LEPSIUS'S 'STANDARD ALPHABET'

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Richard Lepsius

Standard Alphabet for Reducing Unwritten Languages and Foreign Graphic Systems to a Uniform Orthography in European Letters

RICHARD LEPSIUS

STANDARD ALPHABET FOR REDUCING UNWRITTEN LANGUAGES AND FOREIGN GRAPHIC SYSTEMS TO A UNIFORM ORTHOGRAPHY IN EUROPEAN LETTERS

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PREFACE

This new edition of Richard Lepsius's *Standard Alphabet* reproduces the text of the second, enlarged, edition of 1863. In preparing an introduction to it I have attempted to place it in its historical setting, and to provide comments on the phonetic basis for the Alphabet and the notation. In doing this I have sometimes related it to modern phonetic frameworks of description, not with the intention of showing up deficiencies in the light of modern knowledge, which would be of doubtful value, but in order to clarify or elucidate points which might otherwise be obscure.

I am most grateful to all those who have helped me, directly or indirectly, in the preparation of this edition. Among these I should particularly like to thank David and Mary Abercrombie, Mike McMahon, Elizabeth Uldall and Horst Weinstock for valuable comments and suggestions, and, not least, Konrad Koerner, the editor of this series, who persuaded me into undertaking the project, and gave me helpful bibliographical references and much good advice. Needless to say, errors that remain are my own responsibility. My thanks also to the staff of the various libraries I have used, particularly the Edinburgh University Library, the National Library of Scotland, the British Library, and the library of the Church Missionary Society. I am grateful to the Archivist of the Church Missionary Society for permission to quote material from their archives, and to the Librarian of Cambridge University Library for permission to reproduce the "Index to Lepsius's Works". Finally my thanks to my wife for helping to proof-read the drafts, and for her constant encouragement.

Edinburgh, 1980 *J. Alan Kemp*

USE OF SYMBOLS

In a work of this kind symbols are obviously crucial. The following practice has been adopted in the introduction:

(1) Where it is necessary to refer to *sounds* as unambiguously as possible the alphabet of the International Phonetic Association has been used, enclosed by square brackets.

(2) When, occasionally, it has been appropriate to refer to *phonemes* the same alphabet has been used, enclosed by oblique lines.

(3) When Lepsius's own symbols are referred to they are reproduced in italic script, because this is what he himself used throughout, with the various diacritical marks. The only exceptions are the Greek symbols, which are here reproduced in an upright and not a sloping fount. Lepsius's diacritical marks have been reproduced as exactly as possible. In one case a more easily available mark has been used, as it closely resembles the original, namely '*i*' instead of '*i*' on pp. 56*, 57*, 72*.

(4) Otherwise symbols are reproduced as nearly as possible in the same form as in the original works they are taken from. Roman symbols are enclosed between single inverted commas, to set them off from the rest of the text.

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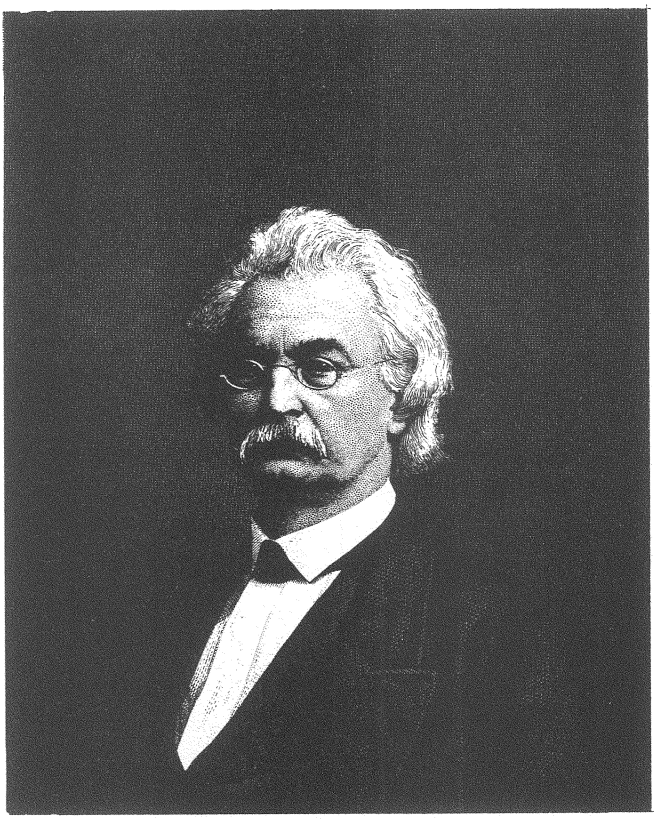

R. Lepsius.

INTRODUCTORY

Carl Richard Lepsius will be remembered chiefly for his outstanding work in the field of Egyptology. In histories of linguistics he tends to be allotted only a few lines, for his work on Egyptian hieroglyphics, or on Osco-Umbrian inscriptions, or his development of a universal phonetic alphabet. Yet, although his influence on the course of development of 19th century linguistics was not great when compared with that of some of his contemporaries, he deserves a fuller mention than he customarily gets. His linguistic work was the fruit of careful research into a wide range of languages of the world, and, in particular, an interest in writing systems and their relationship to the languages they represent. The following brief survey of his life may help to indicate how his linguistic interests and writings, and in particular his 'Standard Alphabet', relate to the main current of his life's work. The chief source used for his life is the biography of Lepsius written by his friend and pupil Georg Ebers not long after the famous scholar's death (Ebers 1885); this draws on Frau Lepsius's personal diaries, as well as on letters and personal recollections and on Lepsius's own works. These works are listed in full by Ebers in his biography, and the list (referred to in Chapter 1 as 'Index') is reproduced in this edition (pp.88*ff.) from the translation of Ebers by Underhill (*Richard Lepsius: a Biography*, by Georg Ebers, translated by Zoe Dana Underhill. New York: W.S. Gottsberger, 1887, 325-347).

1.0 CARL RICHARD LEPSIUS, 1810-1884

Lepsius was born on 23 December 1810 in Naumburg on the Saale. His father was the Saxon Finance Procurator for the whole of the Thuringian district, a well respected man who later became President of the Provincial Court of Justice and a Privy Counsellor. The ties between father and son were to become stronger as the years went by. The discipline and attention to detail which characterised Richard Lepsius's work in later life certainly derive, at least in part, from his father. He grew up in an atmosphere favourable to the development of intellectual interests. At the Pforta School in Naumburg he was much influenced by his tutor, Adolph Gottlob Lange (1718-1831), and by the time he left school in 1829 he had acquired through him a thorough knowledge of the classical languages.

However, when he entered Leipzig University in the same year, he was undecided as to what should be his area of study. Philology and archaeology both attracted him, but neither of these disciplines led to obvious careers. He had no need to rush into a decision; for the moment he settled down to work at classical philology, one of his teachers being Gottfried Hermann (1772-1848). Work was not allowed to exclude other interests. He led an active social life, one aspect of which was an enthusiasm for chess which he never lost. After spending a year in Leipzig Lepsius moved on to Göttingen. There he met Karl Otfried Müller (1797-1840), one of the outstanding classical scholars of his time, and found in him a fresh stimulus to his archaeological interests. Through Müller he came to know the work of the International Institute for

Archaeological Correspondence (which was founded in 1829 and had its headquarters in Rome), and he spent many hours tracing copies of ancient architectural and sculptural masterpieces. During this period also he acquired a knowledge of Sanskrit through Heinrich Ewald (1803-75), with the intention of extending his interests beyond the traditional bounds of classical philology.

In May 1832 he left Göttingen for Berlin. Philology there could boast such famous scholars as Karl Lachmann (1793-1851), August Boeckh (1785-1867) and Franz Bopp (1791-1867), pioneer of comparative philology, but Lepsius was disappointed at first, and missed what he felt were the higher standards of Göttingen. However, as time went on, Bopp's approach to grammatical analysis, with its emphasis on a systematic study of structures, exerted a strong influence on him. Lepsius's doctoral dissertation, the first major independent work he undertook, consisted of a study of the seven Eugubian tablets. These tablets contained relics of the old Umbrian language, which was as yet undeciphered. The dissertation, completed in 1833 (see Index to Lepsius's works on p.88* - no. I) received high praise. Continuing his activities in the archaeological field Lepsius acted as assistant to the famous archaeologist Eduard Gerhard (1795-1867). The interest in Egypt and its culture, which later became such a dominant influence, not to say passion, in his life, was as yet unawakened.

