

# 用 $\text{b}$ , $\text{d}$ , $\text{g}$ 當不吐氣清破裂音

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## ON USING $\text{b}$ , $\text{d}$ , $\text{g}$ FOR UNASPIRATED VOICELESS PLOSIVES

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The International Phonetic Alphabet provides two sets of letters,  $\text{p}$ ,  $\text{t}$ ,  $\text{k}$  and  $\text{b}$ ,  $\text{d}$ ,  $\text{g}$  for unaspirated voiceless plosives and unaspirated voiced plosives respectively. Of the former kind of sounds, a weakly articulated variety, such as occur in the Mandarin of Beeipyng and in South Germany, is often written as  $\text{b}$ ,  $\text{d}$ ,  $\text{g}$  which easily pass into voiced  $\text{b}$ ,  $\text{d}$ ,  $\text{g}$  in intervocalic positions.

Now it happens that in English and German, there are two groups of phonemes to be tentatively called  $\text{P}$ ,  $\text{T}$ ,  $\text{K}$  and  $\text{B}$ ,  $\text{D}$ ,  $\text{G}$ , which have the following values:

	In accented initial positions		after $\text{s}$ , $\text{f}$ and in unaccented positions
Eng. P. T. K.	$\text{p}'$ $\text{t}'$ $\text{k}'$		$\text{p}$ $\text{t}$ $\text{k}$
Germ. P. T. K.	$\text{p}'$ $\text{t}'$ $\text{k}'$		$\text{p}$ $\text{t}$ $\text{k}$
	In accented initial positions		In intervocalic positions
Eng. B. D. G.	$\text{b}^{\text{b}}$ $\text{d}^{\text{d}}$ $\text{g}^{\text{g}}$		$\text{b}$ $\text{d}$ $\text{g}$
Germ. B. D. G.	$\text{b}^{\text{b}}$ $\text{d}^{\text{d}}$ $\text{g}^{\text{g}}$		$\text{b}$ $\text{d}$ $\text{g}$

Although the values given on the *left*-hand side of the table should be considered the normal values of these phonemes, i. e., should be considered their principal members, the customary method of transcribing these phonemes has been to use  $\text{p}$ ,  $\text{t}$ ,  $\text{k}$  and  $\text{b}$ ,  $\text{d}$ ,  $\text{g}$ , which are graphically the simplest and nearest to the orthography of these languages.

The question of how to transcribe Chinese plosives has always been a stumbling block to phoneticians as well as practical teachers, and the writer hopes to be pardoned for rediscussing such a worn out but still unsolved problem. Taking North Mandarin as containing two sets

of phonemes and calling them x, y, z, and u, v, w, (in order not to prejudice the case), we have then the following values:

	In accented initial positions						In intervocalic positions		
Mand.	x	y	z	p'	t'	k'	p'	t'	k'
Mand.	u	v	w	ɸ	ɬ	ɣ	b	d	g

For a practical transcription, one of three things may be done, all of which are open to difficulties. (1) One may follow the usage of French and English sinologists and use p', t', k', for x y z and p, t, k for u v w. But as the customary phonetic transcriptions of two of the three major European languages use p, t, k, for phonemes whose principal and therefore typical members are aspirated, that custom has permanently spoiled the use of these letters for unequivocally transcribing unaspirated sounds, the official definition of the International Phonetic Association to the contrary plus the usage of French notwithstanding. To look at the puzzled face of a Chinese student with a phonetic transcription of an unknown language containing p, t, k is sufficient evidence of this difficulty. (2) Secondly, one may follow Russian and some German sinologists and use p, t, k, for x, y, z and b, d, g for u, v, w. This, in fact, is the orthography of the National Romanization. The use of p, t, k, for the aspirated is in agreement with the usage of English and German phonetic transcriptions, and the use of b, d, g for voiceless sounds is only slightly worse than in the case of German itself, as a comparison of the preceding tables will show. However, since the German practice is not very good, what is slightly worse than the not very good cannot very well be good. (3) A more accurate way would be to write out the principal members of the phonemes, thus p', t', k', ɸ, ɬ, ɣ, as the writer has done on various occasions. This last procedure has two disadvantages. In the first place, the voiceless modification sign tends to suggest that the letter represents a variant, that is, a subsidiary member, of some phoneme represented by the unmodified letter, whereas the reverse is the case. Secondly, in many if not most Chinese dialects, the sounds corresponding to u, v, w in Mandarin have a rather tense articulation, comparable to French p, t, k, for which the signs ɸ, ɬ, ɣ would be unsuitable, and yet it would be of

very little linguistic significance to make a distinction between the softer variety of u, v, w in Mandarin and the harder variety in the other dialects by giving them two different sets of letters.

To deal with this situation, I shall begin by considering two kinds of needs and propose a plan of satisfying them. In the case of English, German and French, let us agree that the aspiration of voiceless plosives have no phonemic significance and there is in fact a need of letters to represent voiceless plosives without regard to aspiration. If now we take the letters p, t, k, to represent such sounds *de jure*, which is really being done all the time *de facto*, then this need is satisfied. This amounts to the legalizing of an illegal practice of using p, t, k, for p', t', k', which hitherto has been passed over with a wink. Next, there is a need for a set of signs which shall unequivocally represent *unaspirated* voiceless plosives, whether they are tensely or lightly articulated. For this I propose the following letter forms:

b, d, g.

Thus, Chinese x, y, z and u, v, w may be represented either as p', t', k', b, d, g or to follow the usage of English and German transcriptions, simply as p, t, k, b, d, g, as these latter include both the harder and the softer variety of unaspirated voiceless plosives. Henceforth, then, p, t, k, are broad transcriptions of voiceless plosives and the uncomfortable feeling that they should not and yet are used for aspirated sounds can be done away with.