant characters and the other to the vowels (including the vowel-letters and the vowel-points). Most of the consonants in this table are equated correctly and scientifically including, א ('ālef), ע ('āyin), ט (ṭêṭ) and ק (qōf). A distinction between ש (śīn) and ס (sāmek) has also been made. But, there was no differentiation between ג (gīmal) and ג (gīmal), ד (dālet) and ד (dālet), ט (tāw) and ט (tāw) in this table. In addition, ה (ḥêṭ) was equated to an ordinary "h", כ (kāf) to the digraph "kh" and צ (ṣādê) to an ordinary "s".

The part of the table dealing with vowels is divided into three columns: one for the long vowels, the second for the medium length i.e. the ordinary length vowels and the third for the short ones. This differentiation was not profound enough, because there was no distinction between the short and the very short vowels. In addition, some vowels were missing from the table. For instance, וֹ (ḥōlem), which is considered an ordinary i.e., a medium length of "o" was not mentioned at all, while ו (qāmeṣ-qāṭān) which is equal in pronunciation to a short "o", was equated to an ordinary "o", and ו (ḥāṭef-qāmeṣ) a very short pronunciation of "o" was equated to a short "ö". יֹ (yōd-seḡōl), יֵ (yōd-ṣērê), וֹ (š'wā nā') and וֹ (š'wā nāḥ) are not mentioned at all.

French Standards:

There are three main French works which are worth considering for their tables of Hebrew characters. These are Larousse du XXe siècle,¹ Grand Larousse encyclopédique² and Encyclopedie universelle illustrée.³

Larousse du XXe siècle and Grand Larousse encyclopédique were more traditional in their equation of the Hebrew characters than the Encyclopedie universelle illustrée. They both equated the characters ך (gīmal), ף (ḡālet) and ן (tāw) to the digraphs "gh", "dh", and "th".

Larousse du XXe siècle was more traditional and less scientific than Grand Larousse encyclopédique. It equated the character א ('ālef) simply to an "a", the character ב (bêt) to "bh", the character כ (kêt) to "kh" and to "ch", the character ע ('āyin) to an ordinary "a", the character צ (ṣādê) to "ts", to "tz" and to "ç", the

1. "Hebreu", in Larousse du XXe siècle, Paris, Librairie Larousse (c1930), Tome Troisième, p. 979.

2. "Hebreu", in Grand Larousse encyclopédique, Paris, Librairie Larousse (c1962), Tome Cinquième, p. 815-816.

3. "Alphabet Hebreu", in Encyclopédie universelle illustrée, Montréal, Les Editions Maisonneuve, (1968), Tome Cinquième, p. 1658.

character ק (qōf) to "q", to "c" and to "kh".

Its equation of שׁ (śīn) to "sch", of נ (ḥêt) not only to "kh" but also to "ch", and of כ (kāf) to "ch" shows that Larousse du XXe siècle was much influenced by the German system in transliterating these characters. Both Larousse du XXe siècle and Grand Larousse encyclopédique equated ט (têt) to a simple "t" and did not differentiate between שׁ (śīn) and שׂ (sāmek).

In comparison with Larousse du XXe siècle, Grand Larousse encyclopédique has made great steps towards scientific transliteration and towards uniformity. It has equated א ('alef), אײן ('āyin), נ (ḥêt) and ע (ṣādê) to special characters. It also equated כ (kāf) only to the digraph "kh", פ (fē) to "f", and ק (qōf) to "q". In addition, it equated the character שׁ (śīn) to the digraph "ch", which fits the French system of pronunciation and not the German as was the case in Larousse du XXe siècle.

The Encyclopédie universelle illustrée made some drastic changes in transliterating Hebrew. These changes may be considered regressive ones in transliteration from the scientific point of view, because it did not distinguish between the two different traditional pronunciations of begedkefat characters (except פ -pē and פֿ -fē). This

change may fit the pronunciation used by most Israelis to-day and also the usage of persons speaking French, but it contrasts with the principle of equating letter-for-letter, including the guttural and the sibilant. In spite of that, many other characters which do not exist in the Roman alphabet were equated scientifically to specific Roman letters. These are א ('ālef), ה (hêt), ע ('āyin) and צ (ṣādê). פ (qōf) was equated to "k" and not to "q", while ש (šîn) was equated to the digraph "ch" which fits the French phonetic system.

It is worth mentioning that none of these important French sources bothered to deal with or even to mention, the Hebrew vowels. The great differences between these works, which were all published between the third and the sixth decades of this century, constitute an additional proof of the need for uniform national standards and especially for a uniform international standard of romanizing Hebrew and other non-Roman alphabets.

A very drastic step towards international standardization in transliterating Hebrew characters has been taken by L'Association Française de Normalisation (AFNOR) in its official publication: Transliteration de l'Hébreu

en caractères latins, FDZ no 46-003.¹ In fact, this publication was a French adoption of the ISO Recommendation, Transliteration of Hebrew.² The transliteration of the characters in this publication is identical with i.e., completely copied from, the ISO, while the comments which follow the table are an exact translation and the introduction is an adaptation.

However, although it is a very comprehensive romanization scheme, we will deal with it in the chapter on international standard.

German Sources:

Two German sources are also worth consideration in dealing with the transliteration of Hebrew, because of the great differences among them, between them and the other European authorities and because they are newly published. One of these is Das Grosse Duden-Lexicon³

1. Association française de normalisation (AFNOR), Translittération de l'Hébreu en caractères latins, FDZ no 46-003, Paris, 1964.

2. International Organization for Standardization, op. cit., 1964.

3. "Hebräisches Alphabet" in Das Grosse Duden-Lexikon, Mannheim, Bibliographisches Institut, (1966), Vol. 4, p. 117.

and the second is Brockhaus Enzyklopädie.¹

Das Grosse Duden-Lexikon was prepared for German readers. Thus, its transliteration of Hebrew was made to fit only German pronunciation and German concepts.

Brokhaus Enzyklopädie is much more a scholarly source. Thus, although it is also written in German and for German readers, it has two columns for transliterating Hebrew: one is scientific and accords with the modern international tendency towards uniformity and letter-for-letter transliteration and the second is a simplified one. In the scientific column there is a clear distinction between begeḏkefaṭ letters, א (bêṭ) is equated to "b", ג (gīmal) to "g", ד (dālet) to "d", כ (kāf) to "k", פ (fē) to "p" and ת (tāw) to "t". Also א (ʾālef), ע (ʾāyin), ח (hêṭ) and צ (ṣādê) were equated correctly and scientifically. In addition the distinction between שׁ (śīn) and שׂ (sāmek) is given. The equation of ק (qōf) to both "k" and "q" was the only ambiguous equation given in this table.

The transliteration in the scientific column of Brokhaus Enzyklopädie can be considered as one of the best

1. "Hebräische Schrift" in Brokhaus Enzyklopädie, (München), Brokhaus Wiesbaden, 1969, 8 Band, p. 272.

modern sources transliterating Hebrew consonants. But, some criticism can be made of this transliteration. First, the equation of ק (qōf) to both "q" and "k" is in contrast with the principle of uniformity and can lead to confusion. Second, it would be better to equate פ (fê) to "f" instead of "p", because the letter and the pronunciation of "f" has long existed in the Roman alphabet. Third, it could be better, from the point of view of consistency, if גִּמָּל was equated to "g" (underlined) and not to "g̃" as was the case in equationing all other begedkefaṭ characters.

The column of simplified transliteration given in Brokhaus is very similar to the transliteration given in Das Grosse Duden-Lexikon. Both match the German language and German pronunciation. It is worth mentioning also that both sources did not mention the Hebrew vowels. Like most works dealing with Hebrew transliteration, these also did not mention the five different final letters existing in the Hebrew alphabet; and like all others, they too, did not invent special Roman characters to equate them.

Spanish Sources:

Two Spanish works dealing with Hebrew translit-

eration are the Boletín de Bibliotecas y Bibliografía,¹ and the Enciclopedia universal ilustrada.² The first gives transliteration tables for nine various alphabets: Gothic, Arabic, Hebrew, Greek, Syriac, Armenian, Coptic, Ethiopic and the Slavic languages. But, its tables of transliteration were not very comprehensive and the explanations of these tables were superficial and for some alphabets, very short and not quite accurate.

In the Hebrew table,³ of Boletín de Bibliotecas y Bibliografía, א ('āleḥ) has been omitted entirely. There was no differentiation between the two pronunciations of beḡdkefaṭ except between פ (pē) and פ (fē). The character ג (gīmal) has been equated to "g" and "gu". The letter ו (śīn) was equated to "s" while ו (śīn) has not been mentioned at all. There are in this table — and also in the table of the Arabic characters — some weaknesses even in the print of the characters. In the Hebrew transliteration table, for instance, the character

1. "La transliteración de alfabetos no Latinos" - "Sistema de transcripción Hebrea", in Boletín de Bibliotecas y Bibliografía, July-September 1935, Vol. 2, p. 238.

2. "Hebraismo", in Enciclopedia universal ilustrada, Madrid, Espasa-Calpe, (1952), Tomo XXVII, p. 879.

3. "La transliteración de alfabetos no Latinos", op. cit., p. 238.

ו (wāw) is written like a ג (gīmal) and the character װ ('āyin) like a ף (final šādê). Also, like most other transliterations the five final Hebrew letters — ך (final kāf), ם (final mēm), ן (final nūn), ף (final fē) and ץ (final šādê) — are not mentioned at all. But, the other characters are equated correctly and scientifically including guttural and sibilant ones. ק (qōf) has been equated correctly to "q", ש (šādê) to "š" and װ (šīn) to "š".

In the Hebrew transliteration table in Enciclopedia universal ilustrada א ('ālef) was not equated to the special character (ʾ), but to an ordinary "a". Like the Boletín de Bibliotecas y Bibliografía, there was no distinction here either between the two pronunciations of begedkefat. They are written, as was the case in Boletín de Bibliotecas, without dāgeš and here too most of them are equated, only to the occlusive ones. Thus, ב (bêt) is equated to "b", ג (gīmal) to "g" and ד (dālet) to "d". But, כ (kāf) was equated to "c" and not to "k" as the Boletín de Bibliotecas... did; פ (fē) to "ph", not to "f" and "p" as the Boletín de Bibliotecas... did; while ת (tāw) was equated to "th". In addition, many other characters, especially gutturals and sibilants, have been equated much less scientifically and much less correctly in Enciclopedia

universal ilustrada. For instance װ (wāw) has been equated to "o" and "v" and not to "w", ן (ḥêṭ) to an ordinary "h", ץ (ṭêṭ) to an ordinary soft "t", י (yōḏ) to "i" and to "j" and not to "y", ך (‘āyin) to an "h" and not to the special character (‘), ם (pē) and ן (fē) to "ph", ץ (ṣādê) to the digraph "tz", ף (qōf) to an ordinary "k" and ץ (śīn) to the digraph "sh". But both sources failed to mention the letter ץ (śīn) in their table and therefore did not equate it. One point to the advantage of Enciclopedia universal... is that it added a column which it called "prolongadas ò finales"¹. Here it lists the characters which can be prolonged when they occur at the end of a line in the sacred Scroll of the Law. It also mentioned the final five Hebrew characters (׳oṭiyōṭ sōfiyōṭ).

Finally, their dealing with the Hebrew vowels was very incomplete. The Boletín de Bibliotecas... did not mark or mention the Hebrew vowel-points, i.e. the diacritic vowels. It just mentioned that in Hebrew there is the vocalization a, e, i, o, u and that in adding initial ʾwā to these vocalization they become ă, ě, ǝ,

1. "Hebraismo", op. cit., p. 879.

(i.e. shorter). It added that א ('ālef), ה (hē), ו (yōd), ו (wāw) are used for prolongation.¹ But, it did not add the necessary diacritic points nor did it equate them. While the Enciclopedia universal ilustrada did the contrary. It did mention the vowel-points but, it did not bother to represent them, i.e. to equate them to Roman characters.² In addition, it neglected the ם (hōlem) and the longer vowels i.e. the letters such as ם (yōd-šērê), ם (yōd-segōl), ם (yōd-ḥīreq), ם (wāw-hōlem) and ם (wāw-sūreq). It did not equate nor even mention them.

The survey of the transliteration by the different European scholars in the transliteration of Hebrew shows the weaknesses in most of these systems and the great differences among them. It also shows that even within countries using the Latin alphabet and speaking one language, such as Germany, Spain, etc., there exist several systems for transliterating an alphabet like Hebrew and that the differences among these systems are great and lead to confusion. This increases the urgency for a uniform and

1. "La Transliteración de alfabetos no Latinos" — op. cit., p. 238.

2. "Hebraismo", op. cit., p. 880.

comprehensive system for transliterating Hebrew into Roman letters which can be used by all cataloguers and bibliographers.

8. MODERN ISRAELI SYSTEMS OF ROMANIZATION

During the second half of the nineteenth century the Jewish nationalist movement, the Zionist, began to spread all over the world. This movement has had a triple task: 1) to encourage the return of the Jewish people to their ancient land. 2) to help them adapt themselves to a new life there. 3) to facilitate the learning of Hebrew which became the language of the newcomers to Israel.

At that time several Jewish scholars who held Zionist ideals began to search for ways of developing and modernizing the Hebrew language so as to fit it for the daily needs of a modern nation. Some of these scholars have gone further in reforming and or simplifying the Hebrew script. But, until the end of the nineteenth century, the number of such scholars was very limited and their efforts sporadic.

In the first quarter of the twentieth century the movement for the reform of Hebrew writing became stronger. This because of: the difficulties which many of these

immigrants to Israel (then Palestine) faced in learning Hebrew; and the developments in other alphabetic writings, such as the reforms of the Cyrillic in post-1917 Russia, the proposals to reforms in Arabic, Persian, Chinese and Japanese between 1920 and 1935.

But none of the suggested reforms became popular or accepted by a majority either of the Jewish people settling in Israel, or of any Jewish community abroad because, most of the suggested systems complicated rather than simplified the Hebrew characters or the Hebrew diacritic vowels. Furthermore, they were all suggested together at approximately the same time. Therefore, none of them could win the support of a majority. There was also a fear that such reforms might lead to division in a critical moment when the nationalist movement was in its very first stage of modern nation building.

Some schemes for reforming Hebrew writing proposed to conserve the present Hebrew alphabet as a basis, but suggested reforms in it. Others went so far as to abolish the existing Hebrew alphabet completely and to replace it by an adapted Roman one.

The first series of schemes can be subdivided into three groups: a) The most conservative did not

intend to change the Hebrew characters nor the Hebrew vowel system. They suggested the writing of the vowel-points only in certain necessary cases which is called in Hebrew נִקּוּד חִלְקִי (Niqqūd ḥilqī). Among these systems are that of Ya'āqob Kohen¹, that of Nowwaḥ Ḥakam², that of G. Ginsberg³ and the system of the Academy for the Hebrew Language of 1964 which has been suggested for popular use.⁴

These suggested systems of the limited marking of the vowel-points economize in the time needed for writing all the vowel-points and all the dāgešes. They generally suggested the omission of the šēwās, the ḥāṭefs and part or all the dāgešes.

The system of Ya'āqob Kohen reduced the vowel-

1. In monthly Sneh, Edited by Ya'āqob Kohen, 1929, as cited by Werner Weinberg, The Orthographic Reforms of Hebrew, The Problem and the Attempts to Solve it, (the text is published in Hebrew under the title: תִּקּוּן הַכְּתִיב), Jerusalem, Magnes Pr., 1972, p. 68.

2. In Lēshonemū, Vol. 6, p. 220-222, as cited in Werner Weinberg, op. cit., p. 70.

3. G. Ginsberg, 1941, as cited in Werner Weinberg, op. cit., p. 70-71.

4. The Academy for the Hebrew Language, 1964, as cited in Werner Weinberg, op. cit., p. 74.

points to a third. The system of Nowwaḥ Ḥakām to a half, and the system of G. Ginsberg omits vowel-points from all words which can be read clearly without these vowels and retains them in words which are ambiguous without them. The academy for the Hebrew Language suggested only the abolition of the ḥāṭefs, the šēwās and the dāḡešes (except dāḡeš lene in bêt, kâf and fê, i.e. those of beḡedkefaṭ which are still pronounced correctly by all Jewish communities in Israel).

However, these systems of partial inclusion of diacritic vowels cannot replace completely the full diacritically vowelled system for the beginners in the language. These beginners need to know how every word is pronounced before they can master the language.

But, one thing can certainly be abolished without any negative influence on the writing system of Hebrew. This is the šēwā nāḥ which represents the absence of a vowel. Its abolition will also resolve the difficulty which many beginners of the Hebrew language have in distinguishing between it and the šēwā nā'. The ḥāṭefs and the qāmeṣ qāṭān, which represent very short vowels, could be replaced by their closest short ones. This would be a slight and reasonable reform which would simplify the complexity of the voweling system without any drastic

changes. For instance ַ (qāmeṣ qāṭān) and ָ (ḥāṭef qāmeṣ) could be replaced by ֿ (ḥōlem), ֿֿ (ḥāṭef pataḥ) by ֿ (pataḥ) and ֿֿֿ (ḥāṭef segōl) simply by ֿֿ (segōl). The proper pronunciation of the dāgešes, lene and forte, has to be taught, at present to beginners.

b) The second group of reformers suggest reforms only in the diacritic vowels system. Among these were A.Š. Kaminiskī in 1914,¹ Y. Bōršťayin in 1929,² and Yēhūdāh Būrlā' and Y. Šibte'el (both together) in 1963-1964.³

In 1914 Kaminiski suggested a system of reformed diacritic vowels. According to him ַ (wāw šūreq) and ֿ (wāw ḥōlem) will remain as they are, ֿֿ (šērê) and ֿֿֿ (ḥīreq) to be integrated with ֿ (yōd ḥīreq) and ֿֿֿֿ (yōd šērê). The diacritic signs of ַ (qāmeṣ), ֿ (pataḥ) and ֿֿֿ (segōl)

1. A.Š. Kaminiskī, in Hašfirāh, 1914, no. 21, as cited by Werner Weinberg, op. cit., p. 78.

2. Y. Bōršťayin, in Vollständige grammatik der alt-und neuhebräischen Sprache, Vienna, 1929, as cited by Werner Weinberg, op. cit., p. 76.

3. Yēhūdāh Būrlā', "Diyyūn biklalê haktīb", in Z"A, Published by Ha'academia Lallašon Ha'vrīt, Vol. 9, p. 111-114, 1963; and Y. Šibte'el, "G'mār Haddiyūn Behaša'at Haktīb", in Z"A, Vol. 10-11, p. 106-107, both as cited by Werner Weinberg, op. cit., p. 72-73.

are to be replaced by the three accentuation melody marks of the Massorah פַּסְטָא (Pāṣṭā'), מֶרְכָּא (Merkā') and תִּפְחָא (Ṭifḥā'). These latter marks are to be introduced between the characters and not above nor below them. He also omits all šewās and dāgešes except the lene ones in bêt, kāf and tāw and omit all other vowel-points. He gave the following example to illustrate his system:

" כִּלְאִיחִיד מַחִיבֵרִי הַהֶסֶת, דְּרוּת... 1 "

This system does not introduce any change in the writing of the Hebrew characters, but only in some of the diacritic vowels which it replaces by Massoretic and not by foreign marks. However, it does not ease the reading of the non-dotted texts much and does not substitute for the vowel-points system fully.