He left Berlin in July 1833 and went from there to Paris. The great pioneer of Egyptian studies, Jean François Champollion (1790-1832), had been Professor of Egyptology there until he died, a year before Lepsius's arrival, and it was in Paris that Lepsius first determined to concentrate on this area of study. He threw himself into his work with characteristic energy. In 1834 he completed what is, from a linguistic point of view, a very significant work, namely an article entitled 'Palæography as a means of etymological research' (Index no. III). He submitted it successfully for the Volney Prize of 1834 (see below p.21*). This article exemplifies his early interest in the relationship between written and spoken language, which was one of the things that led him to Egyptology. He was fortunate in having influential patrons to

encourage him along this path; chief among them were the famous naturalist and traveller Alexander von Humboldt (1769-1859) and Carl Bunsen (1791-1860), at that time Prussian ambassador to the Papal Court and Secretary of the International Institute for Archaeological Correspondence. Lepsius's early investigations in the field of Egyptology dealt with the relationship between the Coptic, Semitic and Indo-Germanic languages, and the Semitic, Indian, Old Egyptian and Ethiopian scripts. Through Bunsen he submitted articles on these topics to the Royal Academy of Berlin (Index nos. V and VI).

In 1836 he went to Italy, where he first actually met Bunsen. Over the years they became close friends, and although there were some serious disagreements between them Lepsius was always glad of the opportunity to consult his friend. They complemented one another - Lepsius had a more rational and intellectual approach and Bunsen a greater gift of imagination. A decade later Bunsen was to give similar support in various ways to the career of the young Max Müller.

In 1837 Lepsius wrote a letter to Ippolito Rosellini (1800-43), a former pupil of Champollion and one of the foremost scholars in Egyptology, on the subject of hieroglyphics (Index no. XIII). This letter shows us the clarity of presentation and scientific approach to description which was to characterise Lepsius's later grammatical works. He remarks (p.22), with reference to the alleged incomprehensibility of the hieroglyphic system

> **C'est un organisme, c'est à dire un tout, qui porte sa verité et sa necessité en lui-meme ... d'après des lois internes et invariables.**

These words perhaps reflect the influence of his former teacher Franz Bopp. Lepsius goes on to distinguish carefully, with numerous examples, the ancient Egyptian dialects and the writing systems used to express them, and then gives a highly perceptive analysis of the hieroglyphic symbols according to their functions - ideographic, phonetic or intermediate.

While in Italy he continued his work on Oscan and Umbrian inscriptions, in addition to less linguistically-oriented studies of the

chronology and mythology of ancient Egypt.

It was with reluctance that he left Italy in July 1838, to perform the task of promoting the work of the International Archaeological Institute in England. Bunsen was now resident there as Prussian Ambassador, and was able to give his young protegé many valuable contacts, but Lepsius was increasingly anxious to undertake an expedition to Egypt. Bunsen did his best to persuade him to finish other projects first. In 1839 Lepsius went back to Germany, and in the following three years published a number of works, mostly related to his Egyptian studies (Index nos. XXI-XXXI). In January 1842, at the age of 31, he was appointed 'Professor Extraordinarius' of Egyptology in the University of Berlin. Meanwhile Bunsen and von Humboldt attempted to interest King Frederick William IV of Prussia in an Egyptian expedition to be led by Lepsius. The expedition was approved, and after due preparations the German scholar arrived in Egypt with his party in September 1842. He had chosen his companions well, and proved to be an excellent leader and organiser. The expedition surpassed all expectations, bringing Lepsius, who was still only 32 when he set out on it, a high reputation. He had the opportunity while in Egypt to study a number of African languages, which he continued to work on after his return, and they formed the basis for later publications.

In 1846 Lepsius was married to an eighteen year old orphan, Elisabeth Klein, and in the course of a happy married life six children were born to them. His wife was a deeply committed Christian; her one great disappointment was that her husband did not share her whole-hearted devotion. It was in the same year that her husband became 'Professor Ordinarius' of Egyptology in the University of Berlin.

During the years following his return from the Egyptian expedition he wrote a number of works; the culmination was the great twelve volume account of the monuments of Egypt and Ethiopia (Index no. XLV). It described all the archaeological, palaeographical and historical discoveries of the expedition, and included 894 plates. Remarkably, in a work of this immense scope, there are virtually no errors, and Lepsius demonstrated his ability, while not neglecting the details, to let the

whole picture emerge. The last volume was completed in 1856, and it was published in 62 numbers between 1849 and 1859.

In 1850 Lepsius was made a member of the Royal Academy of Berlin. He lectured regularly in the University of Berlin. Some of these lectures were on the grammar of ancient Egyptian, and it was during this period that he was led to develop his ideas as to the possibility of a universal phonetic alphabet. Writing systems had long been one of his interests and he now had the additional stimulus of his contact with African languages. He was contemplating publishing an edition of St Mark's Gospel in the Nubian language (it appeared in 1860 - Index no. LXIX), and this was one strong motive for devising a new method of phonetic transcription. We shall see later (below, pp.28-33*) the events which led up to the publication of the first edition of his 'Standard Alphabet' in 1855. It was also in 1855 that he became co-Director of the Egyptian Museum in Berlin, where he devoted much of his time to the cataloguing and arrangement of the materials it contained. He was made Chief Superintendent of the Museum in 1865. His interest in speech sounds and their representation in writing led to articles on Chinese and Tibetan, on Arabic, on the Zend alphabet, on 'guttural' and 'faucal' letters, on the Persian cuneiform script, and to a much enlarged second edition of the 'Standard Alphabet' published in 1863 (see below p. 49*), in addition to the already mentioned edition of St Mark's Gospel in Nubian. All these works were published between 1860 and 1863 (Index nos. LXVIII-LXXIV).

Lepsius made two further journeys to Egypt (1866 and 1869), and during the second visit witnessed the opening of the Suez Canal. In 1867 he became President of the Directors of the International Archaeological Institute, on Gerhard's death, and under his presidency the Institute widened its scope to include not only Prussia but the whole German Empire. In 1874 Lepsius was appointed Chief Librarian of the Royal Library in Berlin, where he brought about a number of improvements in its service to readers.

Returning to a topic he had first embarked on in 1844 (Index no. XXXV) he published an article in 1872 (Index no. CVIIIa) on the

Ethiopian languages and peoples, and his final linguistic works were an article on the classification of African languages (Index no. CXXIXa) in 1879, and his Nubian Grammar (Index no. CXXX), published in 1880. During the Egyptian expedition he had collected materials for grammars of three languages of the Sudan - Kongara, Beǰa and Nubian. His Nubian Grammar contained an introduction of 126 pages giving a survey of all African peoples and a classification of their languages. In all his linguistic work we find evidence of accurate observation and considerable skill in the organisation and classification of his data (see below p.62*).

Numerous honours were bestowed on Lepsius in his later years. He was fortunate in his family life, always receiving great support from his wife, who took a warm interest in his work and was an excellent hostess as well as a good mother. They entertained their friends regularly, and Ebers relates that on Lepsius's birthday it was usual for a play to be performed. On one occasion a fable was presented with his 'Standard Alphabet' as the subject - personified as Miss Alphabeta Standarda, shown at various stages of development!

Lepsius's characteristically intellectual and dispassionate approach to his work and his somewhat reserved nature led many to think of him as a cold man. However, the outer calm concealed a warmth of heart and indeed, by his own confession, an impulsiveness which he deprecated, as likely to impair his judgement. His early family life and his thorough academic training combined to produce a very high standard of scholarly accuracy in all that he attempted. His integrity as a man and as a scholar was of the very highest order. Ebers concludes his biography by saying that it would be wrong to describe him as a genius, because he did not possess the genius's exceptional degree of imaginative creativity. There can be no questioning his outstanding intellect, and the boundless energy which he applied to all his activities. In the obituary which he wrote for 'The Academy' Max Müller (1884:44) said of Lepsius

> He belonged to the old chivalrous race of German scholars, to whom scholarship was a means, not an end, who lived for great ideas, and were conscious of their high calling to do good work, not for the lecture room only, but for mankind at large.

Lepsius died on 10 July, 1884, having continued to work almost to the last.

2.0 UNIVERSAL ALPHABETS

Before we trace in more detail the development of Lepsius's 'Standard Alphabet' it may be helpful to look at the background to it, and in particular at similar attempts to provide a universal alphabet.

What is meant by a 'universal alphabet'? One answer might be "A collection of symbols devised to make it possible, by using them, to give an unambiguous representation in writing of any or all languages". It is necessary here to make a clear distinction between the terms 'transcription' and 'transliteration', and it will be useful to adopt the definitions provided by the Working Group on a Single Romanization System, convened under the auspices of the United Nations Conference on the Standardization of Geographical Names (see Wellisch 1978:31):

> *Transcription:* **The process of recording the phonological and/or morphological elements of a language in terms of a specific writing system.**
>
> *Transliteration:* **The process of recording the graphic symbols of one writing system in terms of the corresponding graphic symbols of a second writing system.**

In other words transliteration always involves converting one set of graphic symbols into another, whereas it is possible to transcribe a language which has never had a writing system. Writing systems for particular languages may originally have been devised to represent the sound system fairly closely, but as languages change over a period of time the relationship often ceases to be a simple one, unless the writing system is also altered.

