

UNIVERSAL PHONETIC ALPHABETS :

AN HISTORICAL PERSPECTIVE

J. Alan Kemp

I don't think it is necessary these days to apologise for or defend the idea of talking about the history of our discipline. Just as in other disciplines, such as science or medicine, I think it is widely accepted that we must retain an historical perspective. Not only can we often learn from the past by studying the way in which advances were made or not made, we can also retain a better sense of perspective as to our own achievements. When we look back some 2500 years to the work of the ancient Indian phoneticians, for instance, we can be appropriately humble when we then look at modern frameworks of description and see how little, relatively speaking, they differ from these early descriptions of speech.

But I confess that I have always had a particular interest in looking back into the past. I started my academic career studying the ancient western classics of Greece and Rome. Later I switched my allegiance to phonetics, but the study of history has always retained its fascination for me, and in recent years I have done my best to combine these two interests in research into the history of linguistics, and more particularly the history of phonetics. Most recently the topic that has concerned me in this research is that of phonetic transcription. It is often the case that when you tell someone that you are a phonetician their response is "Oh yes! - all those funny letters". So essentially 'funny letters' is a major part of what I am going to talk about today.

Next year there is to be a convention in Kiel University, Germany, from 19 - 21 August, to discuss the revision of the alphabet of the International Phonetic Association. It will be open to anyone interested, whether or not they are members of the IPA. So perhaps my topic can be said to have some immediate relevance which is not entirely historical.

First of all I should like to look at the reasons why people have, from quite early times, put forward

ideas for a way of transcribing languages, and particularly speech - because we must distinguish attempts to write down spoken language from the more straightforward systems for converting one script (e.g. Thai, Greek, Arabic, Latin (Roman) etc.) into another. We can call this conversion 'transliteration' rather than 'transcription'.

Secondly I shall mention some of the practical problems to be overcome in devising a system of transcription.

Then I will go on to look at some examples of systems put forward for transcribing speech, notably by contestants for the Volney Prize in the early nineteenth century.

Finally I will try to draw some conclusions as to what the convention in Kiel next year might hope to achieve.

So first of all, what sort of motivations have led people to try and find a way to reproduce languages in writing? Some of these will appear very obvious; others are perhaps less immediately obvious.

1) One thing which has led many people to this sort of enterprise has been the desire to make some of the existing writing systems much more easily intelligible to the learner. In other words they wanted to reform the spelling, and to establish a new writing system, using symbols representing the sounds.

Everyone who has tried to learn English, and not only foreign learners, knows some of the trials and tribulations one has to go through in coping with its amazing spelling. And the same applies to French. I confess it wasn't one of my main problems at school - I was lucky enough to have a reasonably good visual memory. But not being able to master these often seemingly totally irrational spellings has often made people's life a bit of a misery, and I have a great deal of sympathy for spelling reformers, who have been trying to do something about it at least since the 16th century, without much success.

2) A second motive for seeking a new alphabet has been to provide ways of writing down languages which have previously had no writing system. There were many of these in the early 19th century. Of course the choice of a suitable writing system is a complex one, involving as it does not just a selection of a new set of symbols, but a number of considerations which are not primarily linguistic ones.

3) However, perhaps the most obvious need for a standard alphabet is in order to help those who are teaching and learning the pronunciation of unfamiliar languages. Obviously this is particularly the case when no native speaker of the language in question is easily available, or when there is a special need to supply a visual aid, as with the deaf.

4) A fourth motive is somewhat similar, but relates to teachers of elocution, who are concerned to change and 'improve' people's pronunciation of their own language - to teach them to speak 'properly' or 'nicely'; that is, to conform to a certain prestigious form of pronunciation.

At certain times, more than others, there has been pressure of this kind to conform to a certain pronunciation, or otherwise to be regarded as socially inferior. For English, this was notably the case in the 18th and 19th centuries, and perhaps to a lesser extent still is today. Coming as I do from Scotland (though as you may possibly have deduced from my accent I am not Scottish myself) I am very familiar with these pressures. Sometimes social reformers have set out to encourage the teaching of a particular pronunciation by elocutionists, with the idea that it will bring greater unity or cohesion to a community and remove some of the causes of inequality. This sort of social engineering is no doubt inspired by the best possible motives, but linguistically it really is nonsense, and has the effect of undervaluing local accents.