Y. Bōršťayin in 1929 and others before and since, has tried to find special signs for the ך (qāmeṣ gādōl) which is pronounced as a long "ā" and for the ך (qāmeṣ qāṭān) which is pronounced as a short "ō" and which are both represented by the same mark (ך). Bōršťayin has suggested the mark (ך̣) for the qāmeṣ qāṭān, while others

1. A.Š. Kaminiskī op. cit., as cited by Werner Weinberg, op. cit., p. 78.

have suggested an inverted qāmeṣ (⌒), an inverted segol (⌒), etc.

These systems offered reforms only for the qāmeṣ qāṭān. Some of the signs which they suggested for replacing it were easy and match the Hebrew vowel-points system, while others were complicated.

Yehudah Būrlā' and Y. Šibṭe'el in 1963-1964 presented a reformed system of partial writing of the vowel points. They suggested replacing two successive šēwās by a period as in the following: "בכתבך מכתבי" בכתבך...¹ They also suggested the introduction of letter vowels. For instance to write רֹשׁ (Ro'š), pronounced Roš, as רֹשׁ (Rw'š) i.e. to add a ך (wāw) between the character ר (Roš) and the character ש (ālef); to write רִשׁוֹן (Ri'šōn), pronounced Rišōn, with ך (yōd) i.e. to add ך (yōd) between the character ר (Roš) and the character ש (ālef) and to write לוֹ (lo') with ך (wāw) i.e. לוֹ (Lw').

Burlā's suggestion of a period to replace two successive šēwās did not solve the problem of the šēwās. It only economized their writing. The introduction of

1. Y. Būrlā', op.cit., as cited by Werner Weinberg, op. cit., p. 72.

ו (wāw) to the word רוֹשׁ (Ro'sš) and י (yōd) to the word רִשׁוֹן (Ri'sšōn) contradicts their original pronunciation. The א ('ālefs) in both words were pronounced clearly in Early Hebrew. רוֹשׁ could be pronounced Rō'sš or Ră'sš (similar to Arabic رَأْس - Ră's), while רִשׁוֹן could be pronounced Ri'sšōn or Ră'sšōn. This is why the plural of רוֹשׁ until present days is ראָשִׁים (Ră'sšim) and not רִשְׁוֹנִים (Ro'sšim) and the word ראשִׁי (Ra'sšī) (meaning principle) which derives from the same root is written ראֲשִׁי (Ra'sšī). The same situation existed with the word לֹ (Lō'). It could be pronounced in Early Hebrew Lō' i.e., with clearly pronounced א ('ālef) and shortly pronounced "o", or it could be pronounced as in literary Arabic La' - لاء.

However, these words may only be special cases. Therefore, it may not be a grave matter if they will remain written and pronounced as they are today; there are exceptions in every language. But, the addition of letters to these words will only carry them further from their original Semitic writing and pronunciation and will not ease dictation. So it would be much easier and more reasonable to keep them written as they are and to pronounce them as they were pronounced originally.

6) Some scholars advocated radical changes in the Hebrew characters and/or the Hebrew diacritic vowels.

The most radical was the system of Yōsef Kaplan. He suggested, in 1914, a reformed Hebrew alphabet with reformed diacritic vowels.¹ He differentiated between the two characters of begedkefat by adding a bar to the upper part of the "rafe" ones of these characters.² Kaplan also added vowel characters similar to א ('ālef) and ו (wāw) to represent "a", "o" and "u" by leaving the א ('ālef) for the vowel "a" and adding a bar to it to represent the consonant א ('ālef). He did the same with ו (wāw) while he left י (yōd) for "y" and used י (yōd hīreq) for the vowel "i". Kaplan also suggested a system of vowel-points written between the characters.³ These new vowels are much bigger than the traditional diacritic ones but they are similar to the latter, except pataḥ which is replaced by a diagonal line.

1. Yosef Kaplan, in Haḡfirāh, no. 95 and 101, 1914; also "Vorschläge zur Verbesserung der hebräischen Schriftformen", Archiv für Buchgewerbe, LIII, p. 36-39; also Ch. Lauer, "Zur Renaissance der hebräischen Sprache"; also A.Z. Schwartz "Zur Reform der", (1915, Zürich) Israelitisches Wochenblatt; all as cited by Werner Weinberg, op. cit., p. 67 and p. 79.

2. Yōsef Kaplan, op. cit., as cited by Werner Weinberg, op. cit., P. 67 and p. 79.

3. Ibid., p. 79-81.

This system economized in the use of dots (dāgešes) for begedkefat. It also distinguished between the two characters of begedkefat quite clearly by using a special character for each.

But, it also has many disadvantages. It increased the number of letters of the Hebrew alphabet by adding more letter vowels. It also took more space by increasing the size of the diacritic vowels and by entering them between the letters. In addition, it complicated the ◌ֿ (hōlem) and the ◌ֿֿֿ (hīreq) by adding three points above the bold hīreq and three points below the bold hōlem which it suggested.¹ In his modified alphabet of 1933, Yōsef Kaplan proposed a new segōl character which was similar to a װ ('āyin). This can lead to confusion.²

Many other reforms have been suggested by researchers of the Hebrew writing. But most of these systems were complicating rather than facilitating the Hebrew writing.³

1. Ibid, p. 79.

2. Ibid, p. 80-81.

3. Additional suggestions of reforms the reader can find in Werner Weinberg, op. cit. p. 82-106.

The second group of reformists mainly young radicals who were prepared to abandon the traditional Hebrew alphabet completely and to replace it by an adapted Roman.

These young reformists were influenced by similar movements, for romanizing other non-Roman alphabets which became strong during the second and the third decades of the twentieth century: the movement for romanizing Russian in Russia, for romanizing Chinese and Japanese, for romanizing Arabic and Persian in Egypt and in Iran, and particularly the movement which succeeded in romanizing Turkish led by Kemal Ataturk. At the same time many languages which had not been written at all before came to be written after the First World War with the Roman alphabet.

Some of these reformers were also influenced, in their claims for romanization by two additional factors. The first was the difficulty which many of the new immigrants, who did not know Hebrew before their arrival to the Holy Land, have in learning Hebrew. They faced not only a new language, but also a new script. Also some of these reformers thought that by romanizing its alphabet, the Hebrew language will spread faster and will become in time an international language. This was the opinion in

particular of Ittamar Ben-Avi as formulated, in his article, in his newspaper Deror of 17 November 1933.¹

The major problem facing romanizers of alphabets especially the Semitic ones such as Hebrew and Arabic, is how to romanize. Should they transliterate the letters exactly one by one, or transcribe them "phonetically", or compromise between the two? Compromise has proved to fit Hebrew and other Semitic languages best.

Another problem is how to find an adequate Roman equivalent for every Semitic character including the guttural and the sibilant which do not exist in the traditional Roman alphabet. The absence of Roman characters equivalent to these guttural and extra-sibilant Semitic obliges the rominizers to invent new characters or to use diacritic signs for equating these Semitic characters.

Such problems faced Yiṣḥaq Rozenberg in writing his Hebrew book in Roman alphabet. They also faced the two main advocates of the movement for romanizing Hebrew, Ittamar Ben-Avi and Zeev Jabotiniski.

1. Ittamar Ben-Avi, in Deror, no. 1, p. 1, 17 Nov., 1933, as cited by Werner Weinberg, *op. cit.*, p. 111.

Rozenberg's system was classical: transliterating every Hebrew letter into its Roman equivalent. Weinberg quotes the following text from page 48 of this book of Rozenberg, *Hebräische Conversations--Grammatik*, published in Vienna, in 1898:

Pōh 'āmowd 'immadiy, qowré nā'iy!
 haṭ ozn'khā liy, v'asmiy 'ākhā pēšer
 dābhār, mah himrišāniy (mah rā'-
 iythiy 'al kakhāh) lābhō, biq'hal
 m'chabrēy s'phāriym (la'ālowth 'al
 bomthēy chowbhrēy chābher, l'howsiph
 'al hāri'sowniym 'owd sēpher 'echād
 mowreh hassāphāh ha'ibhrijāh...¹

The advantage of this system is that it transliterated every Hebrew character into a Roman one. It transliterated א ('ālef) and ע ('āyin) by the special signs (') and ('). It transliterated ט (ṭēṭ) by "ṭ", ש (śīn) by "ś". It also used diacritic marks for distinguishing between long and short vowels. Its equation of ב (bēṭ) to "bh", ג (gīmal) to "gh", ד (dālet) to "dh", כ (kāf) to "kh" and ת (tāw) to "th" matches the English language system of using digraphs, while its equation of ח (ḥēṭ) to "ch" and י (yōḏ) to "j" matches the German language.

1. Werner Weinberg, op. cit., p. 108.

One of the main disadvantages of this system is that it does not render the phonetic value of the Hebrew script clearly. This can be seen in the equation of ם (wāw hōlem) to "ow" and of ם (yōd hīreq) to "iy", while they are pronounced as "ô" (long o) and "î" (long i). Another disadvantage is that it represented the "rafeh" (weak) characters of begedkefat by the digraphs gh, dh, kh, ph and th which contradict the Semitic languages tradition of not using digraphs for a specific pronunciation. Another disadvantage is that he equated ן (hêt) to "ch" and ן (yōd) to "j" instead of equating them to "h" and "y". It seems that in his equation of these latter characters he was influenced by the German system.

Ittamar Ben-Avi has published a Hebrew book in Roman alphabet in 1927, under the title Avi.¹ This book also included a Hebrew-English dictionary in Roman alphabet.

His romanization system, especially the early one, was influenced by the French system of writing. He mentions this in his introduction to his Avi: "Ha-alef-beyt ha-latini (ha-tzâr-fati be-''iqar) hôt'âm la alef-

1. Ittamar Ben-Avi, Avi, Jerusalem, 1927, Introduction, as cited by Weinberg, op. cit., p. 109.

beyt ha-"ivri..."¹

In his book he equated ו (śīn) to "c" and װ (śīn) to "ç", i.e. to "c" with cedilla. He also adopted all the French diacritic marks and adapted them to his system. He equated א (ʾālef pataḥ) to "a", א (ʾālef qāmeṣ) to "â", א (ʾālef ḥāṭef pataḥ) to "à", : (šewā nā) to "e", א (ʾālef segōl) to "è", א (ʾālef šērê) to "ë", א (ʾālef ḥāṭef segōl) to "é", א (ʾālef ḥīreq) to "i", א (ʾālef yōd ḥīreq) to "î", א (ʾālef ḥōlem) to "o", א (ʾālef wāw ḥōlem) to "ô", א (ʾālef ḥāṭef qāmeṣ) to "ò", א (ʾālef qibbūṣ) to "u" and א (ʾālef wāw šūreq) to "û".²

The system of Ittamar Ben-Avi was non-phonetic transcription. He failed to distinguish between א (gīmal) and א (gīmal), א (dāleṭ) and א (dāleṭ) and א (tāw) and א (tāw), possibly because the majority of the Jewish population of Palestine, being Aškenazi, do not distinguish between these characters. Ittamar Ben-Avi also

1. Translation: "The Latin alphabet (particularly the French) has been adjusted to the Hebrew alphabet", - Ittamar Ben-Avi, op. cit., as cited by Weinberg, op. cit., p. 109.

2. Ittamar Ben-Avi, op. cit., as cited by Werner Weinberg, op. cit., p. 109.

rendered װ ('āyin) to two ordinary commas (",") instead of an inverted one (‘). He equated ן (ḥêṭ) to an "h" upside down (ʎ), כ (kāf) to a "k" also inverted (ʎ), while צ (ṣādê) to the digraph "tz".

Like all other romanizers of Hebrew, Ben-Avi too, did not invent special Roman characters to equate the five final Hebrew characters, but equated them to ordinary Roman. Like them he equated the Hebrew sign of gemination, the dāgeš forte, by doubling the geminated character.

There are many flaws in this system. Failure to distinguish between ג (gīmal) and ג (gīmal), ד (dālet) and ד (dālet), ת (tāw) and ת (tāw) constituted a break between these characters and their traditional pronunciation. This would make research into the language more difficult if this system were to replace the traditional. The equation of צ (ṣādê) to the digraph "tz" distorts the original pronunciation of this character and contradicts the Semitic principle of not using digraphs. His representation of ן (ḥêṭ) and כ (kāf) by inverted characters radically complicates instead of facilitating the system. In addition, these inverted characters have to be added to the ordinary Roman alphabet typewriter. The equation of װ (śīn) to "c", of װ (śīn) to "ç" and of װ ('āyin) to two commas (",") are a deviation from what was accepted

by most romanization systems of these characters.

In December 1928, Ben-Avi began to publish a daily newspaper under the title Ha Shavua Ha Palestini¹ in which he modified his system of romanized Hebrew. He continued to publish it until April 1929. He agreed to stop it after a strong pressure from most nationalist, religious and conservative sectors, each sector for its own reasons. But, in November 1933 he began to publish a new daily newspaper, with a more modified and of a more phonetic romanized system of writing, under the title Deror.² He continued to publish this newspaper until March 1934. Then, he was again obliged to stop publishing it under similar pressure partly to avoid a division in the population.

The modified romanized system of Ittamar Ben-Avi as it has appeared in Deror² was very different from his first one. It was more phonetic and based on modern pronunciation of Hebrew by young Sabras. Thus, it does

1. Ittamar Ben-Avi, Ha Shavua Ha Palestini, Vol. 1-3, 14 December 1928 - 23 April 1928, as cited by Werner Weiberg, op. cit., p. 110.

2. Ittamar Ben-Avi, Deror, 17 November 1933 - 25 March 1934, as cited by Werner Weinberg, op. cit., p. 110-111.

not distinguish, in its representation of the characters, between - (paṭah) and ַ (qāmeṣ), ֿ (ḥīreq) and ֿ (yōḏ ḥīreq), ֿ (ḥōlem) and ֿ (wāw ḥōlem), ֿ (qibbūṣ) and ֿ (wāw šūreq). In this system he has abolished the inverted characters which represented ַ (ḥêṭ) and ֿ (kâf). He also returned to the representation of ֿ (śîn) by "s", ֿ (šîn) by the digraph "sh" and ֿ (kâf) by the digraph "kh". But, he represented ַ (ḥêṭ) by double "hh" and omitted the representation of ֿ ('ālef) and ֿ ('āyin) (except of 'āyin in a closed syllable which occurs in a middle of a word). He also omitted the silent "hē" at the end of a word to support a long vowel. He equated "wāw hahibbūr" (conjunction wāw), before "rafeh" pronunciation of begeḏ-kefat, with "u" and not with "wu" as it is written, in Hebrew, and as it was pronounced originally. He does not distinguish between ֿ (ṭêṭ), ֿ (tāw) and ֿ (tāw) and equated all the three to an ordinary "t". He also transliterated ֿ (śîn) and ֿ (sāmek) identically. Like all romanizers of Hebrew, he represented the dāḡeš forte, sign of gemination, by doubling the geminated letter. But he also doubled letters which occur in a closed syllable at the end of a word such as in the case of ֿֿֿ (Leatt)¹,

1. Ittamar Ben-Avi, Deror, op. cit., as cited by Werner Weinberg, p. 111, column 1, line 15.

נַח (Ett)¹, אַמ (Amm)², נַחַח (Emett)³, etc. This can be considered as a radical innovation in Hebrew.

Z. Jabotiniski was interested in reforming Hebrew writing earlier than Ittamar Ben-Avi, but in a slower and more steady manner than the latter. Indeed, he collaborated with Ben-Avi at one period, but, they did not agree on a single system of romanization. Thus, he worked out independently a system which he applied in his Taryag Millim.⁴ The book had been written in 1938-1939, but was published only in 1949.

He developed a phonetic system of romanization based on actual pronunciation by the majority of the younger generation in Israel. In his system he was influenced by several European languages. His equation of ט (qāmeṣ) with "à", of ש (šewā na') at the beginning of a syllable with "ë", of ו (wāw ḥōlem) with "ó", of ז (ṣādê)

1. Ibid., as cited by Werner Weinberg, op. cit., line 30.

2. Ibid., as cited by Werner Weinberg, op. cit., line 22.

3. Ibid., as cited by Werner Weinberg, op. cit., line 10.

4. Z. Jabotiniski, Taryag Millim, (n.p.), 1949, as cited by Werner Weinberg, op. cit., p. 112-113.

with "ç" indicates that he was influenced by the French system of accents. His equation of כ (kāf) with "ch" and of נ (hêt) with "œ" reflects German, Russian and Greek influences, while his equation of ש (šîn) with "sh" matches the English system. From the Massoretic tradition, Jabotiniski borrowed the ~ (zarqa)¹ above the "ā" to represent פ ('āyin-qāmeš) at the beginning of a word or after : (šewā nāḥ). In other cases פ ('āyin) is not transliterated. א ('ālef) he did not transliterate at all. ו (wāw ḥōlem) he transliterated in some cases to "ó" and in other cases to an ordinary "o".²

This Jabotiniski system renders the study of spoken Hebrew easier for foreigners who are not at all familiar with the Hebrew characters but who want to learn quickly how to speak Hebrew without needing to spend time to learn the Hebrew characters. But, it has also some faults. It does not distinguish between ג (gimal) and

1. The (~) zarqa is a mark introduced by the Massoretic Scholars in the seventh century A.D. to represent long accentuation in melody in reading the bible. It is similar to Arabic ~ (Madda) which is put above the initial א (alif) for lengthening its pronunciation. — Z. Jabotiniski, op. cit. as cited by Werner Weinberg, op. cit., p. 113.

2. Z. Jabotiniski, op. cit., as cited by Werner Weinberg, op. cit., p. 113.

ך (gīmal), ד (dālet) and ד (dālet), נ (tāw), נ (tāw) and ו (têt), ב (bêt) and ו (wāw). It also transliterates "wāw hahībbūr" (waw conjunction) by "u" as is pronounced by Aškenazic and part of the Sefardic communities and not to "wu" as it was pronounced traditionally. This system although easier and more reasonable than that of Ben-Avi, is not sufficient to replace the traditional Hebrew writing system.

M. 'Avinōr was active in the movement for reforming the present Hebrew characters. But, he has always admitted that his final goal was to write Hebrew with Roman alphabet. Thus, in 1959 he published a pamphlet under the title 'Ivrit Madda'it¹, in which he explained his system of romanizing Hebrew. In 1965, he presented a new version with many improvements.²

In his pamphlet 'Avinōr presented a compromise system of romanizing Hebrew based on a romanized alphabet composed of thirty three characters. Twenty two of these

1. M. 'Avinōr, 'Ivrit Madda'it, Holland, 1959, as cited by Werner Weinberg, op. cit., p. 114.

2. M. 'Avinōr, "Ivrit biktāb latini", Madda', Vol. 9, p. 183-187, as cited by Werner Weinberg, op. cit., p. 114.

characters represent the twenty-two original Semitic ones, three characters represent the three rafeh (weak) characters of "p", "k" and "f", three characters represent pronunciations which entered Hebrew from other languages, and five represent the five different Hebrew vowels. In his work he brought illustrative examples of texts in which he applied his system of romanization and set forth the grammatical rules for it.

The innovation in the 'Avinōr system was that he introduced new characters to represent the Hebrew guttural and sibilant sounds which do not exist in the Latin alphabet instead of using diacritic vowels to represent them.