The term 'universal alphabet' is applied by some to systems devised for *transliterating* non-roman scripts (for example, Greek,

Cyrillic, Arabic) into the roman script. Each distinctive symbol of the original script is allotted a similarly distinctive symbol in the transliteration; thus the conversion can be made automatic. In transliterating Modern Greek, for instance, the Greek letters ι, η would each receive a distinctive symbol (e.g., i, ē) wherever they appeared, irrespective of the fact that both Greek symbols represent the same vowel sound (they represented different sounds in ancient Greek). Similarly, in the case of Arabic, each distinct symbol would correspond to a distinct roman symbol in the transliteration; this would be the case also in transliterating Persian (which uses the Arabic script) even though some distinct Arabic symbols represent one and the same sound in Persian. Such a transliteration system can be described as 'universal' insofar as it is widely, or even universally, agreed that the symbols used for transliteration of languages are always to be taken from the particular set provided, and all other symbols are to be excluded. (For a discussion of the problems of transliteration see Wharton 1921 and Wellisch 1978.)

More often the function of a 'universal alphabet' is seen as to provide the means of *transcribing* languages. Someone who does not know a particular language can thus be given at least an approximate idea of how it is pronounced, in addition to its graphemic structure, if it has one. No transcription, however detailed, can by itself give more than a rough idea of the pronunciation of a language. If the roman alphabet is used as a basis it needs to be modified and augmented in a number of ways in order to convey the sound values of a wide range of languages (see below pp.14-15*). In spite of the problems, many attempts have been made to provide an alphabet which would allow one at least to distinguish the 'important' sounds of the languages of the world, so as to facilitate communication between scholars, missionaries, language learners and teachers, travellers and others with particular needs. Wharton (1921) contains a full, though not complete, bibliography. He lists 146 systems of transcription or transliteration put forward at various times. In this introductory article some of these systems will be briefly described, to give a background to Lepsius's *Standard Alphabet*.

2.1 *THE PROBLEMS OF DEVISING A UNIVERSAL ALPHABET*

Let us consider some of the problems that face the would-be inventor of a universal alphabet intended to convey pronunciation:

(1) What sounds are the 'important' ones? In other words how far does one need to go in distinguishing shades of difference in sounds? And what criterion is to be used in deciding where to stop? We might answer today that it is sufficient to be able to convey the phonemic distinctions in the languages being transcribed. But it was not till towards the end of the 19th century that an explicit phoneme theory emerged, though we shall see that there is some similar principle at work in Lepsius's approach (below p.49*).

(2) How adequate is the contemporary knowledge of the articulatory formation and/or acoustic make-up of the sounds? Will it permit a classification which conveys their phonetic relationship accurately, so that it may be reflected in the way the alphabet is constructed? How does one provide for sounds whose formation is only imperfectly understood, or for sounds yet to be found in languages?

(3) When a language has no accepted standard pronunciation, how can one most effectively provide for dialectal variations? This is particularly important if the alphabet is to form the basis of a new orthography in languages which have previously had no written form; for instance, many languages of Africa and North America in the 19th century.

(4) What *form* is the notation to take? This is one of the major problems. Is it better to choose a familiar script as a basis, such as the roman alphabet, or to invent a new script? If the latter, should the symbols be 'iconic', that is directly representative in their shape of the physical or physiological formation of the sounds they stand for?[1] There are disadvantages in using unfamiliar and sometimes complex new symbols: (a) unfamiliarity gives rise to initial distrust; (b) very considerable expense is likely to be involved in the provision

[1] **Abercrombie (1967:120) points out that "A symbol in an iconic notation is likely to be tied to a particular theory of phonetic description - and this theory may turn out to be wrong or inadequate", whereas the symbols of the roman alphabet are not tied to one theory.**

of the necessary types for printing the symbols, and they will not be widely available; (c) they cause problems for printer, writer and reader.

2.2 *EARLY ATTEMPTS TO PROVIDE A UNIVERSAL ALPHABET*

The pioneers in this area were handicapped by their uncertainty about the ways in which the speech mechanism operated in producing particular sounds. Even though remarkably accurate descriptions were being produced as early as the 16th and 17th centuries in Europe (e.g. Holder 1669) the description of vowels, in particular, posed considerable problems. It was difficult, if not impossible, to observe the positions the tongue took up for them, and it was only in the 19th century that their acoustic structure began to be accurately analysed and described (e.g. by Helmholtz 1863). Accurate vowel diagrams appear at the end of the 18th century (see below p.54*). Among the consonants also there were certain groups which posed particular problems of description such as the Arabic 'emphatic' consonants, the clicks of southern African languages, and those produced with a glottalic airstream (ejectives and implosives). This was partly because of the difficulty of observing the mechanism of production, and partly through the unavailability of informants who could illustrate these sounds. However, this was obviously not a problem for those who were concerned only to provide a transliteration, in the sense in which it has been defined (p.9* above), and schemes for transliterating languages have existed from the earliest times (see Wellisch 1978, Chap.3). The development of phonetically based universal alphabets comes considerably later.

In the 17th century there was a great upsurge of interest in the idea of a universal language, which would allow men to communicate more easily and unambiguously across national boundaries (see Salmon 1972). This was stimulated partly by the rapid growth of scientific research, with the foundation of the Royal Society and other such learned bodies, and partly by the activities of missions, and the expansion of trade. Among scholars who put forward detailed schemes for a universal language was John Wilkins (1614-72), one of the founders of the Royal

Society. Like many of his contemporaries he was a man of wide interests, which included mathematics, philosophy, theology and languages. His *Essay towards a real character and a philosophical language* (1668) is a remarkable work. In it he attempts to classify everything that exists, and then to provide a notation for each of the concepts in his classification, so building up a universal language, with its own grammar and phonetic realisation. In his description of the phonetic aspect of this language he puts forward three separate notations, based on an articulatory analysis of the sounds of languages with which he was familiar. He specifies three conditions for arriving at suitable figures or characters for notations (1668:375):

> **(1) They should be the most simple and facil, and yet elegant and comely as to the shape of them.**
> **(2) They must be sufficiently distinguished from one another.**
> **(3) There should be some kind of suitableness or correspondency of the figure to the nature and kind of the letters which they express.** [i.e. he favours an 'iconic' notation - see p.11* above.]

The first of his three notations is non-roman (p.376), using symbols made up of straight and curved lines in various combinations, and allotting similar shapes to phonetically similar segments. It is in fact a syllabary; for each consonant symbol there is a particular variant according to the vowel which follows it. (A contemporary of Wilkins, Francis Lodwick, put forward a similar non-roman syllabary (see Salmon 1972:231-46 and Abercrombie 1948:2-11)). Wilkins describes his first notation as 'more facil and simple' than the second, which is an attempt to represent the actual articulations made in producing each sound - what he calls a 'Natural Character'; it consists of a diagram of the head and articulatory organs, and an abbreviated outline of the position of the main articulators involved. This is as near as one can get to a truly 'iconic' alphabet. Wilkins proposes it "without any design of common use, for which they [the symbols] are less fit, by reason of their being so complicated". (Abercrombie (1967:115) reproduces Wilkins' original plate.) The third notation is an adaptation of the roman alphabet, supplemented by the use of digraphs and two Greek symbols. None of Wilkins' notations achieved any widespread use.

2.3 *DEVICES FOR SUPPLEMENTING THE ROMAN ALPHABET*

Before we go any further let us consider what devices are available for supplementing the roman alphabet. They include:

(a) *The introduction of additional symbols.* These may be newly invented symbols, often modifications of existing letters, such as [ŋ] for the velar nasal. Or they may be borrowed from another alphabet, such as Greek or Cyrillic, and modified in form to harmonise with the roman letters, like [θ]. Or they may be 'turned' forms of roman letters, such as [ɔ] and [ɟ]. If they come from an existing alphabet they are normally used to represent sounds with a value similar to the ones they stand for in that alphabet. Turned roman letters may be given values related to those of the unturned letters, e.g. IPA [ɹ] and [ʁ]; or they may be given values associated with their turned form, e.g. IPA [ɟ] (associated with [j] and not with [f]. Except for the wholly new letters the types will be readily available to many printers, so avoiding the necessity to go to the expense of casting new types.

(b) *The use of 'superfluous' roman letters with new values.* Two obvious examples of 'superfluous' letters are 'x' and 'q'. In their normal values (for English) they may be replaced by 'ks' and 'k(w)' respectively. They then become available to represent other sounds.

(c) *The use of digraphs.* These are made up of two roman letters, which may be joined together to form one symbol, representing a single sound, such as 'th' or 'th' (for IPA [θ]) and 'sh' or 'sh' (for IPA [ʃ]). This device is not open to those who insist that single sounds should not be represented by combinations of symbols, usually on the grounds that the digraphs concerned may be needed to represent truly compound sounds; for example 'th' may be required to represent aspirated [t] (see Lepsius 1863:13).