5) Now we come to the motive which was foremost in the mind of the man who was responsible for the founding of the Volney Prize, which I shall say more about in a moment. It was his wish to open up to those who were unfamiliar with oriental scripts the possibility of reading the great literature of oriental languages in a transliteration in the Roman alphabet. And coupled with this desire was the reverse of it - the determination to spread abroad as widely as possible the knowledge of the Roman script. The reasons given for this in some 18th and 19th century works seem to us today highly patronising,

if not outrageously colonial in their assumptions. Let me just quote one excerpt:

The day when Europeans translate their ideas into the Asian languages with facility they shall acquire over all this region a decided superiority over the natives in every walk of life: the latter, astonished to hear their languages spoken more purely, read more fluently, written and understood more quickly by strangers than by themselves will end by studying our new European alphabet ...and a great and fortunate revolution will commence for Asia, a revolution which alone is capable of regenerating her. (Volney 1819: xiv - xvi)

This illustrates the less acceptable aspect of Western attitudes to the Orient, and indeed to Africa and elsewhere, but alongside it there was a genuine desire to increase understanding between West and East.

6) One other motive I should mention is the purely scientific or scholarly one of providing a research tool for those particularly concerned with the analysis of language sounds. This clearly is likely to make rather different demands than most of the other objectives I have talked about.

These, then, are just some of the reasons which have led people to try and find a standard way of writing down the sounds of languages.

I now want to consider briefly the practical problems which they have had to cope with in an enterprise of this kind.

1) What is to be the scope of their system? How many sounds is it to cater for? It isn't sufficient just to say "the sounds of languages". Anybody who has made even a fairly brief study of speech will know:

(a) that there are very considerable problems involved in trying to divide up speech into neat segmental units;

(b) that there is enormous variability, even within the speech of one individual - according to age, state of health, state of sobriety or inebriation (i.e. whether or not you've just been to a really good party!) and many other factors. One writer on this topic who submitted a detailed scheme for transcription calculated that, taking all the variables he could think of into account, his system would be able to account for 43,923,168 sounds! He was not seriously proposing that all these were necessary, but merely emphasising the size of the task. You may be amused

to know what the 'norm' was that he chose to avoid some of the variables :

"A Frenchman from Paris, aged about 30, of average height, having a good constitution, healthy, middle class, before having a meal, when not affected by any strong emotion, of a good character, conversing in a friendly manner while in a standing position, with a moderate degree of loudness, in a room of average size, amply furnished, about noon on a fine day in spring in the early 19th century".

This problem - of deciding just what constitutes a 'sound', and just how many one needs to represent in one's system - was one of the most serious ones facing early pioneers in producing transcription systems. Nowadays we can talk about representing just the linguistically important or significant sounds - giving what in modern terms is called a 'phonemic transcription'. But in the early 19th century the notion of phoneme had not been formulated, though we find hints of something of the kind when people talk about "important" sounds. And of course the number of sounds to be included in the system depends a great deal on what you want it to do. What is good for use as the basis of a spelling system will be too limited for writing down the speech of the deaf, to take one example.

2) The second practical problem concerns the actual notation to be used. There are two main possibilities :

(a) It can be a specially invented system, using totally new symbols, but with the intention of showing by their shape how they are related to each other. In this way, the theory goes, the user is helped in his attempt to make the sounds. Such alphabets have sometimes been called 'organic' or 'iconic'. A notable example is the Organic Alphabet devised by Henry Sweet (Sweet 1880; Henderson 1971: 270-85).

(b) It can use more familiar symbols, taken from an existing writing system - mostly this has meant alphabets used for European languages, such as the Roman (or Latin) alphabet, the Greek alphabet or perhaps the Cyrillic alphabet. Such symbols have obvious advantages, but they also have disadvantages - in a number of cases symbols are used with different sound 'values' in different languages. For English, 'j' is interpreted as = [dʒ], whereas in German it is = [j] and in Spanish it is = [x]. The same is true of certain other symbols.