He also inserted into the Hebrew alphabet five vowel characters to represent the five Hebrew vowel sounds. The first one represents the sound of "a"; he called it Attah and put it after 'āleḥ in the order of his proposed alphabet; the second, represents the sound of French "é", he called it Egel and put it after "hē"; the third, represents the sound of "i", called Iriq and put it after yōḏ; the fourth, represents the sound of "o", called Olom and put it after 'āyin. In addition, he added three characters at the end of his alphabet to represent three foreign sounds which entered Hebrew from other languages. These are: j (i.e. j with a small bar on top) to represent

the French soft sound of j (in Hebrew it is usually equated to י), J (i.e. j with a long winged bar on the top) to represent the English hard sound of j (in Hebrew it is equated to י) and č (i.e. c with a small v on top) to represent the sound of English ch (in Hebrew it is equated to כ). He gave specific names to each of these new characters.¹

In contrast to Jabotiniski, who used "œ" to represent הֵט, 'Avinōr used it for representing כַּף. For הֵט he invented the new character (ח), for 'ālef the new character (א), for טֵט the new character (ט), for capital 'āyin the new character (א), for small 'āyin he retained its Hebrew cursive form (א), and for שֵׁן the character (ש) which is similar to the traditional Hebrew.¹

He equated dāḡeš forte, the sign of gemination, by doubling the letter. He also doubled הֵט and 'āyin when they are supposed to be geminated. In addition, he doubled some explosive characters at the end of a word after a long vowel, like the "d" in the word cadd.² But,

1. M. 'Avinōr, op. cit., p. 185, as cited by Werner Weinberg, op. cit., p. 115.

2. M. 'Avinōr, op. cit. p. 183-187, as cited by Werner Weinberg, op. cit., p. 114.

he was less radical than Ben-Avi in doubling letters at the end of the words. Like Ben-Avi and Jabotiniski, he also omitted unpronounced "hē" which occurs at the end of a word to support a long vowel, while a pronounced "hē", ה (hē mappīq) he equated with an ordinary "h". He also omitted unpronounced yōd and unpronounced wāw at the end of a word except when they represent the tenses of the verbs, such as in עֵינֵיהֶם ('ēneyhem), עֵינֵיךָ ('ēnā(y)w), עֵינֵיהָ ('ēneyhā), etc.¹

The romanization system of 'Avīnōr, although the most original and the most comprehensive to be proposed by any Israeli romanizer, also has many drawbacks. His romanization of vowels was too phonetic. He did not distinguish between long and short vowels except the hāṭefs, which he represented by an accent "˘" (identical to the French ˘ "accent aiguë"). He also did not distinguish between ג (gīmal) and ג (gīmal), ד (dālet) and ד (dālet), ת (tāw) and ת (tāw). He also abolished the character שׁ (śīn) and replaced it by ש (sāmek). In addition, he replaced both שֵׁ (śērê) and שְׁ (śěwā nā) by "é", but omitted שׁ (śěwā nā) at the beginning of a word.

1. Ibid., as cited by Werner Weinberg, op. cit., p. 116.

In his system Hebrew "service letters" (prepositions and conjunctions) are written separately and put alone without supporting vowels like in the case of "l ktob, b battey, etc".¹ This can lead to confusion, especially for a beginner of the language who will have to guess how to read them. But, when two "service letters" come consecutively they are put together and the second one is vowelised as in the expression "šbe 'ivrit".² Another lack in the romanization system of Avinor is his equation of י. (yōḏ šērê) with "ey". For instance, he wrote וְיַמְיִן as follows "wbé yameynu"³ instead of "wub- yāmênu" which represents its traditional pronunciation since the Massoretic period.

About the time 'Avīnōr was presenting his system another Israeli romanizer, 'Uzī 'Ōrnam, suggested another system.⁴ According to his system 'ālef is ('), 'āyin is

1. Ibid., as cited by Werner Weinberg, op. cit., p. 114.

2. Ibid., as cited by Werner, Weinberg, op. cit., p. 114.

3. Ibid., as cited by Werner, Weinberg, op. cit., p. 114.

4. 'Uzī 'Ornan, Baṁḥaneh, 26 June 1962, as cited by Werner Weinberg, op. cit., p. 116.

('), ṭêṭ is "ṭ", ḥêṭ is "ḥ", ṣādê is "c", wāw is "w", qōf is "q" and šîn is "š".

It seems that Ornan was influenced by several previous experiences. His equation of 'ālef with ('), of 'āyin with ('), and ṭêṭ with "ṭ" is identical to the traditional equating of these letters which has been accepted internationally. His equation of ḥêṭ to "ḥ" is identical to that of Jabōtīniskī. His equation of ṣādê to "c" is identical to that of 'Avīnōr. Also, like 'Avīnōr, he omitted "hē" at the end of the word when it supports a long movement and retained it when it represents a pronounced one such as ḥē mappiq). Like most other romanizers, he also romanized forte dages by doubling the letters and used capital letters at the beginning of a sentence, for proper names, for their derivation and in titles. Like 'Avīnōr he omitted all šēwā nā' and ḥāṭefs as in the following examples: "whaqqeṣer, yilmdu, etc,"¹ instead of writing wehaqqeser, yilmedu, etc. He transliterated the vowels phonetically, did not distinguish between long and short ones and equated šîn and sāmek identically with "s".

1. 'Uzī 'Ornan, op. cit., as cited by Werner Weinberg, op. cit., p. 116.

Among the changes that 'Ornan made are the equation of šīn with "š" i.e., with "s" with a dot below. This latter character was preserved traditionally to šādê. He also omitted all distinctions between the two characters of begedkefat including the ones which are still pronounced correctly in Modern Israel. Thus, he equated bêṭ and bêt with "b", pē and fē with "p", kāf and kâf with "k". But he mentioned that these three latter characters can be pronounced in two ways. Thus, he wrote "tnak" i.e. tēnak with an ordinary "k", the word "ibrīt" i.e. 'ibrīt with an ordinary "b" and an ordinary "t", etc.¹ In his proposed system אֲוִיָּוִת הַשְּׂמִינִי (the service letters) are all connected to the word which they serve. But only the first letter of the original word can be capitalized as in the following example: "haA"b".²

The most important deficiency in his system is his omission of the distinction between the two characters of begedkefat and the writing of the "service letters" without vowels. These two grave flaws can lead to ambi-

1. 'Uzi 'Ornan, op. cit., as cited by Werner Weinberg, op. cit., p. 116.

2. Ibid., as cited by Werner Weinberg, op. cit., p. 117.

guity in reading Hebrew with the 'Ornan system and obliges the reader to guess much before pronouncing a word or a sentence.

Soon after the presentation of the 'Ornan system, Y. Raṭūš presented his system of romanization in a series of articles in the Israeli newspaper Yēdī'ōt 'Ahārōnōt from June until September 1962.¹ His system was partially phonetic and partially non-phonetic. He used digraphs for equating bêt, kāf and fē, i.e. he equated them successively with "bh", "kh" and "ph". He equated šîn with "sh" while sîn with "ś" or "š".¹ In addition, he equated the pronunciation of characters which entered Hebrew from other languages, such as the English hard "j" with the digraph "jh", the French soft "j" with the digraph "zh" and the English "ch" with the digraph "ch".¹

His system deviates from what has been accepted by international standard and by many other romanizers of Hebrew. Most of his equations were not reasonable, for instance, he equated א ('ālef) with "w", ו (vêt) with

1. Y. Raṭūš, Yēdī'ōt 'Ahārōnōt, June - September 1962, as cited by Werner Weinberg, op. cit., p. 117.

"ô" or with "œ" and ץ ('āyin) with "y".¹ The only "justification" which may be made for his equation of 'āyin with "y" is that this character has some similarity in structure to capital Y. In addition, he did not equate the character ת (tāw) "rafeh" and transliterated both ת (tāw) and ת (tāw) by "t" in his sample text.¹

Raṭūš transliterated the character ן (wāw) by "v" and ן ן (wāw conjunction) to "ve" as in the following example: "Ve axarei kikhlot hak kol..."¹ He equated ḥêṭ with "œ" and ṣādê with "c" as many other modern romanizers did. His transliteration of yōḏ by "j" can be explained as borrowing from the German.

In his sample text he romanized the vowels phonetically as they are pronounced now by most Israelis. But he mentioned in his romanization rules that long vowels can be distinguished by the marks (-) or (..) above it, and ḥāṭefs, very short ones, by the mark (˘) above them too and šēwā nā' by the sign ('). Ratus added that these marks would be used only in books for teaching the lan-

1. Y. Raṭūš, op. cit., as cited by Werner Weinberg, op. cit., p. 118.

guage, dictionaries, etc.¹ But, in his sample text he transliterated šewā nā' by "e" like in "Ve"², yōd-šērê by "ei" like in "axarei"² instead of "ē" (long), its traditional pronunciation which is followed by Sefardic communities.

Raṭūš also omitted all initial 'ālefs accompanied by a vowel such as the case of the 'ālef of אֶחָדָא ('āhidā³) which he wrote "axida"³ and of בְּעֵמֶת (be'emet) which he wrote "beemet"⁴. But 'ālef at the end of a syllable he represented by "w" as in the case of חָלוֹ (halō') which he wrote "Halow"⁵. He also omitted all unpronounced "hē"s i.e. all "hē"s which support a long vowel at the end of a word, while he did transliterate a pronounced "hē". When such a pronounced "hē" occurring in the middle of a

1. Y. Raṭūš, op. cit., as cited by Werner Weinberg, op. cit., p. 117.

2. Y. Raṭūš, op. cit., as cited by Werner Weinberg, op. cit., p. 118, line 2.

3. Ibid., as cited by Werner Weinberg, op. cit., p. 118, line 19.

4. Ibid., as cited by Werner Weinberg, op. cit., p. 118, line 31.

5. Ibid., as cited by Werner Weinberg, op. cit., p. 118, line 18.

word, he marked it by a (') as in maz'hir¹ to distinguish it from an "h" which is part of a digraph.

In his system of romanization he separated the definite article "hē" from the following word. He doubled the first letter of this following word. He also attached one of these doubled characters to the "hē". Thus, he wrote, for instance, "hag giljonot"² instead of writing haggilyōnōt or haḡilyōnōt. This can confuse the beginner learning Hebrew by the Raṭūš system. He may not become aware of the limit of the definite article "hē". In addition, Raṭūš transliterated ו (wāw haḡibbūr - wāw conjunction) to "u", as in the example of "u khebhar"², and not to "wu" as was pronounced originally and as is still pronounced by Middle-Eastern and North-African Jewish communities. This is another weakness in his system.

In fact none of these modern Israeli systems of romanizing Hebrew could become popular because none are perfect or near perfection. None are adequate for popular use. Each of them has many flaws in one aspect or another.

1. Ibid., as cited by Werner Weinberg, op. cit., p. 117, line 21.

2. Ibid., as cited by Werner Weinberg, op. cit., p. 118, line 9.

It seems that most of these romanizers lack full knowledge in, at least, one of the areas essential in preparing a comprehensive system of romanizing Hebrew.

It seems also that most of these romanizers did not have a ^othorough knowledge of the historical development of Greek and Roman characters from the Phoenician and from the Early Hebrew ones. Also many of them were not familiar enough with the traditional pronunciation of Hebrew characters and words nor with the historical development of this pronunciation, while others simply ignored them.

Some of these romanizers appear to have prepared systems merely to publish them in the press, in a periodical or a pamphlet or to submit them to the Academy of the Hebrew Language, only to show that they too have something to suggest or to propose.

In addition, most of them have published their systems at around the same time as in a contest. Thus, many of these schemes contradict each other. Naturally, the Academy of the Hebrew Language was also confused and could not readily decide which, if any, system to adopt. The problem of reforming or romanizing the Hebrew characters remains unsolved.

9. INTERNATIONAL SYSTEM

The International Organization for Standardization (ISO) has decided to end the ambiguity and the confusion in transliterating, into Roman, the Hebrew characters as attempted by different libraries in various countries, the ambiguity and confusion resulting from the different codes used by these libraries. Thus, it has appointed a technical committee of experts from twenty six nations to prepare a comprehensive scheme of transliteration of Hebrew which would be used on the international level. After seven years of research, from 1952 until 1959, the ISO received the draft of a standard from the Committee. It has published it in May 1962 under the title ISO Recommendation R259, Transliteration of Hebrew.¹

This standard was the most comprehensive and the most adequate to date. It followed to a great extent the spirit and the principle of transliteration in equating

1. "ISO Technical Committee Produces Hebrew Transliteration Standard", op. cit., p. 4601-4602; national Organization for Standardization (ISO), ISO Recommendation R259, Transliteration of Hebrew, op. cit., p. 2; also Association française de normalisation (AFNOR), FDZ no 46-003, op. cit., p.1.

every Hebrew character by a Roman one. It did not use digraphs, for digraphs can lead to ambiguity; they can be pronounced differently by persons accustomed to the different languages using the Roman alphabet. The standard covered all the Hebrew characters well, including the guttural and the 'extra'-sibilant ones, which did not exist in the Roman alphabet, by using diacritical signs (dots, dashes, etc.) available on typewriter keyboards.

It was also the first scheme which adequately equated all the Hebrew vowels including long, medium, short and very short. It compromised between transliterating letter by letter and transcribing phonetically because Hebrew, like other Semitic languages, does not usually write all the vowels of words, especially in books for adults.

Its romanizers must be knowledgeable both in the Hebrew language, alphabet and grammar and, at least in some of the many languages written in Roman alphabet. They have to be able to introduce correctly the unwritten Hebrew vowels, so that one who knows the language can read and retransliterate them easily. These requirements have been followed, to a great extent, by the ISO. Its standard has therefore been adopted by l'Association française de

normalisation (AFNOR) in 1964,¹ after thorough discussion and consideration.

This scheme provided character symbols for twenty-nine Hebrew consonants, seventeen Hebrew vowels and three non-Hebrew phonemes which entered Hebrew from other languages. In its consonant table², it distinguished clearly between the two characters of begedkefat. It equated ל (bêṭ rafeh) to "v" and also gave an alternative for equating it with an underlined "b" for philological publications. It equated ג (gīmal rafeh) by "g" i.e. with an overlined "g", ד (dāleṭ rafeh) with "d" i.e. with an underlined "d", כ (kāf rafeh) with "k" i.e. by an underlined "k", צ (ṣādê) by "z" i.e. by an underlined "z" and ט (ṭāw) by "t", i.e. with an underlined "t".

It also equated, correctly, ו (wāw) with "w", י (yōd) with "y", פ (qōf) with "q", פ (fē) with "f" and gave also an alternative to equate it with an overlined "p" for publications of philological nature. It equated א (ʾālef) with (ʾ) and ע (ʿāyin) with (ʿ) as many other

1. Association française de normalisation (AFNOR), op. cit., p. 1.

2. International Organization for Standardization (ISO), op. cit., p. 4.

modern references did. It equated ך (hē mappīq) with an ordinary "h", while unpronounced ך (hē), which comes at the end of a word for supporting a long vowel, is omitted and replaced by a diaeresis over the proceeding vowel as in the following example of ךָּ (parä).¹ It equated ך (hêt) with "h" i.e. "h" with a dot below and ך (têt) with "t" i.e. "t" with a dot below. Its equations, in general, are much more accurate than systems which used digraphs. They parallel the Hebrew system which also distinguishes between characters by diacritic marks.

The ISO is more scientific than many other standards which equated ך (hêt) with an ordinary "h"², with "ch"³, with "kh"⁴, with "x"⁵, etc.; ך (têt) with an ordinary "t"⁶

1. Ibid., p. 6.

2. Lord Edward Gleichen, op. cit., p. 70; also "Hebraismo", op. cit., p. 879.

3. "Hebreu", in Larousse du XXe siècle, op. cit., p. 979.

4. Abraham S. Halkin, "Hebrew Language and Literature", in The Encyclopedia Americana, International ed., N.Y., Americana Corp., (c1972), Vol. 14, p. 34.

5. Saul Levin, The Indo-European and Semitic Languages, Albany, State University of New York Pr., (c1971) p. XXXIII.

6. Lord Edward Gleichen, op. cit., p. 70; also "Hebraismo", op. cit., p. 879, also "Hebraische Alphabet", op. cit., p. 117.

or with "ʃ"¹; ן ('āyin) with "h"², with "a"³, with "y"⁴, with "ə"⁵, etc., etc. Many other Hebrew characters have been equated with digraphs and even with polygraphs in the several standards or works. I have counted until sixteen different equations for some characters by the different references. The equation of װ (šīn) to "š"⁶ came originally from Slavic sources and not from Semitic ones. But this equation has been already accepted internationally for the pronunciation of this character in the different schemes. Also the distinction made by ISO between װ (šīn) and ן (sāmek) by equating the first one with "ś" and the second with an ordinary "s", (although they were pronounced identically long ago) is another proof of its accuracy.

-
1. Saul Levin, op. cit., p. XXXiii.
 2. "Hebraismo", op. cit., p. 879.
 3. "Hebreu", in Larousse du XXe siècle, p. 979.
 4. Y. Ratůš, op. cit., as cited by Werner Weingerg, op. cit., p. 118.
 5. Saul Levin, op. cit., p. XXXiii.
 6. International Organization for Standardization (ISO), ISO Recommendation R259, op. cit., p. 4.

The ISO Standard was the first in the history of romanizing Hebrew to cover all the Hebrew vowels. It deals with the seventeen Hebrew vowels: the letter vowels and the point vowels.¹ It omitted only the : (šewā nāḥ) which represents the absence of a vowel and which is not equated in any scheme because it has no real importance. It equated - (paṭaḥ) to an "a", ַ (qāmeṣ) to "ā", ֿ (qāmeṣ qāṭān) to "o" i.e. to "o" with a cedilla below it, ֿ (segōl) to "ē", i.e. to "e" with a cedilla under it, ֿ (šērê) to "e", ֿ (ḥīreq) to "i", ֿ (qibbūṣ) to "u", ֿ (yōḏ segōl) to "ê", ֿ (yōḏ šērê) to "ē", ֿ (yōḏ ḥīreq) to "î", ֿ (wāw ḥōlem) to "ô", ֿ (wāw šūreq) to "û", : (šewā nāḥ) to "ě", ֿ (ḥāṭef paṭaḥ) to "ă", ֿ (ḥāṭef segōl) to "ĕ" and ֿ (ḥāṭef qāmeṣ) to "ö".¹

Much confusion in equating Hebrew vowels existed before the introduction of the ISO Standard. Some of these vowels have been equated in eight different ways by the different sources. None of these authorities troubled to equate all the seventeen Hebrew vowels. Even the Encyclopedia Britannica, which introduced systematization in

1. Ibid., p. 5.

equating these vowels by grouping them into long, medium, and short, was unable to equate more than ten of them.¹

The ISO standard equated adequately the non-Hebrew phonemes which entered Hebrew from other languages. It equated 'ג (= English j) with "ǵ", as in גִּי' - Ġōn; 'י (= French j) with "ǰ", as in יֵי - žan; 'כ (= English ch) with "č", as in כֵּיכֵי - Čerčil.²

In spite of its comprehensiveness, the ISO Standard of romanizing Hebrew remained uncomplete. It did not transliterate the initial alef at all, while it did transliterate medial and final 'ālefs by a dash over the preceding vowel even though they were originally pronounced clearly as consonants. Its equation of the rafeh characters of ג (gīmal) with "ḡ", i.e. with an overlined "g", goes against the principle of consistency. It might have been better to equate it with "g" underlined, as other rafeh characters of begedkefat.³ The character ה (hêt)

1. Ibid., p. 5.

2. Ibid., p. 7.

3. "ḡ" overlined is used for the romanization of Arabic غ, possibly because غ and many other Arabic characters are above-dotted and not belowdotted as in the case of ح, ف, ق, ن, ت and ث.

could be underlined "Ĥ" instead of being dotted below.¹
 Ṣ(ṭêṭ) could remain transliterated as underdotted "ṭ" or it could be written as "ṭ̄" i.e. "t" with two bars. The two bars represent its emphasis more reasonably. The equation of Ṣ (ṣādê) with an underlined "z" contradicts its original pronunciation which has an emphatic sound of "s". Thus, it could have been more accurate to retain it as underdotted "ṣ" or to transliterate it to an underlined "s" for consistency.