(d) *The use of different type faces.* Printers have available both italics and capitals. These can be given phonetic values different from the lower case roman letters. Objections may be made to this for a number of reasons - failure to harmonise with lower case roman type, difficulty in distinguishing them from lower case roman in handwriting,

and conflict with other conventional uses (such as the use of italics for emphasis, or of capitals for proper names). Nevertheless a number of important phonetic alphabets have made use of them (e.g. the Swedish Dialect Alphabet - see p.77* below).

(e) *The use of diacritical marks*. These are marks such as horizontal or vertical lines, wavy lines, dots, small circles, hooks, small letters, numerals, etc. added to the basic symbol to modify its value. They may be actually attached to the basic symbol, or separate from it, and may be in any of the various possible spatial relationships to it - above, below, etc. Some languages use them in their orthographies, for example French 'é, è, ê, ç', Norwegian and Swedish 'å', Czech 'č', German 'ä, ö, ü', and so on. They are an economical way of enlarging the repertoire, because one diacritical mark with a particular value may be applied to many basic symbols, for example to give nasalised vowels - 'ã, ẽ, ĩ' etc. However, they have the disadvantage that, unless they are restricted to a small number of symbols, they are liable to lead to mistakes through inadvertent omission or imperfect reproduction in print or in handwriting. They also interfere with legibility, and most of them require the cutting of new type faces, thus adding very considerably to expense.

(f) *The use of symbols in different spatial relationships*. With reference to a particular median line symbols may be written on it, above it or below it, and different sound values may be given to each of these spatial relationships. Once again this poses problems for both printer and writer, and can easily lead to errors and a decrease in legibility. Although some phonetic alphabets have used this device (e.g. Thompson 1859, Brücke 1863) it is not a common one.

(For an interesting discussion of the use of some of these devices by English orthoepists see Weinstock 1978.)

2.4 *THE 18TH CENTURY*

Spelling reform provided another stimulus for considering what principles underlie the effective use of symbols in an alphabet. From the 15th century onwards we find attempts being made to reform the spelling of European languages (see Scragg 1974, Chap.6; Kukenheim

1932:Chap.1), and various new notations were proposed, chiefly in the 16th and 17th centuries. John Wilkins was one of those who supported this movement. In the 18th century much less enthusiasm was shown for the idea of changes in orthography to reflect changes in pronunciation, Samuel Johnson being one of the most eloquent opponents of it (Scragg 1974:99ff.). However, several important pronouncing dictionaries of English were published which are of interest from our point of view, though they made no pretensions to supplying universal alphabets. William Kenrick, Thomas Sheridan and John Walker all produced dictionaries (Kenrick 1773, Sheridan 1780, Walker 1791) which indicated pronunciation by using superposed numerals to supplement the roman alphabet (Weinstock 1978:343), a device which we find used also in some later alphabets. In an earlier work (1761:8-9; reproduced in 1780:13) Sheridan sets out what he considers to be essential rules for an effective orthography:

1. **No character should be set down in a word which is not pronounced.**
2. **Each distinct simple sound should have a distinct character to mark it; for which, it should uniformly stand.**
3. **The same character should never be set down, as the representative of two different sounds.**
4. **All compound sounds should be marked only by such characters, as will naturally, and necessarily produce those sounds, upon being properly pronounced, in the order in which they are placed.**

These rules were implicit and sometimes explicit in many earlier attempts to reform orthographies, and the second and third, which can be summed up as 'one sound/one symbol', are taken as crucial in most of the later alphabets we shall look at.

An iconic notation was devised by the French magistrate and scholar Charles de Brosses (1709-77). In his *Traité de la formation mécanique des langues* (1765, Chap.5) he sets out his 'alphabet organique et universel'. It is non-roman, and attempts to show in the symbols the curved lip shape for labials, throat consonants with a circle, dentals with a tooth shape, and so on. Like John Wilkins he sees his alphabet as not for 'l'usage ordinaire' but for research into languages, in order to show up similarities between segments which the roman alphabet

does not convey. There seems little likelihood that anyone other than de Brosses himself used the notation.

The late 18th century and the 19th century see the growth of a new interest in the problem of providing a method of transcribing the increasing number of languages which were becoming known throughout the world. It is more of a practical interest than that of the 17th century, directed to the needs of colonial administrators, missionaries, merchants, geographers, journalists and the like. Travel to countries outside Europe was becoming more common. The languages and literatures of countries of the Middle and Far East could be made more accessible by transcription or transliteration, though some scholars felt romanisation would destroy a valuable part of the inheritance (see Monier-Williams 1859). In Africa missionaries and traders were faced with the problem of languages which were not only totally unfamiliar but which had no written form at all. Attempts to provide one resulted in confusion. Although the roman alphabet was the common basis for such attempts, the ways in which it was applied differed according to the national origin of the missionary or trader. The same was true in North America (cf. Miner 1974). There was an ever growing realisation that consultation was needed in order to try and establish a single alphabet acceptable to all, if this proved possible. The provision of an orthography for a hitherto unwritten language has to take into account factors which are not phonetic or linguistic ones in a narrow sense (see Nida 1947:100-29; Berry 1958, 1977; Venezky 1970), but an agreed universal alphabet would obviously be of great value for this purpose.

2.5 *ORIENTAL SCRIPTS*

2.5.1 *Sir William Jones*. Towards the end of the 18th century the distinguished oriental scholar Sir William Jones (1746-94) became interested in the problem. His extensive knowledge of languages, European and oriental, and the period he spent as a high court judge in India from 1783 to 1794 put him in an excellent position to understand what was needed. In his *Dissertation on the orthography of Asiatick words in Roman letters* (1788) he proposes a new method for transliterating

oriental languages into the roman alphabet.[1] His method was not at first widely adopted in India (see Monier-Williams 1859:148ff.) possibly because of his choice of vowel symbols, which were based not on English orthography but on that of continental languages such as Italian. In this sense it was a 'European' alphabet, and contrasts with the alphabet devised by John Gilchrist (1759-1841), another oriental scholar, which uses English vowel conventions (see, for example, Gilchrist 1796). Gilchrist's system was used more widely than that of Sir William Jones in official correspondence during the early part of the 19th century in India, but strong support was given to Jones's system by Sir Charles Trevelyan (1807-86), for some years governor of Madras Presidency, at whose instigation Sir Monier Monier-Williams published the papers relating to this question (Monier-Williams 1859; see also pp.33* below).

Sir William Jones and John Gilchrist were concerned mainly with the transliteration of oriental scripts, in particular Persian, Arabic and Devanagari, into roman letters. They did not aim, at least in the first place, to provide a universal alphabet. Nevertheless they had to deal with the problems of supplementing the roman alphabet. Gilchrist's alphabet made widespread use of digraphs, such as 'sh' for [ʃ], 'oo' for [u], and a limited use of diacritical marks. Neither of them made any use of italics, capitals, turned letters, new letters or non-roman symbols. Jones uses a few more diacritical marks than Gilchrist. His system was widely known and, as we shall see, the proponents of Lepsius's Standard Alphabet had a hard task to challenge it in India. Lepsius (1855b:9-10; 1863:31-32) commends Jones for his clear recognition of the 'one sound/one symbol' principle while pointing out that he sometimes departs from it; Lepsius also approved of the use Jones made of diacritical marks, but felt his 'knowledge of the general organism of sounds' was inadequate.[2]

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[1] He acknowledges a debt to the orientalist Nathaniel Halhed (1751-1830), who had proposed a system of transcription in his *Grammar of the Bengal Language* (1778); see Lepsius 1863:31.

[2] For a generous appreciation of Sir William Jones's phonetic work, often underrated or ignored, see Firth 1957:110-14.

2.5.2 *Volney*. In France, at roughly the same time, an alphabet for transliterating oriental languages was devised by the orientalist and historian Comte de Volney (1757-1820) and published in his *Simplification des langues orientales* (1795) (see Lepsius 1855b:12-13; 1863: 33-35). Although Volney had in mind Persian and Turkish as well as Arabic it is this last language which concerns him most, and the latter part of the book is an elementary Arabic grammar. His aim was a practical one, as he states it in a letter to the Commission Exécutive des Affaires extérieures just after he had completed the book (quoted in Gaulmier 1959:173): "de répandre en Europe une méthode commune d'écrire les langues orientales, et de préparer les voies à un alphabet universel". He arranged for 1500 copies to be printed, and urged that care be taken in their distribution so that he might get the reactions of 'hommes instruits' before using the method more widely in dictionaries, grammars, etc. The Arabic grammar was the first published in France since that of Erpenius (1613). In his introduction Volney emphasises the importance of knowing oriental languages for an appreciation of the great cultural differences between oriental countries and the western world.