Another disadvantage is that these alphabets have a limited number of symbols in them - characteristically not more than about 30 - and even if you restrict yourself to representing just the phonemes of the various languages of the world you need a lot more than that. So you have to decide how to increase your repertoire of symbols. There are various possibilities - using symbols from other alphabets (e.g. Greek θ or δ; adding diacritics to the basic symbols to modify their value, such as acute or grave accents, cedilla or Spanish tilde; turning symbols round or upside down, as in [ñ ɔ ɹ ɸ], just to give a few examples.

So much, then, for some of the practical problems. Now I should like to tell you something, again fairly briefly, about a particular attempt in the early 19th century to encourage the development of a system for transcribing a wide range of languages. My reason for doing this is not purely an interest in history. We can learn something about the conflicts of motives which characteristically bedevil the transcription question. One such conflict is the need to reconcile the opposing demands of theoretical accuracy and practical use. In one way the question of transcription poses a challenge to phonetic theorists - how to fit sounds into the existing framework, or how to change the framework to incorporate newly 'discovered' sounds. In another way it is essentially a pragmatic exercise - to discover the most effective means of making it easy for phonetically untrained travellers, missionaries, teachers etc. to be able to note down foreign words in writing or to understand such words when written down. Some of the Volney Prize essays are directed towards the first of these objectives, others more to the second.

Count Volney was one of a group of scholars who came to be known as 'Ideologues' - I should like to give you more of the background, but time does not permit. Suffice it to say that Volney was active in the various social and educational reforms which were being pursued in the late 18th century in France, around the time of the French Revolution. He was convinced that it was essential to link the West and the East culturally - to make both more familiar with the other's literary heritage and to make it easier to learn each other's languages (a worthy aim, as I am sure you will agree). With this in view he tried himself to devise a new and more effective way of writing oriental languages in Roman script.

But at the end of his life, realising that he had failed to achieve this objective, he left in his will a sum of 24,000 francs to institute what came to be known as the Volney Prize.

As often happens, there were disputes as to how to interpret Volney's wishes - did he envisage just a system of transliteration (which is a relatively easy thing to attain) or did he really hope that the result would be a universal phonetic alphabet? There were fierce arguments about this. In time some 36 essays were submitted on this transcription topic and 6 prizes were awarded. But the practical results were minimal. Few of the essays were published, and none was given the full backing of the Volney Prize Commission as being an acceptable solution to the problem. By 1842 the Commission in effect gave up, and abandoned the transcription topic, though the Prize continued to be awarded for a wide variety of linguistic topics. Among those who have won it are scholars who later attained an international reputation in linguistics, such as Max Mueller and Otto Jespersen. The Prize is still in existence and is awarded every five years. It is interesting to observe that few of the contestants for the Volney Prize were primarily concerned with linguistics in their careers. The problem of converting unknown or unfamiliar scripts into more familiar ones obviously had, and still has, a fascination that has attracted orientlists, librarians, physiologists, and social reformers, among others, to try their hands at it.

Let us just look briefly at two of the contestants.

The mysterious M. de Brière (a pseudonym) was the one who produced (in 1831) the scheme that I mentioned earlier, which (he claimed) could cope with over 40 million distinctions of sounds. He did not win the Prize because the Commission was *not really looking for a universal alphabet, but just one that was sufficient for transcribing oriental languages. But his scheme is impressive in its insistence on comprehensiveness.* Brière is not content to confine himself to the conventional phonetic framework, with its relatively small number of distinctions - characteristically only three places of articulation, three degrees of mouth aperture, and two lip positions. Instead he allows for the possibility of as many as 21 different lip positions and 17 different positions of the tongue tip, and he pays attention also to the position of the jaw (hardly mentioned in most descriptions of speech). Although clearly this degree of

refinement of description is not really necessary for most purposes, it is refreshing to find someone who is not content to accept the traditional model without question.