The ISO equation of א ('āleḥ), ה (hē), the vowel-points and gemination could have been also improved. It would be easier and more logical to equate ר (qāmeṣ) with an overlined "ā" instead of an underdotted "ṛ"², א ('āleḥ qāmeṣ) with "ā'" as in the case of בָּרָא (bārā') instead of

1. Ḥêṭ was underdotted by many early systems of romanizing Hebrew and Arabic, because Arabic ḥ which is a "twin" of Arabic ḥ, was already transliterated to an underlined "ḥ". This has been done just for uniformity in romanizing this Semitic character -ḥêṭ- in both Hebrew and Arabic. But, ḥêṭ could be underlined also in Arabic, while Arabic ḥ (kāf) could be written "ḥ" i.e. with an inverted small "h" below the character "ḥ" as is the case with the ʿ (p) which entered Arabic from other languages.

2. International Organization for Standardization (ISO), ISO Recommendation R259, op. cit., p. 5.

equating it to "ā" (bārā)¹ as it did. ף (qāmeṣ qāṭān) as in the first qames of ףָׁ (‘Ofṛāḥ), which is pronounced as a short "o", could be better equated with "ō" instead of "o"², while ף׃ (ḥāṭef qāmeṣ), a very short one, could be equated with "ö" instead of "o"³.

It could well be easier and more logical to equate ׃ (segōl) with "ē" instead of "e"³ and ף׃ (yōḏ segōl) with "ê" instead of "ê"³. In addition the distinction between ׃׃ (ḥāṭef segōl) and ׃ (šewā nā‘) seems easier and nearer the Hebrew diacritic system if it were done by equating ׃ (šewā nā‘) with "ě" instead of "ē"³, while ׃׃ (ḥāṭef segōl) with "ě" instead of "ē"³ because the former is a shorter "e" than the latter according to what seems to have been the opinion of the Massoretic scientists of the Seventh Century A.D.

In addition, gemination by doubling the letter has no basis in any Semitic Script and does not fit any Semitic Language. Thus, Hebrew used the dāgeš forte (·) for gemination, while Arabic used the šaddāh (◌ّ) for it.

1. Ibid., p. 6.

2. Ibid., p. 7.

3. Ibid., p. 5.

Other Semitic writings such as Syriac and Jacobite used also diacritic signs for this¹.

However, when it doubled the romanized Hebrew geminated character representing the forte dāgeš^ʿ (such as after the article "hē" or after the "service letters"), the ISO faced a problem: doubled letter in positions where they are unfamiliar to the Western eye. Thus, it felt obliged to divide the doubled letter at the beginning of such a word into two; it attached one to the definite article or to the preposition; it retained the other in the original word; it joined the two elements by a hyphen, as in "hak-kohen" and "miq-qeḏem"² (in Hebrew מִקְדָּם, הַכֹּהֵן).

It is easier and more befitting the Hebrew language structure to use the Massoretic ~ (zarqāh) or the French ¸ (cedilla) as a gemination mark in romanized Hebrew³.

1. It is worth mentioning that although they use a diacritic sign for gemination, the speakers of these languages pronounce the geminated letter clearly.

2. International Organization for Standardization (ISO), ISO Recommendation R259, op. cit., p. 7.

3. I am suggesting the Massoretic ~ (zarqāh) as a mark for gemination because it is known to Hebrew scholars and has been used by Massoretic scientists for prolongation in reading the Bible with melody, while the French ¸ (cedilla) I am suggesting for practical reasons, it exists on an ordinary Roman alphabet typewriter.

Thus, the word מִקְדֶּם for instance, would be written miq̄édēm or miq̄èdēm which is closer to the original than the ISO system. In addition, it is not reasonable in our age of shorthand when we ease the writing of the Latin alphabet, to double letters for languages which have long ago simplified the gemination in their script by using diacritical marks to represent them.

On the basis of this suggestion the unpronounced Hebrew "hē" can be transliterated to an ordinary "h", while he-mappīq i.e. the dotted ה (hē), could have the ~ (zarqāh) sign above it. According to this principle the words פָּרָה, זֶה, קֶנֶה, גָּלוֹה would be transliterated Pārāh, zēh, qēneh, gāloh or at least Pārā^h, zē^h, qēne^h, gālo^h, i.e. with a small "hē" written higher instead of "paṛā, zē, qēnē, gaḷō"¹ as are transliterated in the ISO Standard. In addition, all 'ālefs have to be transliterated because they were originally pronounced clearly, such as in

תִּמְצֵנָה, תֵּזֶה, רוֹשׁ, which need to be transliterated to timṣē'na^h, teṣe' and ro's^h instead of "timzēnā, tezé and rōs" as are in the ISO Standard¹.

1. International Organization for Standardization (ISO), ISO Recommendation R259, op. cit., p. 6.

This ISO Standard has been criticized by some members of the "Sub Committee for the Romanization of Hebrew, of the American Standard Committee Z-39", as complicated and as one that cannot fit every nation.¹ But there is no standard of romanization which can satisfy completely all the different languages written in the Roman alphabet. For instance the representation of שִׁין by "š" must seem strange to an Englishman who is accustomed to represent it by sh, to a Frenchman who is used to represent it by ch and to a German who represents it by sch.

But this is not the fault of the ISO Standard. This Standard has sought to systematize the prevailing confusion which has long existed in the transliteration of Hebrew. It has developed a system based on compromise to be used by bibliographers, librarians and other scholars. It has not imposed its standard to be used exclusively in every country of the World. National standards can continue to be used if certain governments or libraries prefer to keep using them.

1. American National Standard Institute, Standard Committee Z-39, Subcommittee for the Romanization of Hebrew, Proposed Standard Romanization of Hebrew, Cincinnati, Ohio, Hebrew Union College, Jewish Institute of Religion.

The ISO Standard has also been criticized by the same members of Z-39 because, as they said, it used a complicated system for representing the Hebrew diacritic vowels. But this was not its fault, too. Hebrew diacritic vowels, as they were determined by the Massoretic Scientists and as they are pronounced in the present days are already complicated. The ISO Standard has attempted to represent these vowels carefully and according to the basic principles of transliteration.

CHAPTER III

HISTORICAL TABLES

The historical tables are given to illustrate clearly how the major alphabetic writings related to Hebrew, such as the Greek alphabet, the Latin alphabet, the Arabic alphabet, the Square Hebrew itself and the cursive Hebrew alphabets, have been developed from the Phoenician alphabet or from its "sister", the Early Hebrew.

They are divided into six tables:

The first illustrates the historical development of Square Hebrew alphabet from Phoenician through Aramaic.

The second illustrates the historical development of Greek and Roman from Phoenician.

The third the development of cursive Hebrew alphabets from Square Hebrew.

The fourth the historical development of Modern Greek from North Semitic.

The fifth the historical development of Roman capitals from North Semitic.

The sixth illustrates the historical development of the Arabic alphabet from the Aramaic through the

TABLE 1

DEVELOPMENT OF HEBREW ALPHABET

[illegible]

Nabataean alphabet.

Sources used for these tables are given at the
end.

HISTORICAL TABLES

TABLE 2

DEVELOPMENT OF GREEK AND ROMAN ALPHABETS

OLD GREEK	PHOENICIAN BYBLOS 1100 B.C.	X	W	A	Φ	Ϟ	Γ	Ο	Ϝ	Ϛ	ϛ	Λ	Υ	Ζ	Θ	Β	Ι	<u>Υ</u>	Ξ	Δ	1	Σ	Κ		
	CYPRUS 900 B.C.	+	W	Α	Φ	Ϟ			Ο	Ϝ	Ϛ	ϛ	Λ	Υ	Ζ	Θ	Β	Ι	+	Δ		Α	*		
	LYDIAN 800 B.C.	τ	ρ	q					ο	Ϝ	Ϛ	ϛ	λ	υ					υ	ξ	Δ		Β	Α	
	THERA 700 B.C.	τ	μ	q	φ		γ	ο		Ϛ	ϛ	λ	υ	ζ	θ	β	ι		υ	ξ	Α	Γ	Θ	Α	
	CRETE 600 B.C.	τ		q	φ	μ	γ	ο		Ϛ	ϛ	λ	υ	ζ	θ	β	ι		υ	ξ	Δ	Λ	Β	Α	
OLD ITALIC	CLASSIC GREEK 500-400 B.C.	τ	Σ	Ρ			Π	Ο	Ξ	Ν	Μ	Λ	Κ	Ι	Θ	Η	Ι		Υ	Ε	Δ	Γ	Β	Α	
	ETRUSCAN (RIGHT) 400 B.C.	τ	ς	ρ	q	γ	π	ο	Ϝ	Ϛ	ϛ	λ	κ	ι	θ	β	ι		υ	φ	Ε	Δ	<	Β	Α
	OLD LATIN 300-200 B.C.	τ	ς	ρ	q		ρ	ο		Ν	Μ	Λ	Κ	Ι		Η			υ	φ	Ε	Δ	Γ	Β	Α
	CLASSIC ROMAN	T	S	R	Q		P	O		N	M	L	K	I		H	Z	V	Y	F	E	D	C	B	A

TABLE 3

DEVELOPMENT OF CURSIVE HEBREW FROM SQUARE HEBREW

NAME OF THE LETTERS		SQUARE HEBREW	ORIENTAL	JUDEO-GERMANIC	ASHKENAZO-POLISH	RABINIC OR RASHI	CONTINUOUS (BASED ON ASHKENI-POLISH)
'ALEF	1	א	א	א	א	א	א, א
BÊT	2	ב	ב	ב	ב	ב	ב
GĪMAL	3	ג	ג	ג	ג	ג	ג
DĀLET	4	ד	ד	ד	ד	ד	ד
HÊ	5	ה	ה	ה	ה	ה	ה
WĀW	6	ו	ו	ו	ו	ו	ו
ZĀYIN	7	ז	ז	ז	ז	ז	ז, ז
HÊT	8	ח	ח	ח	ח	ח	ח, ח
TÊT	9	ט	ט	ט	ט	ט	ט, ט
YÔD	10	י	י	י	י	י	י
KĀF	11	כ	כ	כ	כ	כ	כ, כ
LĀMED	12	ל	ל	ל	ל	ל	ל
MEM	13	מ	מ	מ	מ	מ	מ, מ
NŪN	14	נ	נ	נ	נ	נ	נ, נ
SĀMEK	15	ס	ס	ס	ס	ס	ס
'AYIN	16	ע	ע	ע	ע	ע	ע
PÊ	17	פ	פ	פ	פ	פ	פ, פ
SĀDÊ	18	צ	צ	צ	צ	צ	צ, צ
QŌF	19	ק	ק	ק	ק	ק	ק, ק
ROŠ	20	ך	ך	ך	ך	ך	ך, ך
ŠIN	21	ש	ש, ש	ש	ש	ש	ש, ש
TĀW	22	ת	ת	ת	ת	ת	ת, ת

* The five final letters — final khāf, final mēm, final nūn, final pē and final sādê — are put beside the ordinary ones.

** Characters written in two manners are put together and separated by a comma.

TABLE 4

DEVELOPMENT OF MODERN GREEK FROM NORTH SEMITIC

NORTH-SEMITIC				GREEK					
EARLY PHOENICIAN	EARLY HEBREW	MOABITE PHOENICIAN		EARLY	EASTERN	WESTERN	CLASSICAL	MODERN	
𐤀	𐤁	𐤂	𐤃	Α	Α	Α	Α	Α	Α
𐤄	𐤅	𐤆	𐤇	Β	Β	Β	Β	Β	Β
𐤈	𐤉	𐤊	𐤋	Γ	Γ	Γ	Γ	Γ	Γ
𐤌	𐤍	𐤎	𐤏	Δ	Δ	Δ	Δ	Δ	Δ
𐤐	𐤑	𐤒	𐤓	Ε	Ε	Ε	Ε	Ε	Ε
𐤔	𐤕	𐤖	𐤗	Ζ	Ζ	Ζ	Ζ	Ζ	Ζ
𐤘	𐤙	𐤚	𐤛	Η	Η	Η	Η	Η	Η
𐤜	𐤝	𐤞	𐤟	Θ	Θ	Θ	Θ	Θ	Θ
𐤠	𐤡	𐤢	𐤣	Ι	Ι	Ι	Ι	Ι	Ι
𐤤	𐤥	𐤦	𐤧	Κ	Κ	Κ	Κ	Κ	Κ
𐤨	𐤩	𐤪	𐤫	Λ	Λ	Λ	Λ	Λ	Λ
𐤬	𐤭	𐤮	𐤯	Μ	Μ	Μ	Μ	Μ	Μ
𐤰	𐤱	𐤲	𐤳	Ν	Ν	Ν	Ν	Ν	Ν
𐤴	𐤵	𐤶	𐤷	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ
𐤸	𐤹	𐤺	𐤻	Ο	Ο	Ο	Ο	Ο	Ο
𐤼	𐤽	𐤾	𐤿	Π	Π	Π	Π	Π	Π
𐥀	𐥁	𐥂	𐥃	Φ	Φ	Φ	Φ	Φ	Φ
𐥄	𐥅	𐥆	𐥇	Ψ	Ψ	Ψ	Ψ	Ψ	Ψ
𐥈	𐥉	𐥊	𐥋	Χ	Χ	Χ	Χ	Χ	Χ
𐥌	𐥍	𐥎	𐥏	Σ	Σ	Σ	Σ	Σ	Σ
𐥐	𐥑	𐥒	𐥓	Τ	Τ	Τ	Τ	Τ	Τ
𐥔	𐥕	𐥖	𐥗	Υ	Υ	Υ	Υ	Υ	Υ
𐥘	𐥙	𐥚	𐥛	Φ	Φ	Φ	Φ	Φ	Φ
𐥜	𐥝	𐥞	𐥟	Χ	Χ	Χ	Χ	Χ	Χ
𐥠	𐥡	𐥢	𐥣	Σ	Σ	Σ	Σ	Σ	Σ
𐥤	𐥥	𐥦	𐥧	Τ	Τ	Τ	Τ	Τ	Τ
𐥨	𐥩	𐥪	𐥫	Υ	Υ	Υ	Υ	Υ	Υ
𐥬	𐥭	𐥮	𐥯	Φ	Φ	Φ	Φ	Φ	Φ
𐥰	𐥱	𐥲	𐥳	Χ	Χ	Χ	Χ	Χ	Χ
𐥴	𐥵	𐥶	𐥷	Σ	Σ	Σ	Σ	Σ	Σ
𐥸	𐥹	𐥺	𐥻	Τ	Τ	Τ	Τ	Τ	Τ
𐥼	𐥽	𐥾	𐥿	Υ	Υ	Υ	Υ	Υ	Υ
𐦀	𐦁	𐦂	𐦃	Φ	Φ	Φ	Φ	Φ	Φ
𐦄	𐦅	𐦆	𐦇	Χ	Χ	Χ	Χ	Χ	Χ
𐦈	𐦉	𐦊	𐦋	Σ	Σ	Σ	Σ	Σ	Σ
𐦌	𐦍	𐦎	𐦏	Τ	Τ	Τ	Τ	Τ	Τ
𐦐	𐦑	𐦒	𐦓	Υ	Υ	Υ	Υ	Υ	Υ
𐦔	𐦕	𐦖	𐦗	Φ	Φ	Φ	Φ	Φ	Φ
𐦘	𐦙	𐦚	𐦛	Χ	Χ	Χ	Χ	Χ	Χ
𐦜	𐦝	𐦞	𐦟	Σ	Σ	Σ	Σ	Σ	Σ
𐦠	𐦡	𐦢	𐦣	Τ	Τ	Τ	Τ	Τ	Τ
𐦤	𐦥	𐦦	𐦧	Υ	Υ	Υ	Υ	Υ	Υ
𐦨	𐦩	𐦪	𐦫	Φ	Φ	Φ	Φ	Φ	Φ
𐦬	𐦭	𐦮	𐦯	Χ	Χ	Χ	Χ	Χ	Χ
𐦰	𐦱	𐦲	𐦳	Σ	Σ	Σ	Σ	Σ	Σ
𐦴	𐦵	𐦶	𐦷	Τ	Τ	Τ	Τ	Τ	Τ
𐦸	𐦹	𐦺	𐦻	Υ	Υ	Υ	Υ	Υ	Υ
𐦼	𐦽	𐦾	𐦿	Φ	Φ	Φ	Φ	Φ	Φ
𐧀	𐧁	𐧂	𐧃	Χ	Χ	Χ	Χ	Χ	Χ
𐧄	𐧅	𐧆	𐧇	Σ	Σ	Σ	Σ	Σ	Σ
𐧈	𐧉	𐧊	𐧋	Τ	Τ	Τ	Τ	Τ	Τ
𐧌	𐧍	𐧎	𐧏	Υ	Υ	Υ	Υ	Υ	Υ
𐧐	𐧑	𐧒	𐧓	Φ	Φ	Φ	Φ	Φ	Φ
𐧔	𐧕	𐧖	𐧗	Χ	Χ	Χ	Χ	Χ	Χ
𐧘	𐧙	𐧚	𐧛	Σ	Σ	Σ	Σ	Σ	Σ
𐧜	𐧝	𐧞	𐧟	Τ	Τ	Τ	Τ	Τ	Τ
𐧠	𐧡	𐧢	𐧣	Υ	Υ	Υ	Υ	Υ	Υ
𐧤	𐧥	𐧦	𐧧	Φ	Φ	Φ	Φ	Φ	Φ
𐧨	𐧩	𐧪	𐧫	Χ	Χ	Χ	Χ	Χ	Χ
𐧬	𐧭	𐧮	𐧯	Σ	Σ	Σ	Σ	Σ	Σ
𐧰	𐧱	𐧲	𐧳	Τ	Τ	Τ	Τ	Τ	Τ
𐧴	𐧵	𐧶	𐧷	Υ	Υ	Υ	Υ	Υ	Υ
𐧸	𐧹	𐧺	𐧻	Φ	Φ	Φ	Φ	Φ	Φ
𐧼	𐧽	𐧾	𐧿	Χ	Χ	Χ	Χ	Χ	Χ
𐨀	𐨁	𐨂	𐨃	Σ	Σ	Σ	Σ	Σ	Σ
𐨄	𐨅	𐨆	𐨇	Τ	Τ	Τ	Τ	Τ	Τ
𐨈	𐨉	𐨊	𐨋	Υ	Υ	Υ	Υ	Υ	Υ
𐨌	𐨍	𐨎	𐨏	Φ	Φ	Φ	Φ	Φ	Φ
𐨐	𐨑	𐨒	𐨓	Χ	Χ	Χ	Χ	Χ	Χ
𐨔	𐨕	𐨖	𐨗	Σ	Σ	Σ	Σ	Σ	Σ
𐨘	𐨙	𐨚	𐨛	Τ	Τ	Τ	Τ	Τ	Τ
𐨜	𐨝	𐨞	𐨟	Υ	Υ	Υ	Υ	Υ	Υ
𐨠	𐨡	𐨢	𐨣	Φ	Φ	Φ	Φ	Φ	Φ
𐨤	𐨥	𐨦	𐨧	Χ	Χ	Χ	Χ	Χ	Χ
𐨨	𐨩	𐨪	𐨫	Σ	Σ	Σ	Σ	Σ	Σ
𐨬	𐨭	𐨮	𐨯	Τ	Τ	Τ	Τ	Τ	Τ
𐨰	𐨱	𐨲	𐨳	Υ	Υ	Υ	Υ	Υ	Υ
𐨴	𐨵	𐨶	𐨷	Φ	Φ	Φ	Φ	Φ	Φ
𐨸	𐨹	𐨺	𐨻	Χ	Χ	Χ	Χ	Χ	Χ
𐨼	𐨽	𐨾	𐨿	Σ	Σ	Σ	Σ	Σ	Σ
𐩀	𐩁	𐩂	𐩃	Τ	Τ	Τ	Τ	Τ	Τ
𐩄	𐩅	𐩆	𐩇	Υ	Υ	Υ	Υ	Υ	Υ
𐩈	𐩉	𐩊	𐩋	Φ	Φ	Φ	Φ	Φ	Φ
𐩌	𐩍	𐩎	𐩏	Χ	Χ	Χ	Χ	Χ	Χ
𐩐	𐩑	𐩒	𐩓	Σ	Σ	Σ	Σ	Σ	Σ
𐩔	𐩕	𐩖	𐩗	Τ	Τ	Τ	Τ	Τ	Τ
𐩘	𐩙	𐩚	𐩛	Υ	Υ	Υ	Υ	Υ	Υ
𐩜	𐩝	𐩞	𐩟	Φ	Φ	Φ	Φ	Φ	Φ
𐩠	𐩡	𐩢	𐩣	Χ	Χ	Χ	Χ	Χ	Χ
𐩤	𐩥	𐩦	𐩧	Σ	Σ	Σ	Σ	Σ	Σ
𐩨	𐩩	𐩪	𐩫	Τ	Τ	Τ	Τ	Τ	Τ
𐩬	𐩭	𐩮	𐩯	Υ	Υ	Υ	Υ	Υ	Υ
𐩰	𐩱	𐩲	𐩳	Φ	Φ	Φ	Φ	Φ	Φ
𐩴	𐩵	𐩶	𐩷	Χ	Χ	Χ	Χ	Χ	Χ
𐩸	𐩹	𐩺	𐩻	Σ	Σ	Σ	Σ	Σ	Σ
𐩼	𐩽	𐩾	𐩿	Τ	Τ	Τ	Τ	Τ	Τ
𐪀	𐪁	𐪂	𐪃	Υ	Υ	Υ	Υ	Υ	Υ
𐪄	𐪅	𐪆	𐪇	Φ	Φ	Φ	Φ	Φ	Φ
𐪈	𐪉	𐪊	𐪋	Χ	Χ	Χ	Χ	Χ	Χ
𐪌	𐪍	𐪎	𐪏	Σ	Σ	Σ	Σ	Σ	Σ
𐪐	𐪑	𐪒	𐪓	Τ	Τ	Τ	Τ	Τ	Τ
𐪔	𐪕	𐪖	𐪗	Υ	Υ	Υ	Υ	Υ	Υ
𐪘	𐪙	𐪚	𐪛	Φ	Φ	Φ	Φ	Φ	Φ
𐪜	𐪝	𐪞	𐪟	Χ	Χ	Χ	Χ	Χ	Χ
𐪠	𐪡	𐪢	𐪣	Σ	Σ	Σ	Σ	Σ	Σ
𐪤	𐪥	𐪦	𐪧	Τ	Τ	Τ	Τ	Τ	Τ
𐪨	𐪩	𐪪	𐪫	Υ	Υ	Υ	Υ	Υ	Υ
𐪬	𐪭	𐪮	𐪯	Φ	Φ	Φ	Φ	Φ	Φ
𐪰	𐪱	𐪲	𐪳	Χ	Χ	Χ	Χ	Χ	Χ
𐪴	𐪵	𐪶	𐪷	Σ	Σ	Σ	Σ	Σ	Σ
𐪸	𐪹	𐪺	𐪻	Τ	Τ	Τ	Τ	Τ	Τ
𐪼	𐪽	𐪾	𐪿	Υ	Υ	Υ	Υ	Υ	Υ
𐫀	𐫁	𐫂	𐫃	Φ	Φ	Φ	Φ	Φ	Φ
𐫄	𐫅	𐫆	𐫇	Χ	Χ	Χ	Χ	Χ	Χ
𐫈	𐫉	𐫊	𐫋	Σ	Σ	Σ	Σ	Σ	Σ
𐫌	𐫍	𐫎	𐫏	Τ	Τ	Τ	Τ	Τ	Τ
𐫐	𐫑	𐫒	𐫓	Υ	Υ	Υ	Υ	Υ	Υ
𐫔	𐫕	𐫖	𐫗	Φ	Φ	Φ	Φ	Φ	Φ
𐫘	𐫙	𐫚	𐫛	Χ	Χ	Χ	Χ	Χ	Χ
𐫜	𐫝	𐫞	𐫟	Σ	Σ	Σ	Σ	Σ	Σ
𐫠	𐫡	𐫢	𐫣	Τ	Τ	Τ	Τ	Τ	Τ
𐫤	𐫥	𐫦	𐫧	Υ	Υ	Υ	Υ	Υ	Υ
𐫨	𐫩	𐫪	𐫫	Φ	Φ	Φ	Φ	Φ	Φ
𐫬	𐫭	𐫮	𐫯	Χ	Χ	Χ	Χ	Χ	Χ
𐫰	𐫱	𐫲	𐫳	Σ	Σ	Σ	Σ	Σ	Σ
𐫴	𐫵	𐫶	𐫷	Τ	Τ	Τ	Τ	Τ	Τ
𐫸	𐫹	𐫺	𐫻	Υ	Υ	Υ	Υ	Υ	Υ
𐫼	𐫽	𐫾	𐫿	Φ	Φ	Φ	Φ	Φ	Φ
𐬀	𐬁	𐬂	𐬃	Χ	Χ	Χ	Χ	Χ	Χ
𐬄	𐬅	𐬆	𐬇	Σ	Σ	Σ	Σ	Σ	Σ
𐬈	𐬉	𐬊	𐬋	Τ	Τ	Τ	Τ	Τ	Τ
𐬌	𐬍	𐬎	𐬏	Υ	Υ	Υ	Υ	Υ	Υ
𐬐	𐬑	𐬒	𐬓	Φ	Φ	Φ	Φ	Φ	Φ
𐬔	𐬕	𐬖	𐬗	Χ	Χ	Χ	Χ	Χ	Χ
𐬘	𐬙	𐬚	𐬛	Σ	Σ	Σ	Σ	Σ	Σ
𐬜	𐬝	𐬞	𐬟	Τ	Τ	Τ	Τ	Τ	Τ
𐬠	𐬡	𐬢	𐬣	Υ	Υ	Υ	Υ	Υ	Υ
𐬤	𐬥	𐬦	𐬧	Φ	Φ	Φ	Φ	Φ	Φ
𐬨	𐬩	𐬪	𐬫	Χ	Χ	Χ	Χ	Χ	Χ
𐬬	𐬭	𐬮	𐬯	Σ	Σ	Σ	Σ	Σ	Σ
𐬰	𐬱	𐬲	𐬳	Τ	Τ	Τ	Τ	Τ	Τ
𐬴	𐬵	𐬶	𐬷	Υ	Υ	Υ	Υ	Υ	Υ
𐬸	𐬹	𐬺	𐬻	Φ	Φ	Φ	Φ	Φ	Φ
𐬼	𐬽	𐬾	𐬿	Χ	Χ	Χ	Χ	Χ	Χ
𐭀	𐭁	𐭂	𐭃	Σ	Σ	Σ	Σ	Σ	Σ
𐭄	𐭅	𐭆	𐭇	Τ	Τ	Τ	Τ	Τ	Τ
𐭈	𐭉	𐭊	𐭋	Υ	Υ	Υ	Υ	Υ	Υ
𐭌	𐭍	𐭎	𐭏	Φ	Φ	Φ	Φ	Φ	Φ
𐭐	𐭑	𐭒	𐭓	Χ	Χ	Χ	Χ	Χ	Χ
𐭔	𐭕	𐭖	𐭗	Σ	Σ	Σ	Σ	Σ	Σ
𐭘	𐭙	𐭚	𐭛	Τ	Τ	Τ	Τ	Τ	Τ
𐭜	𐭝	𐭞	𐭟	Υ	Υ	Υ	Υ	Υ	Υ
𐭠	𐭡	𐭢	𐭣	Φ	Φ	Φ	Φ	Φ	Φ
𐭤	𐭥	𐭦	𐭧	Χ	Χ	Χ	Χ	Χ	