The alphabet is based on the 'one sound/one symbol' principle, and Volney stresses the need for an accurate knowledge of the anatomy of the vocal organs. It has a roman basis, with some Greek letters to supplement it and new symbols to represent [ɬ] [ɮ] [ɧ] [ɕ] [ʃ] [ʕ]. (Lepsius 1855b:12-13; 1863:34-35.) He avoids the use of digraphs, unlike his orientalist contemporaries and rivals Silvestre de Sacy and Langlès. These two scholars were fellow members with Volney of a Commission appointed by the French Government in 1803 to make recommendations for a suitable transliteration of Arabic names in the newly prepared Atlas of Egypt. In spite of their opposition Volney's basic principles of transliteration were approved, but the Commission proceeded to modify his plan beyond recognition. Volney's new letters were replaced by digraphs based on French orthography.

Volney came back to the question in a later work, *L'Alphabet européen appliqué aux langues asiatiques* (1819). (See Lepsius 1855b:13-14;

1863:35.) He dedicated the work to the Asiatic Society in Calcutta, expressing the hope that they might give the alphabet their support, but the Secretary of the Society expressed his regret that the time was not yet ripe, nor were the means available for its adoption. In his dedication Volney admits the defects of his earlier work in particular in conceding too much to French orthography, and in concentrating too much on Arabic, and pays tribute to Sir William Jones for his clear statement of the principles involved in undertakings of this kind. He expresses the hope that this new work will be used for Turkish, Persian, Syriac, Hebrew and Ethiopian as well as Arabic, and in due course also for the languages of India and China. He recognises the importance of having the support of an influential authority and public approval in order to make any such project viable.

In the first three chapters he gives a detailed description of vowels and consonants, referring to earlier descriptions; he emphasises that it is unnecessary to be too precise in describing the articulation of vowels, as it is the auditory impression that is crucial, and this may result from more than one articulatory position. The alphabet has 25 symbols for vowels and 35 for consonants (see Lepsius 1855b:13-14; 1863:35). Almost all of them are based on roman symbols; he has abandoned the use of Greek θ and γ, and also his earlier idea of making the symbols resemble the Arabic characters whose sound they represent (for example, he had used ψ for Arabic ش, and ع for Arabic ع). He still avoids digraphs and makes no use of turned letters or non-roman founts. His diacritical marks are sometimes attached to the basic symbols (for example, 'ǵ' - IPA [dʒ]), and sometimes separate (for example, 'ţ' - IPA [θ]). Some of his phonetic observations are inaccurate, but others are very perceptive, such as his comment on the auditory similarity between [x] and [f], that is between velars and labials (in recent times subsumed under the feature 'gravity').

Volney betrays in a number of places his resentment at the fact that traditional orientalists such as Silvestre de Sacy and Langlès refused to give his ideas any recognition (e.g. 1819:172-3).

2.6 *THE VOLNEY PRIZE AND SCHLEIERMACHER*

A fresh incentive for the development of new alphabets was given by Volney's institution of a prize, to be funded by a sum of 24,000 francs left in his will (see Lepsius 1855b:14-15; 1863:36). One of the aims behind it was to further the development of an alphabet suitable for transliterating Asiatic languages, and in due course of a truly universal alphabet. The prize was to be awarded by a Commission made up of three members from each of the Académie Française and the Académie des Inscriptions, and one member from the Académie des Sciences. The first award was made in 1822. The way in which the Commission proceeded was strongly criticised by Brière (1832), (whom Wharton, 1921: 84, identifies with le Comte Pierre Louis Roederer). He was particularly incensed by their disregard of his own submissions for the prizes of 1827 and 1831, and asserts that they deliberately ignored Volney's intention that the prize should be for a universal alphabet, and not for alphabets limited to specific groups of languages (cf. Erdan 1854, Prologue). Thus African and American languages are neglected.

The 1822 prize was shared between Andreas August Schleiermacher (1787-1858), a librarian from Darmstadt, and a certain Herr Scherer, who was also a librarian, in the Royal Library at Munich (for details see Brierè 1832). Scherer's alphabet was designed to allow the transcription of pronunciation, and took in 'almost all languages of Europe and Asia', whereas Schleiermacher aimed only at a transliteration of symbols, believing it to be important to keep one form for a particular symbol, even when it was pronounced differently in different dialects or languages (e.g. Persian and Arabic). Both alphabets were roman in basis, but neither was adopted by the Commission for more general use.

In 1823 the prize was to be for a 'harmonic' alphabet for the principal languages of Asia, to be based on the roman alphabet and suitable both for an orthography and to indicate pronunciation more exactly. As Brierè (1832) pointed out, it was an apparently superfluous exercise when the 1822 alphabets were already available.

Schleiermacher produced an amended version of his 1822 alphabet and Scherer produced two new alphabets, one to serve as an orthography and the other to indicate pronunciation. Schleiermacher's 1822 alphabet had covered 40 Asian languages; in 1823 he reduced this to comply with the Commission's terms. Scherer's alphabets were confined to 6 languages; although his double alphabet did not comply with the Commission's requirements he was awarded the prize. Once again the Commission failed to adopt the alphabets, which they said should be subject to 'unlimited public discussion'.

For the prize of 1827 the Commission appears to have departed from its earlier view that a universal alphabet was impossible, and now invites entrants to provide an alphabet capable of expressing all sounds. Once again Schleiermacher entered, and this time was successful with an alphabet based on his versions of 1822 and 1823. However, he rejected the idea of a universal alphabet, as being impossible to achieve if intended to convey every shade of sound; what was possible, in his opinion, was an alphabet which could represent all sounds symbolised in existing alphabets of the world. His 1827 alphabet is still designed principally to allow transliteration of some 32 languages, now including European languages with non-roman scripts.

Schleiermacher adopts the 'one sound/one symbol' principle for this alphabet, avoiding digraphs. Like his earlier alphabets it is basically roman, using no letters from foreign alphabets, which he felt would be typographically offensive. Nor does he make use of other type faces or turned letters. He adopts the vowel symbols 'a, e, i, o, u', in their German and Italian values, adding 'y, æ, œ'. The consonants of the roman alphabet are supplemented by the use of a number of diacritical marks, some above and some below the basic symbols; in a few cases marks are placed above and below. He tries to give a systematic value to each of his marks wherever they appear, but admits that this is not always possible because of problems of legibility and combinability. For palatalisation he uses a raised dot 'ṫ, ḋ', etc.), for aspiration a raised curved line ('t͡ʃ, k͡', etc.), for 'strong' consonants a subscript accent ('ṭ, ḍ', etc.). Like Volney he uses 'superfluous' roman letters

to supplement his alphabet, for example 'q' (for IPA [q]), though somewhat oddly he retains 'x' with the value [ks]. His phonetic classification of sounds is unsatisfactory, notably in failing to separate properly what we now call categories of 'place of articulation' from categories of 'manner of articulation', and in his use of phonetically ambiguous headings such as 'varied' and 'mixed'; Lepsius criticises this (1863:36, note 1).

Schleiermacher republished his 1827 alphabet in 1835, together with grammars of Burmese and Malay, in which the alphabet is used (Schleiermacher 1835). He continued to work on the problem of transliteration, but it was not till six years after his death that the money was found to publish the manuscripts he had left, under the title *Das harmonische oder allgemeine Alphabet zur Transcription fremder Schriftsysteme in lateinische Schrift* (1864). It included his prize *Mémoire* (1835), with examples of his alphabet applied to the Slavic, Coptic, Amharic and Ethiopic alphabets. At great expense, 275 characters were specially cast. Apparently, however, Schleiermacher's alphabet was never adopted for wider use.

The Volney prize has since been awarded to many prominent linguists, for instance Paul Passy (1892) and Otto Jespersen (1906).