Another example of a refreshingly new approach, though with rather more emphasis on the practical aspect than we find in Brière, is contained in Paul Ackermann's essay, submitted in 1837. Ackermann was one of the exceptions in being himself a linguist - he became professor of French Language at the University of Berlin. What particularly marks out his essay is his interesting theory of what he calls in French 'timbre' - 'quality' is probably the best translation. Each sound is said to be a complex of a certain number of these qualities, and it is the particular combination that we find of these qualities in one sound which gives that sound its identity. One is immediately reminded of the notion of phonological 'features' which springs from the Prague School of Linguistics - Trubetzkoy and Jakobson, though Ackermann was not putting forward (consciously at least) a phonological theory of features. The idea that sounds are a composite of different elements or processes was not a new one, even in Ackermann's time - one can find it as far back as the ancient Indian phonetic treatises some 2,500 years ago. However Ackermann's presentation is particularly clear and insightful, and phonetically sound. Alphabetical symbols are seen as an abbreviation of the complex of 'timbres' or qualities that make up the sound, just as they are today.

The search for an effective transcription system goes on throughout the 19th century. Richard Lepsius in his *Standard Alphabet* (2nd ed. 1863) sets out to describe what he calls "the essential differences of sound, which amount to more than 50 in number" but in fact we find that he lists 186 separate symbols. The 19th century British phonetician A.J. Ellis calculated that Lepsius's alphabet had "at least 286 characters, of which at least 200 would need to be newly cut". It was criticised particularly for employing too many diacritical marks on the symbols. Ellis himself, in his *Palaeotype alphabet*, has over 180 symbols, but most of these were taken from types which were readily available to printers without special provision - by turning or reversing letters or using them as diacritical modifiers.

The search can be said to have culminated in the foundation of the International Phonetic Association

almost exactly 100 years ago. The Association's alphabet, with modifications, is not by any means one that is universally accepted. Those who gather in Kiel next year to consider its revision will have to face virtually the same problems that I have tried to outline in this brief historical survey :

- (a) how many sounds are to be included?
- (b) how does one incorporate newly ' discovered ' sounds?
- (c) how can one satisfy in one system the needs both of professional phoneticians and of less technical users - teachers, anthropologists, singers etc.?
- (d) how should the revision be approached ? Does it require a complete rethinking of phonetic categories previously used? Or can there be a less drastic change, on the grounds that an alphabet of this kind will never be a perfect reflection of theoretical categories?
- (e) if one decides that there is to be a major revision, would one be content to retain the present basis, which is an articulatory one, or is there a better alternative, based, for example, more on the acoustic or auditory aspect of sounds?

In some ways this resembles the question of spelling reform. If you decide to change the spelling system of a language you have to accept that existing written material will become in a greater or less degree more difficult to read for future generations, and there is always a strong resistance to changing well established habits. Admittedly the change of the IPA alphabet would only affect a relatively small number of people, but if the alphabet were to be changed in a major way it would clearly affect potentially all

the phonetic transcriptions done in IPA terms, including large numbers of dictionaries.

In recent issues of the Journal of the International Phonetic Association various suggestions have been put forward for a revision of the alphabet. If any trend is discernible in these it is towards saying that the alphabet must be made flexible enough to provide for the very different demands made on it by such disparate categories as anthropologists, teachers of the deaf, computer speech processors and academic phoneticians. One way of achieving this flexibility is to have alternative sets of symbols set out in different charts - but with the essential condition that no symbols may be used in totally different ways in the separate charts. This allows, for instance, the use of a ' basic ' or ' core ' symbol as [t] to be used in some circumstances to stand for a voiceless stop in the alveolar - dental area. If more specificity is wanted the alternative chart could distinguish at least three different variants - [t], [t̪] and [t̟] - corresponding to alveolar, dental and interdental.

We are more fortunate than the pioneers of the early 19th century were. For them the universal alphabet was no more than a distant ideal. Even Lepsius's alphabet in the mid-19th century had a limited life span, and was mostly confined to Africa. The alphabet of the IPA, for all its gaps and inconsistencies, is the nearest we have got to a universal system. Let us hope that after next year's convention it will emerge as an even more powerful tool to celebrate its hundredth birthday. But one must proceed cautiously in attempting to reform such a well established system. I think the distinguished linguist André Martinet put it nicely in a recent article when he said " Novelties should not be enforced, but presented as an enrichment that will make life easier for everyone concerned ".

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