HISTORICAL TABLES
TABLE 5
DEVELOPMENT OF ROMAN CAPITALS FROM NORTH SEMITIC

NORTH-SEMITIC				GREEK				ETRUSCAN		LATIN			MODERN CAPS.	
EARLY PHOENICIAN	EARLY HEBREW	MOABITE	PHOENICIAN	EARLY	EASTERN	WESTERN	CLASSICAL	EARLY	CLASSICAL	EARLY	EARLY MONUMENTAL	CLASSICAL	ITALIC	ROMAN
𐤀	א	𐤁	𐤂	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α
𐤅	ב	ב	ב	Β	Β	Β	Β	Β			Β	Β	Β	Β
𐤇	ג	ג	ג	Γ	Γ	Γ	Γ	Γ	Γ		<	C	C	C
𐤈	ד	ד	ד	Δ	Δ	Δ	Δ	Δ		Δ	Δ	Δ	Δ	Δ
𐤊	ה	ה	ה	Ε	Ε	Ε	Ε	Ε	Ε	Ε	Ε	Ε	Ε	Ε
𐤋	ו	ו	ו					Ϝ	Ϝ	Ϝ	F	F	F	F
											G	G	G	G
𐤌	ז	ז	ז	Ζ	Ζ	Ζ	Ζ	Ζ	Ζ					
𐤍	ח	ח	ח	Θ	Θ		Η	Θ	Θ	Θ	H	H	H	H
𐤎	ט	ט	ט	Θ	Θ	Θ	Θ	Θ	Θ					
𐤏	י	י	י	Ι	Ι	Ι	Ι	Ι	Ι	Ι	Ι	Ι	Ι	Ι
													J	J
𐤑	כ	כ	כ	Κ	Κ	Κ	Κ	Κ	Κ	Κ	Κ	Κ	Κ	Κ
𐤒	ל	ל	ל	Λ	Λ	Λ	Λ	Λ	Λ		Λ	Λ	Λ	Λ
𐤓	מ	מ	מ	Μ	Μ	Μ	Μ	Μ	Μ	Μ	Μ	Μ	Μ	Μ
𐤔	נ	נ	נ	Ν	Ν	Ν	Ν	Ν	Ν	Ν	Ν	Ν	Ν	Ν
𐤕	ס	ס	ס				Ξ	Ξ	Ξ					
𐤖	ע	ע	ע	Ο	Ο	Ο	Ο	Ο		Ο	Ο	Ο	Ο	Ο
𐤗	פ	פ	פ	Π	Π	Π	Π	Π	Π	Π	Π	Π	P	P
	צ	צ	צ					Μ	Μ					
	ק	ק	ק	Ρ	Ρ	Ρ		Ρ	Ρ		Q	Q	Q	Q
𐤘	ר	ר	ר	Ρ	Ρ	Ρ		Ρ	Ρ		R	R	R	R
𐤙	ש	ש	ש	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ	S	S
𐤚	ת	ת	ת	Τ	Τ	Τ	Τ	Τ	Τ		Τ	Τ	T	T
				Υ	Υ	Υ		Υ	Υ	Υ	Υ	Υ	U	U
													V	V
													W	W
				Χ	Χ	Χ				Χ	Χ		X	X
											Υ		Y	Y
											Z		Z	Z
				Φ	Ψ	Ω		Υ	↓					

* The Gothic characters are not mentioned here because of its complexity and its minor importance for this thesis.

TABLE 6

DEVELOPMENT OF ARABIC FROM ARAMAIC

CURSIVE ARAMAIC	NABATAEAN	JACOBIITE	SYRIAC	ARABIC	TRANSLI- TATION	ARABIC NAME
Ⲁ ⲁ	Ⲁ ⲁ	Ⲁ	Ⲁ	Ⲁ	ʾ	ʾALIF
Ⲃ ⲃ	Ⲃ ⲃ	Ⲃ	Ⲃ	Ⲃ	B	BA
Ⲅ ⲅ	Ⲅ ⲅ	Ⲅ	Ⲅ	Ⲅ	G	ḠIM
Ⲇ ⲇ	Ⲇ ⲇ	Ⲇ	Ⲇ	Ⲇ	D	DĀL
Ⲉ ⲉ	Ⲉ ⲉ	Ⲉ	Ⲉ	Ⲉ	Ḍ	ḌĀL
Ⲋ ⲋ	Ⲋ ⲋ	Ⲋ	Ⲋ	Ⲋ	H	HĀ
Ⲍ ⲍ	Ⲍ ⲍ	Ⲍ	Ⲍ	Ⲍ	W	WĀW
Ⲏ ⲏ	Ⲏ ⲏ	Ⲏ	Ⲏ	Ⲏ	Z	ZĀ
Ⲑ ⲑ	Ⲑ ⲑ	Ⲑ	Ⲑ	Ⲑ	Ḥ	ḤĀ
Ⲓ ⲓ	Ⲓ ⲓ	Ⲓ	Ⲓ	Ⲓ	Ḧ	ḦĀ
Ⲕ ⲕ	Ⲕ ⲕ	Ⲕ	Ⲕ	Ⲕ	T	ṬĀ
Ⲗ ⲗ	Ⲗ ⲗ	Ⲗ	Ⲗ	Ⲗ	Z	ZĀ
ⲙ ⲛ	ⲙ ⲛ	ⲙ	ⲙ	ⲙ	I	YA
ⲝ Ⲟ	ⲝ Ⲟ	ⲝ	ⲝ	ⲝ	K	KAF
ⲟ Ⲡ	ⲟ Ⲡ	ⲟ	ⲟ	ⲟ	L	LAM
ⲡ Ⲣ	ⲡ Ⲣ	ⲡ	ⲡ	ⲡ	M	MĪM
ⲣ Ⲥ	ⲣ Ⲥ	ⲣ	ⲣ	ⲣ	N	NŪN
Ⲧ ⲧ	Ⲧ ⲧ	Ⲧ	Ⲧ	Ⲧ	S	S
Ⲩ ⲩ	Ⲩ ⲩ	Ⲩ	Ⲩ	Ⲩ	ʿ	ʿAYN
ⲫ Ⲭ	ⲫ Ⲭ	ⲫ	ⲫ	ⲫ	G	GAYN
Ⲯ ⲯ	Ⲯ ⲯ	Ⲯ	Ⲯ	Ⲯ	F(P)	FĀ
ⲱ Ⲳ	ⲱ Ⲳ	ⲱ	ⲱ	ⲱ	S	SAD
ⲳ Ⲵ	ⲳ Ⲵ	ⲳ	ⲳ	ⲳ	D	ḌAD
Ⲷ ⲷ	Ⲷ ⲷ	Ⲷ	Ⲷ	Ⲷ	Q	QAF
ⲹ Ⲻ	ⲹ Ⲻ	ⲹ	ⲹ	ⲹ	R	RĀ
ⲻ Ⲽ	ⲻ Ⲽ	ⲻ	ⲻ	ⲻ	Š	ŠĪN
ⲽ Ⲿ	ⲽ Ⲿ	ⲽ	ⲽ	ⲽ	Š	ŠĪN
ⲿ Ⲑ	ⲿ Ⲑ	ⲿ	ⲿ	ⲿ	T	ṬĀ
ⲑ Ⲓ	ⲑ Ⲓ	ⲑ	ⲑ	ⲑ	T	ṬĀ

Sources used for composing the historical tables:

Barkali (Kaléko), S., 'Ibrīt lěkōl 'iš, Hebraïsch für Jedermann, Neu Auflage, Jerusalem, Verlag Rubin Mass, (c1970), p. 5.

British Standard Institution, Transliteration of Arabic Characters, BS4280, London, 1968, p. 3.

-----, Transliteration of Cyrillic and Greek Characters, BS29, London, 1958, p. 20.

Cohen, Marcel, La grande invention de l'écriture et son évolution, texte, Paris, Imprimerie Nationale, 1958, p. 122, 147, 161, 163, 183, 187.

Diringer, David, The Alphabet, a Key to the History of Mankind, 3rd ed., London, Hutchinson, (c1963), Vol. 2, p. 373.

-----, Writing, (Ancient people and places), London, Thames and Hudson, (1962), p. 126, 129, 130, 135, 137, 176.

Fevrier, James G., Histoire de l'écriture, Nouvelle éd. Paris, Payot, 1959, p. 209, 226, 268, 303.

Freidrick, J., Extinct Languages, N.Y., Philosophical Library, (c1957), Fig. 64.

Gelb, I. J., A Study of Writing, Rev. ed., Chicago, Univ. of Chicago Pr., (1969), p. 137, 177.

Hebrew Alphabet, N.Y.C., Hebrew Publ. Co., 1931.

Higounet, C., L'écriture, 4e ed., Paris, Presses Universitaires de France, 1969, p. 49, 51, 53, 56, 65, 76.

International Organization for Standardization (ISO), ISO Recommendation R843, International Systems for the Transliteration of Greek Characters into Latin Characters, 1st ed., (corrected), (Geneva), October 1968, p.6.

Toby, L.F., Hebrew Artistic Lettering, design and 14 Caligraphic tables drawn by Rothschild-Lippmann, with an historical table and text illustrations by the author, Tel Aviv, Herzfelder, (1951, Table of) Development of the Hebrew Square Script as well as the Roman Antique from the Phoenician Alphabet, (n.p.).

CHAPTER IV

PRONUNCIATION TABLE

The pronunciation table is given to illustrate how each Hebrew consonant is pronounced by the various Jewish Communities in the World. The bases for this table were the Encyclopedia Judaica¹ and my own observation and experience. When my own knowledge differed from the Encyclopedia Judaica I discussed these differences in the following notes.

1. 'Uzi 'Ornan, "Hebrew Grammar", in Encyclopedia Judaica, Jerusalem, The Macmillan Co. (c1971), Vol. 8, p. 85-86.

TABLE 7

179

[illegible]

Notes:

(1), (2) The Iraqi and the Yemenite Jewish Communities pronounce ט (bêṭ with dāḡeš lene) as an emphatic "b", i.e. "thick" in pronunciation, while ט (bêṭ rafeh) as an ordinary "b". Apparently this is unknown to Mr. 'Ornan the author of the article "Hebrew Grammar" in the Encyclopedia Judaica.

(3) Yemenite Jews pronounce ט (bêṭ rafeh, i.e. the undotted ט) as an ordinary English "b" exactly as the Iraqi Jews. Mr. 'Ornan states that only some Yemenite Jews pronounce the ט (bêṭ rafeh) so, while others read it as "v".

(4) All Moroccan Jews pronounce ט (bêṭ rafeh, the undotted ט) as an ordinary "b". Mr. 'Ornan states that only some Moroccan Jews pronounce it so, while others pronounce it "w".

(5) ך (gīmal with dāḡeš lene) is pronounced as ך̣ (like English J) only by some Yemenites, while others (including the Adenites) pronounce it as an ordinary "g" like in the English "Garden". Mr. 'Ornan states that all Yemenites pronounce it "g̣".

(6) All Iraqi Jews pronounce ף (dāleṭ rafeh),

as an ordinary "d" i.e. they do not distinguish it from $\daleth$ (dālet with dāgeš lene) although most of them are aware that it should be pronounced "ḏ" i.e. like "th" in English "the". Mr. 'Ornan states that Iraqi Jews pronounce $\daleth$ (dālet rafeh) as "ḏ" i.e. like "th" in English "the".

(7), (8), (9) Some Bukhara and some Persian Jews pronounce the character $\q$ (qōf) correctly i.e. as an emphatic q(K). Mr. 'Ornan states that Bukhara and Persian Jews pronounce $\q$ (qōf) as "g" or "k".