2.7 *ALPHABETS FOR UNWRITTEN LANGUAGES*

Sir William Jones, Volney and Schleiermacher were all primarily concerned to provide systems for transliterating oriental languages that already had scripts. A somewhat different problem was presented by languages which had no script of their own. In some ways it was easier to deal with; there were no previous traditions or prejudices to overcome. But it clearly demanded more linguistic skills than a transliteration. An effective orthography needs to take into account the phonology of the language, and with no script to start from the investigator must combine phonetic expertise in observing the sounds with an accurate analysis of the phonological structure underlying them. These early investigators had no phonological theory to help them. The need for orthographies was particularly felt in Africa south

of the Sahara and in America. The missionaries provided much of the stimulus. Lepsius (1855b:4-5; 1863:26-28) writes:

> **... for many years the Committees of the principal Missionary Societies have regarded it as an important object to reduce to writing the language of all the nations to which their missionaries have penetrated, and to prepare in all these languages translations of the sacred Scriptures ... The British and Foreign Bible Society of London had published, down to the middle of the past year [1854], 26 millions of Bibles, or parts of the same, in 177 different translations ... It was natural that the European system of writing should be used for all those languages which had no system of their own. But here the same question arose as in linguistic science: Which orthography ought to be used?**

2.7.1 *North America*. During the early part of the 19th century there were two notable attempts to tackle the problem of an orthography for American Indian languages, both, as it happens, by men who were trained as lawyers. Pierre Étienne Du Ponceau (1760-1844) emigrated from France to America, where he became greatly interested in the Indian languages. His *Mémoire sur le système grammatical des langues de quelques nations indiennes de l'Amérique du Nord* (1838) won the Volney prize of 1838. Linguistic work on Indian languages had begun much earlier (see Miner 1974), but, as in Africa, attempts to provide an orthography were bedevilled by the different orthographical conventions of the investigators' own languages. As one writer puts it (Pickering 1818:6):

> **When, for example, a mere English reader finds the familiar names of the *Creeks* and the *Choctaws*, the *Wabash* and the *Washita*, with many others, disguised by the French writers under the strange garb of *Kriques*, and *Tchactas*, *Ouabache* and *Ouachita*, &c.; and, among the German authors, the letters G, J, T, and Z used to express sounds which we should denote by C, Y, D, and TS, as in the words *Ganata* for *Canada*, *Japewi* for *Yapewi*, *N'mizi* for *N'meetsee* ... he will at first view suppose that they are the names and languages of so many different tribes of Indians.**

Du Ponceau and John Heckewelder (1743-1823), his collaborator, dealt with some of these problems in their correspondence (see Heckewelder 1819). In 1817 Du Ponceau published an article entitled *English*

Phonology; in this he shows a clear understanding of the problems of devising a universal alphabet. He says (*Trans.Am.Philos.Soc.* 1818:231);

> **To acquire even an imperfect knowledge of so many different sounds, to analyse and compare them with each other, class them according to their respective analogies, and graduate them by an accurate scale, and after all to communicate in an intelligible manner through the eye, the result of all these studies requires almost an Herculean labour, from which, perhaps, might result a curious and interesting science, which, until a better name can be devised, I would denominate the *Phonology of Language*.**

His article attempts the limited task of providing a description and a notation for the sounds of English, but he comments towards the end (pp.263-64) on the possibility of a 'phonological alphabet' which he says

> **should neither be composed of the characters in common use nor of entire new signs ... Therefore I would propose to take the Greek alphabet as the basis, with the addition of characters borrowed from other languages, particularly the Russian ...**

He envisages it being used only for 'demonstration and comparison, in pronouncing dictionaries and other philological works', and therefore sees no need to introduce differences such as capital/lower case or roman/italic.

John Pickering (1777-1846), another lawyer, was much influenced by Du Ponceau's work and acknowledges his debt to him, as well as to Sir William Jones and to Volney (1818:7 note, and 9). He acquired at least a working knowledge of all the principal European and Semitic languages, and some languages of the Chinese group, and became the leading authority of his time on the North American Indian languages. In his *Essay on a uniform orthography for the Indian languages of North America*, (first published in 1818) he puts forward a new system for writing these languages, using the roman alphabet as a basis. Like Sir William Jones he adopts the 'European' values for the vowel letters, not the English ones; additional distinctions may then be made by the use of diacritical marks above or below. However, he advises caution in using dots, which

may easily drop out by mistake. Instead he suggests small letters above (e.g. 'a͡'), or numerals placed below the main symbols. We saw earlier (p.16* above) that numerals were used in some 18th century pronouncing dictionaries of English, and later in the 19th century Ernst Brücke made them a vital part of one of his notations (below p.40*). Pickering saw his alphabet as essentially a practical tool, and not 'a universal one on philosophical principles for the use of the learned' (1818:32); it was intended specifically for the Indian languages of North America and not for more general use. Hence it makes only a limited number of distinctions between sounds, and Pickering mostly follows Sir William Jones in his consonant system, using digraphs rather than introducing new letters.

2.7.2 *Africa.* Spencer (1966:83), discussing the contribution made to the development of notations in Africa by the young scholar and missionary S.W. Koelle in the years 1847-54, points out that prior to 1847 'almost all ... collections of African language material had been presented in an unaugmented roman alphabet'. He goes on to describe how the Church Missionary Society published a six page pamphlet in 1848 entitled *Rules for reducing unwritten languages to alphabetical writing in roman characters. With reference especially to the languages spoken in Africa.* (See Lepsius 1855b:18-19; 1863:40.) The Secretary of the Society at that time, Henry Venn, though no expert in the field, realised the importance of having some system of this kind for the use of missionaries. The pamphlet was the work of the missionary James Frederick Schoen (1803-89) and the Rev. Samuel Lee (1783-1852), former Professor of Arabic and Hebrew in the University of Cambridge, and was intended to provide a standard system for use by those setting up new orthographies. It specifically disclaims any idea of forming 'a perfect phonetic system', but does make use of some diacritical marks, namely a single dot and a double dot below certain vowel or consonant letters. The use of diacritical marks on a larger scale is discouraged 'on account of their great practical inconvenience in printing and writing'. The pamphlet distinguishes, however, between 'Vocabularies

and Pronouncing Dictionaries' where diacritical marks are admissible, and 'books for the use of the Natives, - who will not need them when they have once learned to read'. Digraphs, such as '*ng*' for 'the nasal sound of *n*', and '*gb*, *kp*' for the commonly found double articulations, are permitted as admittedly 'clumsy' expedients, because "We are not yet sufficiently acquainted with the varieties of African sounds, or with the construction of African words to warrant a simpler notation". (The IPA Alphabet still retains [gb] and [kp]). The sparing use of diacritical marks was also determined in part by considerations of economy. The Church Missionary Society was concerned above all to establish a *standard* and *practical* system, in order to avoid the wasteful effort expended by separate missions all inventing their own systems and the confusion resulting from the lack of agreement between them. As Lepsius (1855b:18; 1863:40) points out, the missionary societies were in a stronger position than 'the scientific world' when it came to trying to make a new system known, in that "the Directors may recommend ... an alphabet to the missionaries dispersed over the whole earth, which will usually be a sufficient motive for its reception".

The American Mission in Port Natal had the same objectives as the Church Missionary Society when it set up a Committee in 1849 to examine the problems of devising an orthography for Zulu, and subsequently (in 1850) circularised other missions in Africa and elsewhere proposing a plan for a standard orthography for the languages of Southern Africa. One of their missionaries, the Rev. Lewis Grout, published a lengthy *Essay on the Phonology and Orthography of the Zulu and kindred dialects in Southern Africa* (1853). In this he makes an admirable summary of the problems, and suggests why he believes the systems proposed by John Pickering for North American Indian languages, and by the Church Missionary Society in its *Rules* are inadequate for Zulu. He puts forward a new system, based on the roman alphabet, but introducing a number of diacritical marks and using the 'superfluous' letters 'c, q, x' to represent the click sounds. He adheres to the 'one sound/one symbol' principle, avoiding digraphs for simple sounds, and uses no turned letters or letters from non-roman alphabets. The Committee of

the Mission, at Grout's request, added comments and suggested some amendments, including the use of small squares to represent the clicks, instead of roman letters. Lepsius criticises Grout's system (1855b:19-20; 1863:41) chiefly on the grounds that it was based on a particular language group, and as a result 'the single letters are not arranged according to their natural affinities'; this criticism had also been made by the Mission's Committee (Grout 1853:469) which suggested that the letters should be arranged 'in the order of their organic development' rather than Grout's alphabetical order.

Another system was being used by S.W. Koelle, one which Spencer (1966:87) suggests was less concerned with considerations of orthographical simplicity than the Church Missionary Society's *Rules*. While recognising that no notation can ever recapture 'the more minute modifications and finer transitions of sounds' (Spencer 1966:94) Koelle had used, in the original manuscript of his Vai-English Vocabulary (dated 26 November, 1850), a notation directed to the needs of phonetic accuracy. When Henry Venn asked him for his opinion on the *Rules* he seems to have displayed little enthusiasm. However, in the course of the next three years he apparently agreed, under pressure from Venn, that the system proposed in the *Rules* should be used in his *Grammar of the Vei Language, together with a Vei-English Vocabulary* ... (Koelle 1854a), though he nowhere expressly acknowledges this. It involved abandoning some diacritical marks used in his earlier notation, such as umlaut.