(10) Some Iraqi Jews are unable to pronounce the character $\re$ (reš or roš) clearly. They pronounce it approximately like "g" (i.e. gīmal rafeh).

(11) Only some Moroccan Jews (about 50%) pronounce the character $\w$ (šīn) like $\dot{\w}$ (śīn). Mr. 'Ornan states that all Moroccan Jews pronounce $\dot{\w}$ (śīn) like $\dot{\w}$ (śīn).

(12) All Moroccan Jews pronounce the character ṭ (tāw) correctly, as English "t". Mr. 'Ornan states that some Moroccan Jews pronounce the character ṭ (tāw) like "c".

(13) Some Moroccan Jews pronounce the character ṭ (tāw) like "t" while others pronounce it correctly like the English "th" in "thousand". Mr. 'Ornan states that

some Moroccan Jews pronounce the character η (tāw) like "t" while others pronounce it like "c".

CHAPTER V

TRANSLITERATION TABLES

The transliteration tables are given to illustrate the diversity in the different authorities in transliterating the Hebrew consonants and the Hebrew vowels. They are divided into four tables. The first compares the transliteration in general sources such as encyclopedias. The second is for Jewish scholarly sources. The third is for transliteration given by modern Israeli romanizers. The fourth shows the transliteration schemes by national and international standards.

Notes, abbreviations and sources used in compiling these tables are given at the end of each table.

TRANSLITERATION TABLES

184

TABLE 1 -- GENERAL SCHOLARLY SOURCES

A. CHARACTERS (CONSONANTS)

	Heb.	Brit.	Brit.s.	Amr.	Lr.20	Gr.Lr.	E.U.	D.G.D.L.	Brock.	Brock.S.	E.U.I.
1	א	ʾ	ʾ or a	-	a	ʾ	ʾ	ʾ	ʾ	-	a
2	ב	b				b	b, v	b	b, b	b, v	b
3	בּ	bb, v	v	b or v	b, bh	v		v			
4	ג	g				g					g
5	גּ	gh		g	g, gh	gh	g	g	g, ḡ	g	
6	ד	d			d, dh	d	d	d	d, ḏ	d	d
7	דּ	dh		d		dh					
8	ה	h	h or omt.	h	h	h	h	h	h	h	h
9	ו	w	w or omt.	v	ou, v, w	w	w	v	w	v	o, v
10	ז	z		z	z	z	z	z	z	z	z
11	ח	h	h	kh	kh, ch	h	h	x	h	x	h
12	ט	t	t	t	t	t	t	t	t	t	t
13	י	y	y or omt.	i or y	i, y	y	y	j	y	j	i, j
14	כ	k			k, ch	k	k	k	k, k	k, x	c
15	כּ	kh	kh	kh		kh		x			
16	ל	l		l	l	l	l	l	l	l	l
17	מ	m		m	m	m	m	m	m	m	m
18	נ	n		n	n	n	n	n	n	n	n
19	ס	s		s	s	s	s	s	s	s	s
20	ע	ʿ	ʿ or a	-	a, ho	ʿ	ʿ	a	ʿ	ʿ	h
21	פ	p		p or f	p, ph	p	f, p	p	p, p̄	p, f	ph
22	פּ	ph, f				f		f			
23	צ	ṣ	z	ts	ts, tz, ṣ	ṣ	s	s	ṣ	ts	tz
24	ק	q		k	q, c, kh	q	k	k	k, q	k	k
25	ר	r		r	r	r	r	r	r	r	r
26	ש	ś	sh	sh or s	s, sch	ch	ch	✓	ś	sch	sh
27	שׁ	ś	s			s	s	s	ś		-
28	ת	t		t or th		t	t	t	t, t̄	t	th
29	תּ	th	th		th	th		θ			
			(1)	(2)	(3)						

TRANSLITERATION TABLES

185

TABLE 1 -- GENERAL SCHOLARLY SOURCES

B. VOWELS AND VOWEL-POINTS

	Heb.	Brit.	Brit.s.	Amr.	Lr.20	Gr.Lr.	E.U.	D.G.D.L.	Brock.	Brock.s.	E.U.I.
1	-	a	a								
2	א	ā	a								
3	חא	-	-								
4	ע	e	e								
5	י	-	-								
6	י	ē	e								
7	י	ē	e								
8	י	i	i								
9	י	i	i								
10	ו	o	o								
11	ו	ō	o								
12	ו	u	u								
13	ו	ū	u								
14	א:	ā	a								
15	א:	ō	o								
16	א (q.q)	o	o								
17	ע:	ē	e								
18	ע (x.m)	e	e								
				(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

Notes:

(1) The simplified table in the Britannica is given mainly for readers not familiar with the Hebrew guttural and 'extra'-sibilants characters.

(2) The table given in Americana is very much simplified. It does not distinguish between many of the "begeḏkefat" characters. It equates צ (ṣādê) to "ts" as it is pronounced by most Israelis in the modern times.

(3) In his equation Larousse du XXe siècle does not mention the two Hebrew forms of each of the "begeḏkefat" letters.

(4), (5), (6), (7), (8), (9), (10): These works ignored the Hebrew vowel-points.

(11) E.U.I. mentioned ten of the Hebrew diacritic vowels but does not equate them.

Abbreviations:

Amr. = Encyclopedia Americana

Brit. = Encyclopedia Britannica

Brit.s. = Britannica simplified table

Brock. = Brockhaus Enzyklopädie

D.G.D.L. = Das Grosse Duden-Lexikon

E.U. = Encyclopédie universelle illustrée

E.U.I. = Encyclopedia universal ilustrada

Gr.Lr. = Grand Larousse encyclopédique

Heb. = Hebrew

Lr.20 = Larousse du XXe siècle

Omt. = Omitted

q.q. = qāmeṣ qāṭān

s.n. = šēwā nā'

Sources:

Atkinson, B.F.C., "Hebrew Language", Encyclopedia Britannica, Toronto, Encyclopedia Britannica, Inc., (c1966), Vol. 1, p. 280.

Halkin, S. Abraham, "Hebrew Language and Literature", The Encyclopedia Americana, International ed., N.Y., Americana Corporation, (c1972), Vol. 14, p. 34.

"Alphabet Hébreu", Encyclopédie universelle illustrée, Montréal, Les Éditions Maisonneuve, (1968), (Tome cinquième), p. 1658.

"Hebräische Alphabet", Das Grosse Duden-Lexikon, Mannheim Bibliographisches Institut, (1966), Vol. 4, p. 117.

"Hebräische Schrift", Brockhaus Enzyklopadie, (München), Brockhaus Wiesbaden, 1969, Achter band, p. 272.

"Hebraismo", Enciclopedia universal ilustrada, Madrid, Espana-Calpe, (1952), Tomo XXVII, p. 879.

"Hébreu", Grand Larousse encyclopédique, Paris,

Librairie Larousse, (c1962), Tome cinquieme, p. 816.

"Hébreu", Larousse du XXe siècle, Paris, Librairie
Larousse, (c1930), Tome troisième, p. 979.

TABLE 2 -- JEWISH SCHOLARLY SOURCES

A. CHARACTERS (CONSONANTS)

	Heb.	J.L. 01-02	Ju l GEN.	Ju l Sc.	Ju o Sc.	Ju o Sin.	l.l.	Lev.S.	J. nonis.
1	א	' or omt. (1)	not transl.	'	, (?)	, (4)	,	,	a
2	ב	b	b	b	b	b	bh, b	b	b
3	ב		v	v, b	b (bn)	v			
4	ג	g	g	g	g	g	gh, g	g	g
5	ג		g	g	g	g			
6	ד	d	d	d	d	d	dh, d	d	a
7	ד		d	d	d	d			
8	ה	h	h	h	h	h	h	h	h
9	ו	w	v	w	w	w	w	w	v
10	ז	z	z	z	z	z	z	z	s
11	ח	h	h	h	h	h	h	x	h
12	ט	t	t	t, t	t	t	t	t	t
13	י	y	y, i	y	y	y	y	y	y, y
14	כ	k	k	k	k	k	kh, k	k	c
15	כ		kn	kh, k	k	kh			
16	ל	l	l	l	l	l	l	l	l
17	מ	m	m	m	m	m	m	m	m
18	נ	n	n	n	n	n	n	n	n
19	ס	s	s	s	s	s	s	s	s
20	ע	e	not transl	e	e (s)	e (5)	e	e	h
21	פ	p	p	p	p	p	pn, p	p	ph, p
22	פ	f	f	p, f, ph	f, p	f			
23	צ	.	z	s, z	s	z	c	c	tz
24	ק	k	k	c, k	k, q	q	q	c	k
25	ר	r	r	r	r	r	r	r	r
26	ש	sh	sh	's	's (sh)	sh	's, s	s	sch
27	ש	s	s	s, s	's	s			
28	ת	t	t	t	t	t	th, t	t	th, t
29	ת		t	t	t (th)	t			
				(2)	(3)	(6)		(7)	

TRANSLITERATION TABLES

TABLE 2 -- JEMIS' SCHOLARLY SOURCES

B. VOWELS AND VOWEL-PAIRS

Feb.	J.L. 0'-0"	Ju' G.L.	Ju' 1 Sc.	Ju' 2 Sc.	Ju' 3 Sim.	1. .	Lev. 5.	J. 110115
1	a	a	a	a	a	a	a	
2	a	a	a, a	a, a	a	a	a	
3								
4	e	e	oe, c, q	oe (c, q)	e	e	e	
5			oe, e, i					
6	e	e	e, a, d	e (e)	e, c	ey	e	
7			ei			ey		
8	i	i	i	i	i	i	i	
9	i	i	i	i	i	i		
10			o			o		
11	o	o	o	o	o	o	o, ow	
12	u	u	u, u	u	u	u		
13	u	u	u, u	u	u	u	u, uw	
14	a	a	a, a	a, a	a	a	a	
15	o	o	o, o	o, o	o	o	o	
16, r(qq)	o		o, o	o, o	o	o		
17	e	e	oe, e, i	ae	e	e	e	
18 (j m)	e		a, e, e	e	e	e		
			(a)	(o)		(10)	(11)	(12)

Notes:

(1) In the Jewish Encyclopedia initial 'ālef is omitted while final and medial 'ālefs are represented or by a mark like a comma (') or by diaeresis, e.g., Ze'eb, Me'ir.

(2) The Judaica also transliterated characters representing pronunciation which entered into Hebrew from other languages. It equated 'ā to ě, 'ī to ž and 'y to č.

(3) The characters between brackets are given by the Judaica to explain the pronunciation.

(4),(5) In the simplified column of the Judaica א ('ālef) and ע ('āyin) are omitted.

(6) This simplified column of Judaica presents mainly the modern Israeli pronunciation.

(7) Levin invented two characters, one for ו (têt) and the other for ע ('āyin).

(8),(9) The use of many alternative characters with a variety of diacritic marks, in the scientific columns of the Encyclopedia Judaica complicates, instead of simplifying the equation of the Hebrew vowels. It also contradicts the general principles of transliteration, of equating

letter-for-letter and character for character.

(10) Harper does not equate the Hebrew diacritic vowels but only describes them. We have equated them according to his description.

(11) Levin has invented new signs for some of the Hebrew vowel-points, while he ignored many others.

(12) Monis has completely ignored the Hebrew vowels.

Abbreviations:

Gen. = General

H.W. = Harper, William, R., Elements of Hebrew by Inductive Method

Heb. = Hebrew

J.E.01 = Jewish Encyclopedia, 1901

J.E.02 = Jewish Encyclopedia, 1902

Ju.1 = Judaica, vol. 1

Ju.8 = Judaica, vol. 8

Lev.S. = Levin, Saul, The Indo-European and Semitic Languages

q.q. = qāmeṣ qāṭān

Sc. = Scientific

s.n. = šēwā nā'

Sources:

Monis, J., Dickdook Leshon Gnebreet, Composed and accurately Corrected by Judah Monis, (n.p.), 1735.

Levin, Saul, The Indo-European and Semitic Languages, Albany, State University of New York Pr., (c1971), p. xxxiii.

Harper, William R., Elements of Hebrew by an Inductive Method, 22d ed., with an Index, N.Y., Scribner's 1906, p. 13, p. 16.

'Ornan, 'Uzi, "Hebrew Grammar", in Encyclopedia Judaica, Jerusalem, The Macmillan Co., (c1971), Vol. 8, p. 80.

"Systems of Transliteration and of Citation of Proper Names. A - Rules for the Transliteration of Hebrew and Aramaic", in The Jewish Encyclopedia, N.Y., Funk and Wagnalls, 1901, vol. 1, p. xxv.

TRANSLITERATION TABLES

TABLE 3 -- MODERN ISRAELI ROMANIZERS

194

A. CHARACTERS (CONSONANTS)

	Heb.	Y. Roz.	It. 1	It. 2	Jabo.	Avinor	Ornan	Ratūs
1	א	ʾ	a (1) or omt.	(3) or omt.	a (6) or omt.	ə, ə (9)	ʾ (17) or omt.	u
2	ב	b	b	b	b	b	b	b
3	בּ	bh	v	v	v	v	b	bh
4	ג	g	g	g	g	g	g	g
5	גּ	gh	g	g	g	g	g	g
6	ד	d	d	d	d	d	d	d
7	דּ	dh	d	d	d	d	d	d
8	ה	h	h (2)	h (4)	h (7)	h (10)	h (13)	h
9	ו	w	w	w, u	v, u	w	w	v
10	ז	z	z	z	z	z	z	z
11	ח	ch	ʧ	hh	ʧ	ʧ, ʧ (11)		
12	ט	t	ʧ	t	t	ʧ, ʧ (12)	t	o ,
13	י	j	y	y	y	y	y	j
14	כ	k	k	k	k	k	k	k
15	כּ	kh	ʧ	kh	ch	ʧ x (13)	k	kh
16	ל	l	l	l	l	l	l	l
17	מ	m	m	m	m	m	m	m
18	נ	n	n	n	n	n	n	n
19	ס	s	s	s	s	s	s	s
20	ע	ʿ	ʿ	-(5)	ʿ (6)	ʿ, ʿ (14)		y
21	פ	p	p	p	p	p	p	p
22	פּ	ph	f	f	f	f	p	ph
23	צ	ʕ	tz	tz	ʕ	c	c	c
24	ק	q	ʕ	ʕ	ʕ	ʕ	ʕ	q
25	ר	r	r	r	r	r	r	r
26	ש	ʃ	ʕ	sh	sh	ʷ, ʷ (15)	ʕ	sh
27	שׁ	s	c	s	s	s	s	's , ʃ
28	ת	t	t	t	t	t	t	t
29	תּ	th	t	t	t	t	t	t
						(16)		(17)

TRANSLITERATION TABLES

195

TABLE 3 -- MODERN ISRAELI ROMANIZERS

B. VOWELS AND VOWEL-POINTS

	Heb.	Y. Roz.	It. 1	It. 2	Jabo.	Avinor	Ornan	Raṭūš
1	א	a	a	a	a	a	a	a
2	אָ	ā, â	â	â, a	a, â	a	a	a, ā, â
3	אֶ	ê	ê	ê, a	a	a, ɛ	a'	a, â, ä
4	ע	e, é	é	é	e	e	e	e
5	י	ey			e	e	e	e, ê, ë
6	יֵ	ē, ê	ë	e	e	é	e	e
7	יִ	cy, êy	ey	e	e	e, ey	e	ei, ē, ë
8	יְ	i	i	i	i	i	i	i
9	יִי	iy	î	î	i	i	i	i, î, ï
10	ו	o	o	o	o	o	o	o
11	וּ	ow	ô	o	o	ow	o	o, ô
12	וֹ	u	u	u	u	u	u	u
13	וּ	uw	û	u	u	u	u	u, û
14	וֹ	ă	à	a	a		a or omt.	a, â
15	וֹ	ô	ò	o	o	o	o	o, ô
16	וֹ (9.9.)	ô	o	o	o	o	o	o, ô
17	וֹ	e	è	é	e	e	e or omt.	e, ê
18	וֹ (J.m.)	,	e	e	ë	e	omt.	e

Notes:

(1), (3), (6), (17) Initial 'ālef is omitted in the two romanization systems of Ittamar Ben-Avi, in the system of Jabotiniski and in that of 'Ornan.

(2), (4), (7), (10), (18) Unpronounced final "hē" is omitted in the two romanization systems of Ittamar Ben-Avi, in the romanization system of Jabotiniski, in the romanization system of 'Avīnōr and in the romanization system of 'Ornan, while ⱥ (hē mappīq), a well pronounced "hē", is represented by an ordinary "h".

(5) In the second romanization system of Ittamar Ben-Avi Ɽ ('āyin) is omitted and the vowel, which follows it, receives a circumflex accent (^), as is the case of the 'āyin of the word ôrékh.

(8) In the Jabotinishi romanization system Ɽ ('āyin) is omitted and the vowel following it receives the ~ (zarqāh) mark above it, as is the case in the 'āyin of the word Lif'ānim.

(9), (11), (12), (13), (14), (15) In the case of these newly invented characters of the 'Avīnōr system I have written both the capital letters and the small ones.

(16) The characters which 'Avīnōr invented,

Jan, ʔul and Čert for representing 'ġ, 'ġ and 'ʕ which are used in Hebrew for the pronunciation of French "j", English "j" and English "ch", are not included in the table.

(17) Ratūš has made radical changes by using "w" for ʕ (ʔālef), "ô" or "e" for ʔ (têṭ) and "\$" for ʕ (śin).

Abbreviations:

Avinor = The romanization system of 'Avinor

Heb. = Hebrew

It.1 = The first romanization system of Ittamar Ben-Avi

It.2 = The second romanization system of Ittamar Ben-Avi

Jab. = The romanization system of Jabotiniski

Omt. = Omitted

Ornan = The romanization system of 'Uzī 'Ornan

q.q. = qāmeṣ qāṭān

Ratūš = The romanization system of Y. Ratūš

Y.Roz. = the romanization system of Yiṣ/hāq Rozenberg

s.n. = šewā nā'

Sources:

Weinberg, Werner, The Orthographic Reforms of Hebrew, The Problem and the Attempt to Solve it, Jerusalem, The Magnes Pr., 1972, p. 108-118.

TRANSLITERATION TABLES

198

TABLE 4 -- NATIONAL AND INTERNATIONAL STANDARDS

A. CHARACTERS (CONSONANTS)

	Heb.	C.04	A.L.A.08	A.L.A.42	B.B.B.	Gleic.	Ost.	Vot.	U.S.S.N.	U.S.T.G.	U.S.R.G.	B.S.	ISO	AFNOR
1	א			,	omt.	omt.	Sil	'(1)	for omt.	omt.	,	'(2)	'(3)	'(4)
2	ב	b	b	b	b	b	b	b, v	b	b	b	b, b(bh)	b	b
3	בּ			v	v	v	v	v	v	v	v	v	v	v
4	ג	g	g	g	g, gu	g	g	g	g	g	g	g, s(ch)	g	g
5	גּ			gh	g	g	g	g	g	g	g	g	g	g
6	ד	d	d	d	d	d	d	d	d	d	d	d, d(ch)	d	d
7	דּ			dh	d	d	d	d	d	d	d	d	d	d
8	ה	h	h	h	h	h	h	h	h	h	h	h	h	h
9	ו	w	w	w	w	v	v	w	w	v	w	w	w	w
10	ז	z	z	z	z	z	z	z	z	z	z	z	z	z
11	ח	h	h	h	h	h	ch	h	h	h	h	h	h	h
12	ט	t	t	t	t	t	t	t	t	t	t	t	t	t
13	י	y	y	y	y	y	y	y	y	y	y	y	y	y
14	כ	k	k	k	k	k	k	k, kh	k	k	k	k, h(kh)	k	k
15	כּ	kh	kh	kh	kh	ch	kh	kh	kh	kh	kh	kh	k	k
16	ל	l	l	l	l	l	l	l	l	l	l	l	l	l
17	מ	m	m	m	m	m	m	m	m	m	m	m	m	m
18	נ	n	n	n	n	n	n	n	n	n	n	n	n	n
19	ס	s	s	s	s	s	s	s	s	s	s	s	s	s
20	פ	f	f	f	f	f	Sil.	f	f	f	f	f	f	f
21	פּ	p	p	p	p	p	p	p, f	p	p	p	p, p(ph)	p	p
22	פּ	f	f	f	f	f	f	f	f	f	f	f	f	f
23	צ	s	s	z	s	z	ts	s	s	ts	z	s	z	z
24	ק	k, q	k, q	k	q	q	k	q	q	q	q	q	q	q
25	ר	r	r	r	r	r	r	r	r	r	r	r	r	r
26	ש	sh	š(sh)	sh	š	sh	s	š, sh	sh	sh	sh	š, š	š	š
27	שׁ	s	š	š	s	s	s	s	s	s	s	s	š	š
28	ת	t	t	t	t	t	t	t	t	t	t	t, t(th)	t	t
29	תּ	t	t	th	t	th	th	t	t	t	t	t	t	t

TRANSLITERATION TABLES

199

TABLE 4 -- NATIONAL AND INTERNATIONAL STANDARDS

B. VOWELS AND VOWEL-POINTS

	Heb.	C.04	A.L.A.08	A.L.A.49	B.B.B.	Gleic.	Cst.	Vat.	U.S.S.M.	U.S.T.G.	U.S.R.G.	B.S.	ISO	AFNPR
1	א			ā		ā	ā	ā	ā	ā	ā		ā	ā
2	א			ā		ā	ā	ā	ā	ā	ā		ā, ā	ā, ā
3	א													
4	א			e		e	e	e	e	e	e		e, e	e, e
5	א												ē, ē	ē, ē
6	א			e		e	ei	ē	ē	e	e		e	e
7	א									ei	e		ē	ē
8	א			i		i	i	i	i	i	i		i	i
9	א			i			ie	ī	ī	i	i		ī	ī
10	א					o				o	o		o	o
11	א			o			o	ō	ō	o	o		ō	ō
12	א			u		u	u	ū	ū	u	u		u	u
13	א			u			oo	ū	ū	u	u		ū	ū
14	א					ā		ā		ā	ā		ā, ā	ā, ā
15	א					ō		ō		o	o		ō, o	ō, o
16	א (9.9.)					o		o	o	o	o		o, o	o, o
17	א					ē		ē		e	e		ē, e	ē, e
18	א (1. n.)			e		ē	e		e	e	ē			
		(5)	(6)		(7)		(3)		(2)			(10)		

Notes:

(1), (2), (3), (4) 'Ālef is omitted at the beginning of a word.

(5), (6), (7) Cutter 1904, A.L.A. 1908 and Boletin de Bibliotecas ye Bibliografia did not mention the Hebrew vowels.

(8), (9) Ostermann and U.S. Style Manual described the short vowels as short ones, but they equated them to ordinary Roman ones, i.e. without adding diacritic marks of shortness, to them.

Abbreviations:

AFNOR = Association française de normalisation

A.L.A.08 = American Library Association 1908

A.L.A.49 = American Library Association 1949

B.B.B. = Boletin de Bibliotecas ye Bibliografia

B.S. = British Standard

C.04 = Cutter 1904

Gleic. = Gleichen

Heb. = Hebrew

ISO = International Organization for Standardization

Omt. = omitted

Ost. = Ostermann

q.q. = qāmeṣ qāṭān

s.n. = šēwā nā'

sil. = silent

U.S.S.M. = U.S. Style Manual

Vat. = The Vatican Code

Sources:

A.L.A., Cataloging Rules for Author and Title Entries, 2d ed., Chicago, A.L.A., 1949, p. 248-249.

A.L.A., Catalog Rules, Author and Title Entries (Anglo-American), Chicago, A.L.A., 1908, p. 65.

Association française de normalisation (AFNOR), FD Zno 46-003, Translittération de l'Hébreu en caractères latins, Paris, Avril 1964, p. 2-5.

British Standard, Transliteration of Hebrew, (Supplied by Blackwell's, London, n.d.).

Cutter, C. A., Rules for a Dictionary Catalog, Washington, GPO, 1904, p. 152.

Gleichen, Major-General Lord Edward and John H. Reynolds, Alphabets of Foreign Languages, 2d ed., London, The Royal Geographic Society, 1933, p. 70-71.

International Organization for Standardization (ISO), ISO Recommendation R259, Transliteration of Hebrew, 1st ed., (Geneva), May 1962, p. 4-7.

Ostermann, G. F., Manual of Foreign Languages,

4th ed., N.Y., Central Book Co., 1952, p. 120-121.

"Sistema de Transcripción Hebrea", in Boletín de Bibliotecas y Bibliografía, Vol. 2, July-Sept. 1935, p. 238.

U.S. Board on Geographic Names, Transliteration Guide, (Washington, U.S. Gov't Printing Office, August 1961), Section IV, Hebrew, p. 1-2.

U.S. Dept. of State, Office of the Geographer, Romanization Guide, (Washington), July 1964.

United States Gov't Printing Office, Style Manual, Washington, 1959, p. 415-416.

Vatican Library, Rules for the Catalog of Printed Books, translated from the 2d Italian ed., Chicago, Ill., American Library Association, 1948, p. 407.

CHAPTER VI

CONCLUSION

The relationship between the Hebrew and Roman alphabets covers a long period of history. The Romans received theirs from the Phoenician through the Etruscan between 700-600 B.C.¹. This alphabet was originally identical with the Early Hebrew. But, it went through many changes during its history by the addition and loss of characters and by the accretion of others to represent sounds different from the original in Hebrew such as the use of 7 - 𐤑 (gīmal) for "C", the creation of "G" by adding a bar to "C", the use of the consonant 𐤀 - 𐤅 (‘āyin) for the vowel "o", etc.

Hebrew characters remained stable in their order and their form after they were replaced by an adapted Aramaic alphabet around 600 B.C.². The major reason for this conservation was the fact that they were the characters in which the Bible was originally written. The main deficiency of Hebrew writing, like other Semitic, was that the vowels were unwritten, which could lead to ambiguous

1. Charles Higounet, op. cit., p. 74.

2. David Diringer, The Alphabet, op. cit., p. 186.

readings. This lack was filled at a latter period, between 500 - 800 A.D. by the Massoretic scholars who introduced the vowel points¹. But even their system was quite complicated.

The problem of the present Hebrew includes two main aspects: the pronunciation and the writing.

To deal with the pronunciation problem first. The ^ʿAskenazi² is very far from the original, while the European branch of the Sefardi which has been adopted officially in Modern Israel is closer. But it remains dissimilar from the original pronunciation, especially in respect

1. Walter Harrelson, op. cit., p. 19.

2. In general usage, Jewish communities are divided in regard to their pronunciation of Hebrew, into two main groups:

a) The ^ʿAskenazi (the term originates from the Hebrew name for Germany) which is the system developed in Germany and France and much used in Russia, Poland, Romania and other areas North of the Balkans, and then carried to the Americas and elsewhere.

b) The Sefardi (the term originates from the Hebrew name for Spain) which is a closer development from the original of Palestine. This, Sefardi pronunciation was much used along the Mediterranean and East of that sea. It was carried by immigrants from these areas to some West European countries and other lands where the faithful followers of these rites retained this pronunciation.

Within these two major categories of pronunciation some variations have come into being.

to the guttural and the sibilant characters.

The pronunciation of the Middle-Eastern and North-African Jewish communities, in particular the Yemenites and the Iraqi, is the closest to the original¹. These communities pronounce all the guttural and the 'extra'-sibilant characters in their prayers. But only few of them do so in their daily speech, and this only in respect to *ʾ* (ʿāyin), *ḥ* (ḥêṭ) and *ʿ* (ṭêṭ). The majority of young Middle-Eastern and North-African imitate the pronunciation of Aškenazi Sabras² instead of learning correct pronunciation.

Some Sabras and some immigrants from European countries find proper Hebrew speech difficult to learn because they are unable to pronounce the guttural and the 'extra'-sibilant characters correctly. They consider them as homophones. Therefore, some scholars of this group have made several proposals to reform the Hebrew alphabet by adding and subtracting characters or by replacing the

1. This opinion is based on the description of the original pronunciation of every Hebrew character by scholars such as Diringer in his The Alphabet, op. cit., p. 188 and J.J. Gelb in his A Study of Writing, rev. ed., Chicago, University of Chicago Pr., 1969, p. 137.

2. Sabras: Jews born in Israel.

vowel-points by vowel-letters. Others have suggested schemes of romanizing Hebrew writing. But, none of these schemes succeeded because most of them were suggested by persons without a ⁰through knowledge of the original pronunciation of Hebrew or else they ignored this pronunciation. Some of these schemes even complicate Hebrew writing further rather than simplifying it, e.g. the system of Yōsef Kaplan¹ and the system of Fineštayin².

The first serious suggestions that Hebrew be romanized were made during the third and the fourth decades of the twentieth century by Ittamar Ben-Avi and by Z. Jabotiniski. A new series of such proposals came again a few years ago by members of the Haifah Tekniyon (an advanced school of engineering studies). Their major hope was that the romanization of Hebrew will extend the reach of their numerous scientific publications. This argument has no strong basis. A change in the writing system will not increase the spread of Hebrew publications. To Englishmen, for instance, who do not know Hebrew it will not make

1. Yōsef Kaplan, Hašfirāh, 1914 no. 95 and no. 101, as cited by Werner Weinberg, op. cit., p. 67 and p. 80-81.

2. Z. Fineštayin, He'atid, November 1928, no. 58, p. 8, as cited by Werner Weinberg, op. cit., p. 89.

much difference if the book is written in Hebrew characters, Roman characters or even Chinese. The best means for spreading modern scientific publications written originally in Hebrew is to translate them into the major international languages such as English, French, Spanish, etc.

Hebrew writing by and large fits the Hebrew language. It has been developed with it and is interwoven with it. As far as writing is concerned the Massoretes have fixed in great detail the written form of the classic literary monument of the Jewish people, the Hebrew Bible. They established the propriety of each word and each letter textually and grammatically, invented the vowel marks and formulated a system of punctuation and logic in the cantillation.

In spite of certain flaws¹ they provided following generations with a visual authority which, unfortunately, lacks a sound dimension. So they have developed over the ages and across frontiers differences in pronunciation with no central authority.

The universally recognized objective is to return,

1. See p. 211-215 of this conclusion.

as much as possible, to the original pronunciation of Hebrew. The guttural and the 'extra'-sibilant characters have to be taught correctly at Israeli schools to the new generation and to new immigrants from European and other non-Semitic language backgrounds.

Among the best artificial means which have been developed already for teaching Hebrew pronunciation was the one used by Dr. Garbel, professor of Phonetics at the Hebrew University of Jerusalem.

There are no homophones in Hebrew characters. All Hebrew characters have been pronounced correctly, at least by Middle-Eastern and North-African Jewish communities, in their prayer, to the present day. The only exception is the distinction between **שׁ** (śīn) and **ס** (sāmek), which has long been lost. Thus, we can find even in the Bible words which are sometimes written with **שׁ** (śīn) and sometimes with **ס** (sāmek), such as **פֶּעַס** alongside with **פֶּעַשׁ** **סִיחָה** alongside with **שִׁיחָה**, etc. But this is of minor importance. Many alphabetic writings have at least as many homophonic characters as Hebrew. For example in English, French and some other Latin alphabet languages C, K and Q are often used for the "k" sound. In Arabic **ق** (qād) and **ك** (kā) for the "k" sound.

Even this distinction between $\dot{\text{w}}$ (śīn) and v (sāmek) can be traced and restored. In the South-Arabian alphabet¹; in Syriac²; in Jacobite, Estranguelo and Mandaean alphabets³; in Early Libian scripts⁴ and in Ethiopic sillabary⁵ the śīn and sāmek both existed. But, these writings, except for the Ethiopic, belong to what are considered as dead languages today. Thus, a profound research of the pronunciation of śīn and sāmek among Ethiopic tribes may lead to the discovery of their original pronunciation and therefore to the distinction between them. However, the return to the original pronunciation of Hebrew will solve the major part of the Hebrew writing problem.

The suggestion of Yěhūdāh Būrlā'⁶ to reform some words which are currently pronounced a little differently from the manner of their writing has no solid ground. He

1. Marcel Cohen, op. cit., p. 128; also I.J. Gelb, op. cit., p. 137.

2. I.J. Gelb, op. cit., p. 137.

3. Marcel Cohen, op. cit., p. 163.

4. Ibid., p. 130.

5. Ibid., p. 134.

6. Yěhūdā^h Būrlā', op. cit., as cited by Werner Weinberg, op. cit., P. 72-73.

suggested, for instance, that רִישׁוֹן (written Ri'šōn and pronounced Rišōn), be written רִישׁוֹןִי (Riyšōn) i.e. to introduce י (yōd) between the ro'š and the 'ālef. He also suggested that the words רוֹשׁ (Ro'š) and לוֹ' (Lo') be written רוֹשִׁי and לוִֹי i.e. to introduce a ו (wāw) between the ר (roš) and the א ('ālef) of the word רוֹשִׁי and a ו (wāw) between the ל (lāmed) and the א ('ālef) of the word לוִֹי. But, in my opinion, it is better to pronounce these words as they were pronounced originally rather than to complicate their writing. According to many historians, including Gelb¹, א ('ālef), י (yōd) and ו (wāw) were pronounced clearly in Early Hebrew. He gave as examples the words יוֹם (yôm), אָבִי (āvī) and בָּנִיִּי (banīy). He wrote that they were pronounced as if they were written yowm, abiy and banīy. The words בָּ (bā) and בָּנִיִּי (bāy) were pronounced bā' and bā'tiy¹.

Thus, the word Rišōn before the Massoretic period could be pronounced Ri'šōn or Ra'šōn, i.e. with a clearly pronounced א ('ālef). This is also the case with the word Rašī (meaning principal) which derives from the same root Roš and which is pronounced, until now, Rašī and not Rošī.

1. I. J. Gelb, op. cit., p. 166-167.

The same situation may have existed with the word Roš^ʿ (means head - Arabic Ra's). In Early Hebrew it may have been pronounced Ro'š^ʿ or Ra'š^ʿ, i.e. with a short vowel preceeding the 'ālef, but with clear pronunciation of the 'ālef itself. This is why the plural of this word is written and pronounced, until now, Rašīm and not Rošin. A similar situation existed with the word נ'ל (Lo'). However, these few exceptions can be tolerated and left written as they are if we do not wish to return to their original pronunciation.

What really needs some reforms in Hebrew are not the characters, but the system of diacritic vowels introduced by the Massoretic scientists. It seems that in determining the vocalization, the Massoretic scientists did not seek the original pronunciation of every Hebrew word. They only prepared and determined a system for conserving the pronunciation of Hebrew as they found it at that time. This is why we found, for instance, the words bana(y)w (pronounced banāw) and the word pana(y)w (pronounced panāw) written נ'נַי and נ'נַי, i.e. with yōd preceeded by qāmeṣ. The reform of this weakness has to be made not by omitting the yōd which existed long before the Massoretic period and which represented the plural of נַי (ben), but, by replacing the נ (qāmeṣ), under the nūn,

by — (hīreq). Thus, the words will be written and pronounced בָּנִיֹּו (bānīw) and פָּנִיֹּו (pānīw) instead of bāna(y)w and pāna(y)w, etc.

Another problem which is a little more complicated is that of the furtive pataḥ. The words with furtive pataḥ such as רוּחַ , מוֹת , תְּפִיחַ , רִיחַ , עֲשִׂיחַ , גְּבוּחַ , גְּלִבּוּחַ , etc., were written by the Massoretic scientists Ruḥa, Muḥa, Tappuḥa, Reḥa, Siḥa, Gaḇoha, Gilbo'a, etc. They are pronounced by Aškenazīm and some European Sefardīm: Rūäh, Mūäh, Tappūäh, Reäh, Släh, Gaḇoäh (or Gaḇoha), Gilboä', etc., and by Middle-Eastern and North-African Sefardim as: Ruwwah, Muwwah, Tappuwwah, Reyyah, Siyyah, Gaḇowwah, Gilbowwa', etc. It is more likely that the latter pronunciation is closer to the original. The Massoretic scientists knew that the pataḥ really should be under the wāw or the yōḏ and not under the ḥêṭ, the hē or the 'āyin. This is why they called it פְּתַח גְּנוּזָה (furtive pataḥ). Why they did not put it in its correct place? This matter needs further research. This can be reformed simply by placing the pataḥ in its original place and also by pronouncing these words with furtive pataḥ as they should be pronounced. However, in romanizing these words if we use the ~ (zarqah) as sign for gemination, the romanized form would be as follows: Ruwāḥ, Muwāḥ, Taḇuwwāḥ, Reẏāḥ, etc.

But, this is not all. Before the Massoretes the distinction between long, medium, short and very short vowels, were oral and imaginary. The Massoretes established a system of diacritic marks composed of dots and dashes. One dot above the character called ḥōlem (◌ֹ), represents an ordinary "o". One dot below the character called ḥīreq (◌ֻ), represents a short "i". Three dots under the character in a diagonal manner, called qibbūṣ (◌ׇ), represents a short "u". A dash, called pataḥ (◌ַ) below the letter represents a short "a". They also used the : (◌ְšewā) to represent both the absence of a vowel and a very short "ē". They also combined the : (◌ְšewā) with the - (pataḥ) to form the -: (ḥāṭef-pataḥ) to represent a very short "ă", with the ׀ (qāmeṣ) to form the ׃ (ḥāṭef qāmeṣ) to represent a very short "ö" and with the :: (segōl) to form the ::: (ḥāṭef segōl) for a very short "ě". They used the ׀ (qāmeṣ) to represent both a long "â" and a short "ô" etc. They established seventeen vowel points which it is really difficult today to determine what they represented. In addition, they used the period sign called dāgeš (◌ּ) to both represent gemination and to distinguish between the two pronunciations of begedkefat.

This system is really a complicated one. It needs some reforms:

- 1) The τ (qāmeṣ) has to be preserved only for a long "ā".
- 2) The very short vowels should be abolished and replaced by their closest ones. Thus τ (qāmeṣ qāṭān) and $\tau:$ (ḥāṭef qāmeṣ) can be replaced by — (ḥōlem), or the τ (qāmeṣ qāṭān) can be pronounced as the τ (qāmeṣ gādōl), while $\tau:$ (ḥāṭef qāmeṣ) can be replaced by just a τ (qāmeṣ) and pronounced as qāmeṣ gādōl; $\text{—}:$ (ḥāṭef pataḥ) and $\text{—}::$ (ḥāṭef segōl) can be replaced successively by — (pataḥ) and $\text{—}:$ (segōl).
- 3) The $:$ (šewā) needs be preserved only for a short "ē", while $:$ (šewā nāḥ), which represents the absence of a vowel, can be ignored.
- 4) The $\cdot$ (dāgeš) can be used only to distinguish between the two different pronunciations of begedkefat, while a new symbol, preferably the Massoretic $\sim$ (zarqāḥ) can be placed above the letter to represent gemination.
- 5) The distinction in pronunciation between — (šerê) and $\text{—}:$ (segōl) has to be restored. Segōl is supposed

to be pronounced like French "e". šērê like French "é" while yōḏ segōl like French "eu" and yōḏ šērê like French "ê" or "ai". This distinction is still used in the prayer language of the mountain Jews of North Iraq.