2.8 *LEPSIUS AND THE ALPHABETICAL CONFERENCE OF 1854*

Lepsius's interest in the problems involved in transcription and transliteration had been shown as early as 1834 in his prize essay *Paläographie als Mittel für die Sprachforschung* (Index no. III). No doubt his work on inscriptions subsequently, as well as his encounter with African languages during the Egyptian expedition, served to reinforce this interest. Certainly he had been thinking about the possibility of a universal alphabet some time before it eventually saw the light of day. Lepsius himself says (1863:6) that he introduced his

Alphabet for the first time

> **to a great extent for the transcription of Arabic names, in eight geographical maps of the North-eastern part of Africa and the adjacent countries of Asia, which form the first plates of the "Monuments from Egypt and Ethiopia after the Drawings of the Prussian Expedition to those Countries", published ... 1849-1859.** [i.e. Index no. XLV]

The subject, he says (1855b:20; 1863:42) had occupied his mind for several years when he came to London in 1852. On this occasion he was invited by Henry Venn "to furnish him with a development of his alphabet, which appeared suitable for general adoption and conformable on the whole to the *Rules*" (i.e. to the Church Missionary Society's pamphlet described above). Both Venn and Lepsius were close friends of the Prussian ambassador in London, Carl Bunsen, and this was no doubt what influenced Venn towards Lepsius's scheme, rather than towards alphabets proposed by Isaac Pitman and Alexander J. Ellis, with which he must have been familiar (see Knight 1880:376-77; also below p.35*). Venn had presumably heard details of Lepsius's Alphabet in the course of discussions with Lepsius and "other influential members of Missionary Committees (Lepsius 1863:42). Lepsius gave Venn "a tableau of the alphabet, which was inserted by Mr Venn in a second edition of the *Rules* in 1853" (Lepsius 1855b:20; 1863:42). (There appears to be no trace of this second edition either in the archives of the Church Missionary Society or elsewhere.) Lepsius's interest in the idea was further stimulated by a visit from Koelle, with whom he had detailed discussions about the Alphabet (1855b:20; 1863:42). Koelle became very enthusiastic and was persuaded to use the Alphabet in his *Grammar of the Bornu or Kanuri Language*, and his *African Native Literature*, both published late in 1854, and remarked in the second of these books (p.IX note) that if he had seen it earlier he would have used it also in his *Grammar of the Vei Language* published near the beginning of 1854.

On the 8 December 1853 Lepsius gave a special address to the Royal Academy of Berlin in which he outlined the needs existing for a new alphabet to provide the basis for a standard orthography for languages as yet unwritten. He stressed the importance of this for the Christian

missions, and put forward his own proposals for such an alphabet, with the request that the Academy might consider granting the necessary sum of money for cutting the types required and casting them (see Lepsius 1855b:21; 1855d:784; 1863:42). As a result of this the Academy appointed a special Commission, which included Franz Bopp, Eduard Gerhard, Jacob Grimm and Johannes Müller, to examine the proposals. This Commission reported favourably to the historico-philological class of the Academy, and the estimate of 260 thalers (at that time approximately £40) for the production of the alphabet was approved, and orders were given on 23 January 1854 for the cutting and the casting of the types.

Meanwhile Carl Bunsen had conceived the idea of an 'Alphabetical Conference' to explore the possibility of an agreed and uniform system for representing all languages in writing. We saw earlier (pp.4-5*) that Bunsen (a distinguished scholar as well as a diplomat) was one of those who helped Lepsius to establish himself in the field of Egyptology. Bunsen had always shown a strong interest in missionary work, and it was this that persuaded him to call the Conference. It was held in London, at Bunsen's own residence, and brought together representatives of the main missionary societies and other 'distinguished men, more or less interested in the question' as Lepsius puts it (1855b:21; 1863:43). Lepsius gives the names of some of those present. Among the missionaries he mentions Koelle, though, as Spencer (1966:99) points out, the report of the conference in the *Times* does not include his name. Among the scholars, apart from Lepsius, were Friedrich Max Müller (1823-1900), who was also a protegé of Bunsen's and at the time Professor of Modern European Languages at Oxford, Horace Hayman Wilson (1786-1860), Professor of Sanskrit at Oxford, Sir John Herschel (1792-1871) the astronomer, Charles Wheatstone (1802-75), scientist and inventor, who was also skilled in deciphering hieroglyphics, Charles Babbage (1792-1871), the mathematician and the orientalist Edwin Norris (1795-1872). Sir Charles Trevelyan, who we have seen (above p.18*) was a strong supporter of romanisation in India, and in particular of the system of Sir William Jones, also attended; and Dr Pertz was there representing the Royal Academy of Berlin. It appears that neither

A.J. Ellis nor Isaac Pitman was invited, though their interest in the question was well known (see below, p.35*).

There were four separate meetings, the first on 25 January 1854, and the final one on 3 February. At the first meeting Lepsius was not present. Bunsen, in his opening address, outlined the pressing need for a universal alphabet, both for philological purposes and for use by missionaries; he had found, he said, no system which provided the necessary physiological basis or which was unobjectionable in the way it was applied. He had therefore been brought to the resolution

> **of calling upon those two of my younger friends who had for years occupied themselves with this problem, and who were, by universal consent, considered as men most particularly qualified to propose that definitive project of a universal alphabet to the civilised world which might come before the public with some hopes of success.**
>
> (Bunsen 1854, Vol.4:380)

He was referring to Lepsius and Max Müller. At the first meeting there was what appears to have been a somewhat desultory discussion of whether an adequate physiological basis was available, and, if so, whether the systems proposed used it, and whether they were both 'alphabetically consistent' and 'universally applicable'. Max Müller described his system (Müller 1854). The chief objection made to it was its reliance on distinctions conveyed by the use of italics, which it was suggested were ugly. Max Müller stressed that his use of them in preference to Greek letters or diacritical marks was largely on the ground that italics were easily available. At the second meeting Lepsius presented his system (this was printed, together with Müller's system, as Appendix D to Bunsen's *Christianity and Mankind*, Vol.4 (1854) together with the proceedings of the Conference). At the third and final meetings an attempt was made to sum up the points of agreement and disagreement as to what was desirable, and to see how far the two systems proposed, or either of them, met the requirements. As far as notation was concerned there was agreement that it should be basically roman; Greek letters were to be admitted only by way of exception, and 'Arabic, Russian, or fanciful types' were to be excluded altogether

However the issue of whether to favour Max Müller's italics or Lepsius's diacritical marks could not be resolved; the availability of the italics was counterbalanced by the superior ability of diacritical marks to convey a consistent phonetic feature. Bunsen proposed a compromise whereby Max Müller's system would be used for transliteration of scripts and for those who had no access to Lepsius's many different symbols. It was finally agreed that the Conferences should be renewed later in the year, to try to reach a conclusion. Lepsius (1855b:22; 1863:43) says that in addition to his own scheme and that of Max Müller consideration was given to that of Sir William Jones. This is not recorded by Bunsen (1854:377ff.), apart from a few points of detail where Sir Charles Trevelyan favoured Jones's notation (p.393).

2.9 *THE PUBLICATION OF LEPSIUS'S STANDARD ALPHABET*

According to Lepsius (1855b:23; 1863:44-45) Venn said at the last meeting of the Conference that "the Church Missionary Society and other Societies had already substantially adopted that [the Standard Alphabet] of Professor Lepsius". Certainly by June 1854 Venn was fully committed to it. In a letter to Lepsius dated 19 June[1] (CMS, Misc.For.Corr. 2:423) he tells him that the English translation of the Alphabet is to be published by Bunsen in his *Christianity and Mankind* (this version did not include anything prior to the description of the Standard Alphabet itself (Lepsius 1855b:24ff.)). The full version, he says, will be separately published "similar to your German edition", with a short preface from the Church Missionary Society commending it to missionaries. Venn felt it preferable that it should appear not as a document of the Church Missionary Society, but as an independent work, because "it will have more weight standing as a scientific work and the Missionary Societies generally will be more likely to receive and recognise it as 'the Standard'." Venn finishes his letter with an anxious comment about the intention of Max Müller to circulate his own system among missionaries. In a letter to Bunsen a few days earlier (see Spencer 1966:99) he had

[1] This and later correspondence quoted is to be found in the Archives of the Church Missionary Society, Miscellaneous Foreign Correspondence - quoted henceforth as CMS, Misc.For.Corr.

expressly rejected the idea that either Max Müller's or Lepsius's scheme should be circulated, on the grounds that the missionaries had referred the decision on an appropriate alphabet to the headquarters in London.

In another letter to Lepsius, later in June 1854 (CMS, Misc.For. Corr.2:428), Venn passed on to him Koelle's praise for the German edition, but expresses his own and Koelle's wishes that the English translation should be improved and certain adjustments be made to the examples for the benefit of English readers. It appears that Lepsius subsequently gave his approval to Koelle's making the necessary changes.

It was not possible at the time of publication of the first English edition to obtain firm support from other missionary societies for the new Alphabet, though guarded approval was expressed by some of them (see Advertisement to Lepsius 1855b:V-IX; 1863:V-X). The German edition appeared first in 1854, and was reprinted in 1855. It was entitled *Das allgemeine linguistische Alphabet* (The General Linguistic Alphabet) - 1855a, whereas the first English edition appeared in 1855, entitled *Standard Alphabet* (1855b). The 500 copies of the English edition, after being held up at the Customs for several weeks, reached Venn by January 1856 (letter to Lepsius dated 7 January 1856 - CMS, Mis.For.Corr.2:493).