The Bible, poetry and children's books must continue to be fully vowelled diacritically, while in advanced books and in correspondence the diacritic vowels need be used only for a few words which can lead to ambiguity if they are not vowelled such as in the case of the word דבר (DVR) which can be read דָּבָר (D^aV^aR), meaning "thing" or "saying", and דִּבְרֵי (D^eV^eR), meaning "plague", if it is not vowelled diacritically.

These minor and much needed reforms and remedies will clarify Hebrew writing and will render its pronunciation very phonetic. They will also make its dictation among the easiest in the world.

However, it is not the function of transliteration schemes to introduce reforms in the Hebrew diacritic vowel system. Such reforms must be made by scholars knowledgeable in Hebrew and in other Semitic languages with the collaboration of linguists and phoneticists. They must also receive the acceptance of a majority of the Israeli

population who used Hebrew in their daily life. Under such conditions the ISO or other authorized organizations will be able to romanize these reformed diacritic vowels in an adequate manner. The only thing that transliterators can presently do, in this respect, is to add, beside the scientific table of transliteration, a simplified one, especially for the diacritic vowels, one which can be used and understood easily not only by scholars but also by the public at large. This approach has already been followed by the Encyclopedia Britannica¹, by the American National Standard Institute² and by few other authorities.

1. Godfrey, Rolles Driver, op. cit., p. 280.

2. American National Standard Institute, op. cit., p. 9.

A. BOOKS

Bacon, Roger, The 'Opus majus' of Roger Bacon,
A translation by Robert Belle Burke, Vol. I, N.Y., R and
R, 1962.

-----, The 'Opus majus' of Roger Bacon, edited
with introduction and analytical table by John Henry
Bridges, Supplementary vol., London, W and N, 1900.

Barkali (Kaléko), S., Hebräisch für Jedermann,
'Ibrīt lēkōl 'iš, Neue Auflage, Jerusalem, Verlag Rubin
Mass, 1970.

Benveniste, Leon, L'Alphabet est né au Sinai,
(Thèse, Paris), 1967.

Breen, A.E., A General Introduction to the Study
of Holy Scriptures, 2d. ed., N.Y. Smith and Rochester, 1908.

Burnham, S., Outline of Syriac Grammar, for the
use of classes in Hamilton Theological Seminary, N.Y.,
Hamilton, 1884.

Cohen, Marcel., La grande invention de l'écriture
et son évolution, Paris, Imprimerie nationale, 1958, 3t.

-----, et autres, L'écriture et la psychologie
des peuples, Paris, Colin, 1963.

Daniel, G., Writing, London, Thomas, 1962.

Diringer, D., The Alphabet, a Key to the History
of Mankind, 3d. ed., London, Hutchinson, (c1968), 2V.

-----, Writing, (Ancient Peoples and Places),
London, Thames and Hudson, (1962).

Driver, Godfrey Rolles, Semitic Writing from
Pictograph to Alphabet, Rev. ed., London, Oxford Univer-
sity Pr., 1954.

Duval, Rubens, Traité de grammaire syriaque,
Paris, Vieweg, 1881.

Fevrier, James G., Histoire de l'écriture,
Nouvelle éd. refondue, Paris, Payot, 1959.

Friedric, J., Extinct Languages, N.Y., Philosophical Library, 1957.

Foster, C., The One Primeval Language, London, Bentley, 1951, 2V.

Gelb, I.J., A Study of Writing, rev. ed., Chicago, University of Chicago Pr., 1969.

Gerych, G., Transliteration of Cyrillic Alphabets, unpublished Master's Thesis presented to the Library School of the University of Ottawa, Ontario, April 1965.

Graff, W.L., Language and Languages, An Introduction to Linguistics, N.Y., Russell, 1964.

Harper, W.R., Elements of Hebrew by Inductive Method, 22d. ed., with index, N.Y., Charles Scribner's Sons, 1906.

Harrelson, Walter, Interpreting the Old Testament, N.Y., Holt, Reinhart and Winston, (c1964).

Hebrew Alphabet, N.Y., Hebrew Pub. Co., 1931.

Hempl, G., Mediterranean Studies, N.Y., AMS Pr., 1967.

Higounet, C., L'écriture, 4e éd., (Que sais-je, Le point des connaissances actuelles), Paris, Presses Universitaires de France, 1969.

Institut International de Cooperation Intellectuelle, L'Adoption universelle des caractères latins, Paris, Société des Nations, 1934.

Irwin, K.G., The Romance of Writing from Egyptian Hieroglyphics to Modern Letters, Numbers and Signs, N.Y., Viking Pr., 1956.

Jensen, Hans, Sign, Symbol and Script, an Account of Man's Efforts to Write, 3rd. ed. rev. and Enlarged, Transl. from the German by George Unwin, N.Y., Putnam's, 1969.

Jones, A., The Proper Names of the Old Testament Scriptures, London, Bagster, 1856.

Kautzsch, E., Gesenius' Hebrew Grammar, 2d. ed.
rev. by A.E. Cowley, Oxford, Clarendon Pr., 1910.

Levin, S., The Indo-European and Semitic Languages,
Albany, State University of N.Y. Pr., 1971.

Mc Murtie, D.C., The Book, the Story of Printing
and Bookmaking, Toronto, Oxford University Pr., 1953.

Meillet, A., Linguistique historique et linguistique générale, Paris, Champion, 1921.

Monis, Judah, Dickdook Leshon Gnebreet, (n.p.),
1735.

Navon, A.H., Nouvelle méthode pratique de lecture
hébraïque, 38^e ed., Paris, (n.p., n.d.).

Ostermann, G.F., Manual of Foreign Languages,
4th ed., N.Y., Central Book, 1952.

Pei, Mario, The Story of Language, N.Y., Lippincott, 1949.

-----, Talking your Way Around the World, 2d.
ed. enlarged, N.Y., Harper, 1959.

Qərīāh biktāb Raši, Qūntres šel liqūṭīm lēṭalmidē
bēt sēfer lēhargilām liqrō' biktāb Raši, (the book has
been published in Hebrew under the title: "קריאה בכתב ראש"),
Šilāh, N.Y., (n.d.).

Samples of Printing in Greek and Syriac Pointed
and Unpointed, Hebrew Special Phonetic Signs, Netherlands,
Royal Van Gorcum Ltd. Assen., (n.d.).

Sprengling, M., The Alphabet, Its Rise and Development
from the Sinai Inscriptions, Chicago, (n.p.), 1931.

Textus, Annual of the Hebrew University Bible
Project, Edited by C. Rabin, Jerusalem, Magnes Pr.,
1960.

Toby, L.F., Hebrew Artistic Lettering, Design and
14 Calligraphic Tables, Drawn by Rothschild Lippmann,
Tel-Aviv, Herzfelder, 1951.

Ullman, B.L., Ancient Writing and its Influence,
N.Y., Cooper, 1963.

U.S. Board on Geographic Names, Transliteration Guide, for Arabic, Bulgarian, Chinese, Hebrew, Icelandic, Japanese, Korean, Persian, Russian, Serbo-Croatian, Thai, (Washington), August 1961.

U.S. Department of State, Office of the Geographer, Romanization Guide, for Arabic, Bulgarian, Chinese, Faeroese, Greek, Hebrew, Icelandic, Japanese, Korean, Mongolian, Nepali, Persian, Russian, Serbo-Croatian, Thai, (Washington), July 1964.

United States Gov't Printing Office, Style Manual, Washington, 1959.

Weinberg, Werner, The Orthographic Reforms of Hebrew, The Problem and the Attempts to Solve it, (The text published in Hebrew under the title; *Tiqūn haktib ha'ibri, habe'ayā We hañisyōnōt, liftorā*), Jerusalem, The Magnes Pr., 1972.

B. DICTIONARIES AND ENCYCLOPEDIAS

"Alphabet Hebreu", in Encyclopédie universelle illustrée, Montréal, Les Editions Maisonneuse, 1968, Tome 5^e, p. 1658.

"Alphabets", in Encyclopedia of Librarianship and Information Science, N.Y., 1948, Vol. 1, p. M197-M205.

Atkinson, B.F.C., "Alphabet", in Encyclopedia Britannica, Toronto, Encyclopedia Britannica, Inc., 1966, Vol. 1, p. 662-669.

Broydé, Isaac, "Transliteration", in The Jewish Encyclopedia, N.Y., Funk and Wagnalls, 1906, Vol. XII, p. 229-231.

The Century Dictionary and Cyclopedia, N.Y., The Century Co., 1900.

Driver, G.R., "Hebrew Language", in Encyclopedia Britannica, Toronto, Encyclopedia Britannica, Inc., 1970, Vol. 11, p. 279-281.

The Encyclopedia of Islam, New ed., Leiden, Brill, 1971, Vol. I-III.

Halkin, S. Abraham, "Hebrew Language and Literature", in The Encyclopedia Americana, Int. ed., N.Y., Americana Corporation, 1972, Vol. 14, p. 34.

Hastings, James, Dictionary of the Bible, Dealing with Language, Literature and Contents, N.Y. Scribner's, 1902, Vol. 1.

"Hebräische Alphabet", in Das Grosse Duden-Lexikon, Mannheim, Bibliographisches Institut, 1966, Vol. 4, p. 117.

"Hebräische Schrift", in Brockhaus Enzyklopädie, (München), Brockhaus Wiesbaden, 1969, 8 Band, p. 272.

"Hebraismo", in Enciclopedia universal ilustrada, Madrid, Espana-Calpe, 1925, Tomo XXVII, p. 878-880.

"Hebreu", in Grand Larousse encyclopédique, Paris, Librairie Larousse, 1962, Tome 5^e, p. 815-816.

"Hebreu", in Larousse du XXe siècle, Paris, Librairie Larousse, 1930, Tome 3^e, p. 979-980.

The International Standard Bible Encyclopedia, Chicago, Howard-Severance, 1915, Vol. I-V.

Levias, C., "Alphabet", in The Universal Jewish Encyclopedia, N.Y., 1948, Vol. 1, p. 197-205.

Lidzbarsky, M., "Alphabet the Hebrew", in The Jewish Encyclopedia, N.Y., Funk and Wagnalls, 1901, Vol. I, p. 439-454.

Martin, W.J., "Hebrew Language", in Chamber's Encyclopedia, New rev. ed., London, International Learning Systems Corporation, Ltd., 1970, Vol. II, p. 820-823.

'Ornan, 'Uzi, "Hebrew Grammar", in Encyclopedia Judaica, Jerusalem, The Macmillan Co., 1971, Vol. 8, p. 78-114.

The Oxford English Dictionary, being a corrected re-issue with an introduction, supplement and bibliography of a new English dictionary, Oxford, The Clarendon Pr., 1961, Vol. VIII.

Robert, Paul, Dictionnaire alphabetique et analytique de la langue française, Paris, Société du Nouveau Littré, 1964, Tome sixième.

C. PERIODICAL ARTICLES

Adler, E.N., "A Gazetteer of Hebrew Printing", in Library World, Vol. 19, p. 200-204, 1916-1917.

Frontard, R., "Transliteration Codes and their International Standardization", in UNESCO Bulletin for Libraries, Vol. XV, No. 2, p. 78-80, March-April, 1961.

"ISO Technical Committee Produces Hebrew Transliteration Standard", in Library Journal, Vol. 88, p. 4601-4602, December 1963.

Kent, Francis L., "International Progress in Transliteration", in UNESCO Bulletin for Libraries, Vol. 10, p. 132-135, May-June, 1956.

"A new Global Standard for the Transliteration of Hebrew", in Wilson Library Bulletin, Vol. 38, p. 321, December, 1963.

Paulain, Jean, "The Transliteration of Hebrew Characters", in UNESCO Library Bulletin, Vol. 15, p. 329-330, 1962.

Shaw, Elizabeth, P., "Transliteration, A game for the Library Sleuth", in Bulletin of the Medical Library Association, Vol 37, p. 142-145, 1949.

Ševčík, A., "La Translittération", Revue de la Documentation, Vol. 14, No. 1, p. 21-22, 1947.

Sommer, F.E., "Transliteration Problems", in Library Journal, Vol. 58, p. 534-536, 1933.

Sutcliffe, Edmund F., "St. Jerome's Pronunciation of Hebrew", in Biblica, Vol. 39, p. 116-125.

"La Transliteracion de Alfabetos no Latinos", in Boletin de Bibliotecas ye Bibliografia, Vol. 2, p. 236-243, 1935.

"Transliteration, Report of the ALA Transliteration Committee, 1885", in Library Journal, Vol. 10, p. 302-309, 1885.

"The Transliteration of Russian", in Library Journal, Vol. 23, No. 8, p. 174, 1898.

Ullendorff, Edward, "The Knowledge of Language in the old Testament", in Bulletin of the John Rylands Library Manchester, Vol. 44, No. 2, p. 455-465, March 1962.

Wharton, Leonard C., "Transliteration or Transcription", in International Federation for Documentation-Transactions, Vol. 1-2, p. C244-C245, 1938.

D. CATALOGUING CODES AND TRANSLITERATION RULES

A.L.A., Catalog Rules, Author and Title Entries (Anglo-American), Chicago, Ill., ALA, 1908, p. 69.

-----, A.L.A. Cataloging Rules for Author and Title Entries, 2d ed., edited by Clara Beetle, Chicago, ALA, 1949, P. 248-249.

American National Standard Institute, Standard Committee Z-39, Subcommittee for the Romanization of Hebrew, Proposed Standard Romanization of Hebrew, rev., August 1972, Cincinnati, Ohio, 1972.

Association française de normalisation (AFNOR), FD Zno 46-001, Translittération des caractères cyrilliques, Janvier 1956, Paris, AFNOR, 1956.

-----, FD Zno 46-002, Translittération des caractères arabes en caractères latins, Mai 1963, Paris, AFNOR, 1963.

-----, FD Zno 46-003, Translittération de l'Hébreu en caractères latins, Paris, Avril 1964, AFNOR, 1964.

British Museum, Rules for Compiling the Catalogues of Printed Books, Maps and Music in the British Museums, rev. ed., London, 1936.

British Standard Institution, British Standard 4280: 1968, Transliteration of Arabic Characters, London, Published by the Institution, 1968.

Cutter, C.A., Rules for a Dictionary Catalog, Washington, GPO, 1904, p. 152-153.

International Organization for Standardization (ISO), ISO Recommendation R9, International System for the Transliteration of Slavic Cyrillic Characters, 2d ed., September 1968, Geneva, 1968.

-----, ISO Recommendation R233, International System for the Transliteration of Arabic Characters, 1st ed. December 1961, Geneva, 1961.

-----, ISO Recommendation R259, Transliteration of Hebrew, 1st ed., May 1962, Geneva, 1962.

-----, ISO Recommendation R843, International System for the Transliteration of Greek Characters into Latin Characters, 1st. ed. (corrected), October 1968, Geneva, 1968.

Royal Geographic Society, Alphabets of Foreign Languages, 2d ed., by Lord Edward Gleichen and John H. Reynolds, London, 1933.

"Systems of Transliteration and of Citation of Proper Names, A. Rules for the Transliteration of Hebrew and Aramaic", in The Jewish Encyclopedia, Vol. I, N.Y., Funk and Wagnalls, 1901, p. XXV.

"Systems of Transliteration and of Citation of Proper Names, A. Rules for the Transliteration of Hebrew and Aramaic", in The Jewish Encyclopedia, Vol. II, N.Y., Funk and Wagnalls, 1902, p. IX and X.

"Transliteration Rules, Hebrew and Semitic Languages", in Encyclopedia Judaica, Vol. I, Jerusalem, The Macmillan Co., 1972, P. 90-92.

Vatican Library, Rules for the Catalog of Printed Books, transl. from the 2d Italian ed. by T.J. Shanahan, Chicago, Ill., ALA, 1948.

Cross, Frank Moore and Freedman, David Noel, Early Hebrew Orthography, a Study of the Epigraphic Evidence, New Haven, Connecticut, American Oriental Society, 1952.

Horowitz, Edward, How the Hebrew Language Grew, N.Y., Jewish Education Committee Pr., 1960.

Maimon, Jacob, "Alphabet, Hebrew", Encyclopedia Judaica, Vol. 2, Jerusalem, The Macmillan Co., 1971.

Siegel, Jonathan P., "The Employment of Paleo-Hebrew Characters for the Divine Names at Qumran in the Light of Tannaitic Sources", Hebrew Union College Annual, 1971, Vol. XLII, p. 159-172.

Skehan, Patrick W., "The Text of Isaias at Qumran", The Catholic Biblical Quarterly, April 1955, Vol. XVII, p. 38-43.

Note: - Additional reference works and bibliographic tools which have been consulted, for preparing this thesis, are not listed.

SUMMARY

THE
ROMANIZATION OF^AHEBREW ALPHABET

by

HESKEL SHABATH

This thesis defines the terms romanization, transliteration and transcription. It also surveys the historical development of the Hebrew alphabet. Proper romanization of Hebrew presupposes proper pronunciation, as well as familiarity with the regional and historical differentiation in speech. Even more than in English and in German, a sense of the roots and morphology of the words and their elements are essential to intelligible and acceptable speech — and therefore to transliteration and romanization.

By the same token it has proven necessary to examine, however briefly, the development of the Roman characters out of Early Hebrew and Phoenician.

The early systems of romanizing Hebrew are then dealt with carefully. In today's perspective, with the critical tools available to us, we find that these early systems were based on the linguistic knowledge of a limited number of Hebraists, often men of great personal authority, whose rulings and practices were uncritically followed down the ages. In many cases they ignored most of the

Hebrew vowels, the guttural, the 'extra'-sibilants and the begeḏkefat.

In more recent times, about a century ago, various scientific schemes based on modern linguistics and phonetics were developed. These approaches are also carefully considered. In spite of these advances, most often on private, or at best national, initiative these systems were slow to recognize the limitations of the traditional romanization and failed to benefit from the various oral Hebrew traditions which were kept alive by Hebrew-reading Jews in distant lands. Most of these early scientific systems still ignored many vowel sounds and guttural and 'extra'-sibilant letters or equated them in various ways.

The International Standard which very seriously attempted uniformity is analyzed and criticized. This scheme is comprehensive and utilized all available scholarship and the oral tradition of three continents. It deals with all the vowel sounds, all guttural and 'extra'-sibilants clearly, recognized the two pronunciations of all the begeḏkefat letters, equated each character by an equivalent character, did not have recourse to digraphs. A few weaknesses of this system are noted and remedies are suggested.

Israeli and other Jews are keenly aware of the distance between their ancient language and the culture of the Roman alphabet world. During the past fifty years many have sought to lift at least the alphabet curtain by introducing romanization of Hebrew for daily usage. Various proposals of this nature proposed towards this end are examined.

The thesis is intended to serve as a guide for bibliographers and librarians in romanizing Hebrew characters and Hebrew personal and geographic names. It might also serve researchers as informational background for dealing with reforms or romanization of the Hebrew script.

In the past reading material, in the Hebrew language, in the libraries of the Western World were mainly of a theological and archaeological nature. Today the nature of Hebrew materials has grown to a considerable extent and covers nearly all the sciences. Simultaneously Library Science itself has become more developed, more accurate and more demanding. In our international world it is more important than ever to integrate the cultural activities of all nations into the whole unitary system of knowledge which is represented by modern libraries. This thesis will hopefully assist librarians working in the Western World to cope with this problem.