During the next few years the Standard Alphabet was adopted in a number of works, mostly in the mission field but also, notably, by the philologists Hans C. von der Gabelentz (1807-74) and Heymann Steinthal (1823-99) and linguists working at the Imperial Academy of Sciences at St Petersburg (see Lepsius 1863:1-7,309-13). In a letter to Lepsius dated 15 June, 1858 (CMS, Misc.For.Corr.2:552-53) Venn asserted that "the African languages are in our own hands". However, in India Sir William Jones's system was being actively promoted by Sir Charles Trevelyan and by the orientalist Sir Monier Monier-Williams, who had rejected Lepsius's Alphabet as a possibility for transliterating oriental scripts. He found it

> **burdened with such subtle distinctions, and elaborated with such an excess of analytical precision, that it is quite unsuited to us practical Englishmen, and if adopted by the natives of India, would separate them from us nearly as much as their own character.** **(Monier-Williams, undated:xxxii)**

A series of letters to Lepsius from Venn in 1860 (CMS, Misc.For.Corr. 3:24ff.,29,30,37,41) urged on him the necessity of a new edition, particularly with a view to winning over missions in India, where the Standard Alphabet was firmly established only in the mission supervised by the orientalist and missionary Dr Ernst Trumpp (1828-85) in the Punjab and Sind areas. Lepsius had meanwhile brought it to the attention of the Chinese and Japanese authorities, and was encouraging Venn to set up presses in chief mission stations. Venn, in a letter to Lepsius dated 17 January, 1860 (CMS, Misc.For.Corr.3:24), while agreeing with this suggestion pointed out that it was practicable only in three stations, because of problems of supervision. During 1860 Venn received enquiries about the Alphabet from Dr Rufus Anderson (1796-1880), of the American Board of Commissioners for Foreign Missions, and reported to him its successful use in West Africa. Lewis Grout (see above p.27*) had by then decided to adopt it, and used it in his grammar of Zulu (Grout 1859), devoting a lengthy introduction to it (though in the second edition (1893) he felt compelled to abandon it, because it had failed to become established).

By June 1860 Lepsius had prepared a new introduction in German, and the Church Missionary Society asked their missionary J.F. Schoen to translate it. However, it was not till 1863 that the new English edition of 1500 copies appeared, printed in Germany like the first edition (there was no new German edition). It cost the Church Missionary Society 680 thalers (at that time approximately £100) and was retailed in Britain at 2s.6d a copy. William Knight, a co-Secretary of the Society with Henry Venn, had written a new 'Advertisement' in 1861 (Lepsius 1863:XI-XIV) designed particularly to promote the new edition in India, and Lepsius himself had introduced modifications with the same objective (1863:6-15).

Before a detailed examination of Lepsius's Alphabet the survey of other universal alphabets published about the same time in Britain, America and Germany will be extended.

2.10 *PHONETIC SCRIPTS IN BRITAIN* [1]

2.10.1 *A.J. Ellis*. Alexander J. Ellis (1814-90) was prominent in the

development of phonetic studies in Britain in the first half of the 19th century. Within a few years of leaving Cambridge in 1837, with a degree in mathematics, he became acquainted with (Sir) Isaac Pitman (1813-97). Pitman, from comparatively humble origins, had always been keenly interested in the development of new alphabets, particularly with a view to introducing a reformed system of English spelling. His other main interest was in developing a new system of shorthand, based on phonetic principles, to which he gave the name 'Phonography'. It met with great success, and remains, in modified form, one of the foremost systems in use today (see Abercrombie 1965 for a fuller account of Pitman). The partnership of Pitman and Ellis resulted in several phonetic alphabets. The earliest of these, called the 'Phonotypic Alphabet', appeared in the *Phonotypic Journal* of 1845 and in Ellis's *The Alphabet of Nature* (1845). A revised version of it was published in the *Phonotypic Journal* of 1847 and in Ellis's *Essentials of Phonetics* (1848), and another in his *English Phonetics* (1854). Subsequently Ellis published his so-called 'Digraphic' and 'Latinic' alphabets (Ellis 1856), and claimed that they satisfied the conditions of the resolutions of the Alphabetical Conference of 1854. He also outlined a more permanent roman-based standard alphabet, which he called 'Panethnic', though he made it clear that he felt it was too soon for an alphabet of this kind to be adopted. He believed that it was necessary first to give an extensive trial to alphabets with easily accessible symbols, such as the 'Digraphic' and 'Latinic'. His final attempt at a narrow phonetic transcription was 'Palaeotype' (Ellis 1867) which he used in his major work *On Early English Pronunciation* (1869-89). He claimed (1867:3) that it was more extensive than any other phonetic alphabet he knew of, apart from Alexander Melville Bell's *Visible Speech* (1867) (see below), which required wholly new types, being composed of newly devised iconic non-roman symbols.

Ellis thought the approach adopted by Bell 'indispensable for a complete solution of the problem', but suggested that it was premature because of gaps in the knowledge of the sounds of many languages and also because philologists were "in many cases but indifferently

acquainted with relations of sound, and therefore ill-qualified, without special training, to use a very refined instrument". For Palaeotype he chose to supplement the basic roman alphabet by using italic type for "modifications of occasional occurrence", and small capitals. He also used 'h, j' and italic '*m*' as diacritical signs to modify the letter preceding, and some digraphs. He was strongly opposed to the use of diacritical marks added to letters because of the necessity of casting new types for them, their susceptibility to breakage, and the difficulty they involved for printer, proof reader, and ordinary readers and writers (1867:3 note 1). He also disliked Greek types because they were normally cast on a different body and so failed to harmonise with the roman types. He criticises Lepsius's Standard Alphabet for using diacritical marks "excessively and inevitably ... unsystematically". In his Latinic and Panethnic alphabets he used some 23 turned letters, such as 'ɐ, ɯ, ɹ' but in Palaeotype he reduced these to about a third as many, apart from the turned numerals, which he used to symbolise clicks; he envisages, however, that more turned letters may be needed as new sound types are discovered (1867:36). Palaeotype has a total of over 180 symbols.

2.10.2 *A.M. Bell.* Alexander Melville Bell (1819-1905) was the son of an elocution teacher, and became principal assistant to his father, lecturing at the universities of Edinburgh and London between 1843 and 1870. He subsequently emigrated to Canada and the USA and taught there. His most significant work, at least from our point of view was *Visible Speech, the Science of Universal Alphabetics* (1867). It contained an iconic system of transcription, the symbols being based on the physiological formation of the sounds they represented, which was intended as a universal alphabet. Bell had first publicised it some three years earlier (Bell 1864), and it attracted considerable attention through public demonstrations. In 1865 he published another pamphlet, full of testimonies to the alphabet's effectiveness. He saw it not as an alternative form of orthography but 'a sound bridge from language to language'.

Bell pressed the British Government to support it, but without

success. He was sufficiently confident (or rash) to say about it "The invention ... is now, it is believed, perfect for all its purposes, and will probably be found to require no additions or alterations, however extensive its use may become" (1867:19). There were, inevitably, errors in it and, as we have seen, Ellis, though fully sympathetic to its aims, felt the time was not yet ripe for such an alphabet. Henry Sweet, however, who had previously favoured the roman alphabet as a basis for a universal alphabet, thought that for scientific purposes Bell's 'Visible Speech' was "an improvement on any possible modification of the Roman alphabet". While recognising that it might in due course be superseded by some 'fundamentally different' alphabet he believed it was a necessary step forward, and "as long as we are hampered with makeshift adaptations of the Roman alphabet, our advance will continue to be a mere crawl" (1880:183-85). Sweet produced his own modifications of it (see below).

'Visible Speech' was certainly successful in the sense that both Bell and Sweet used it very effectively in teaching and describing sounds. The analysis of vowels was mostly new, and based on an articulatory rather than an auditory classification. Sweet said of it (1880: 184-85) "Bell's analysis of the vowels is so perfect that after ten years incessant testing and application to a variety of languages, I see no reason for modifying its general framework". Bell's symbols were mostly clear and well designed, but there was the inevitable difficulty of persuading anyone to adopt a system which looked so totally unfamiliar, and it made little impression outside Britain and America. Sweet comments (1880:177) that it is "still little known, except by name, outside a small circle of his own [Bell's] ɒupils".

2.10.3 *Henry Sweet*. Henry Sweet (1845-1912) is generally recognised to be the outstanding British phonetician of the 19th century. He studied under Bell, and was well acquainted with the work of foreign writers on phonetics, such as Merkel, Brücke, Storm and Sievers. In his first published work devoted to phonetics, the *Handbook of Phonetics* (1877), he set out to write "an exposition of the main results of Bell's investigations, with such additions and alterations as ... required to bring