by a *Hamzeh* (corresponding to the *Spiritus Lenis* of the Greeks) or in other words, by a slight effort to emit the breath which is a rudimentary consonant(1). Thus such apparent exceptions will be included in the general rule.

I shall now commence my analysis of the modern dialects of China, by giving first the elements which they possess: initials, vowels, diphthongs and finals, arranged according to the plan derived from Sanscrit, followed by native philologers, and illustrated in the tables of K'ang-hsi. For the Southern dialects, I have dissected the various syllabaries published by Mr. Parker, and for the Northern (with the exception of "Yangchow" where I have followed the same author) I have subjected to a similar process the valuable sound table published by Dr. Mateer in his "Mandarin Lessons." I thus can give a comparative view of 11 different dialects.

A glance at the foregoing tables will discover at once two important facts: the complete and harmonious series of initials in the Wenchow and Ningpo dialects, and the not less remarkable set of vowels, diphthongs, and finals in the Canton dialect. In the latter, the vowels form a few natural diphthongs, and join with the three(2) terminations *ng*, *n*, *m*, to give a regular set of finals. The numerous finals formed by the diphthongs commencing with *i* such as *ia*, *ie*, etc., are absent in Cantonese, and as this is the dialect which agrees best with the ancient rhymes, we must be led to suspect that these numerous diphthongs are derived from simpler forms, in which an *i* has been inserted by euphonic necessities, consequent to the change of value in the initials through phonetic decay.

(1) This conventional consonant will be marked *

(2) I leave out the terminations *k*, *t*, *p*, found in the *Ju Sheng* of the southern dialects because, according to the views of the native philologers, whose system I follow, they are but shortened abrupt forms of *ng*, *n*, and *m*.

Part IV.

PHONETIC ELEMENTS OF THE RHYME-TABLES OF K'ANG-HSI.

Initials.

The four thousand odd characters contained in the above tables are arranged, as we have said, under 36 initials. These are divided into 9 classes, which generally correspond to similar ones in the Sanscrit alphabet, which thus becomes a precious auxiliary for determining their value at the time when the tables were compiled. We subjoin the nine classes with remarks when necessary

1st Class Gutturals K. K'. G. Ng. (same as Sanscrit.)

2nd ,, Dentals T. T'. D. N. (,, ,, ,,)

3rd ,, Cerebrals T(*r*). T(*r*).' D(*r*). N(*i*).[1] (,, ,, ,,)

This class was pronounced with the tip of the tongue against the palate as if to pronounce *r*. The dentals T. T'. D. N. being uttered with the tongue in the above position, became respectively something between T, Ch, Tr-T' Ch'Ts—D, Dj, Dz, Dr—N, Ni, all of which sounds are found separately in various dialects and in Annamese[2].

(1) I adopt the system of indicating cerebralisation by an *r* in brackets, because it shows the position of the tongue: of course the *r* must not be trilled. Dr. Edkins is wrong in considering the characters of this class as palatals; Julien's alphabets show they were used for Sanscrit cerebrals.

(2) These sounds can be paralleled by the Syllabarium Rataţarum of Thibetan (given by Giorgio) and by certain sounds in Dr. Mateer's Sound Table in his Mandarin Lessons.

SKELETON TABLE SHOWING VALUE OF K'ANG-HSI'S INITIALS.

韻	9th Class. 日來	8th Class. 喻影匣曉	7th ,, 邪心從清精	6th Class. 禪審狀穿照	5th ,, 明並滂幫	4th Class. 微奉敷非	3rd ,, 泥定透端	2nd Class. 娘澄徹知	1st Class. 疑群溪見
	Jr L	Y * H Hh	Z S	Dz Ts'	M B	P' P	N	D T'	T
			Z(r) S(r)	Dz(r) Ts(r)'	M B	P' P	N(r)	D(r) T(r)'	T(r)
			,, ,,	,, ,,	W V	F' F	,,	,, ,,	,,
			Z S	Dz Ts'	M B	P' P	N	D T'	T

4th Class. Labials (strong) P. P'. B. M (same as Sanscrit.)

5th „ „ (weak) F. F.' V. W. (absent.

This class is generally derived from the preceding 4th class by the insertion of a *u*:

6th Class. Sibilants Ts. Ts'. Dz. S. Z. (partially represented in Sanscrit)

7th „ (cerebral) Sibilants Ts(*r*). Ts(*r*)'. Dz(*r*). S(*r*). Z(*r*) (absent in Sanscrit.)

This, like the third class, was pronounced with the tip of the tongue against the palate, as if to pronounce *r*, and the sibilants Ts. Ts.' Dz. S. Z. by cerebralisation became something like Tsr. Tsr', Dzr. Sr. Zr[1].

8th Class Aspirates. Hh. H. ʰ. Y.

The sounds of this class, with the exception of Hh and *Y*, are very difficult to determine, and I give them with diffidence as I am unfortunate enough to disagree with such an authority as Dr. Edkins.

9th Class L. Jr.

For the second, I prefer the sound Jr. to J commonly given, because the class would correspond to the half vowels *ri* and *li* of Sanscrit, and because Jr. may more easily change into N. Jr. J. which occur so often in dialects and in Japanese.

(1) See note on preceding page.

The 3rd, 5th, and 7th classes are not marked as separate ones in the Tables under consideration, but are placed respectively under the 2nd, 4th, and 6th classes. But they can be no confusion, because K'ang-hsi gives directions for discriminating between them.

We have already stated that each table of K'ang-hsi is divided into four Divisions, each containing four lines of characters in the different tones. Now that dictionary teaches that characters with initials of the 2nd and 6th classes can only be found in the I and IV Divisions, while characters of the 3rd and 7th classes are only found in the II and III Divisions.

Characters with initials of the 5th Class are found only in the III Division, and mostly in the Tables with closed sounds (合口).[1]

A table is attached, showing how these different initials have changed in the varions dialects and languages which have formed the basis of the present enquiry. As it would have taken too much space to give each dialect separately, four groups have been formed:

Canton, Hakka, and Foochow marked *S;* Wenchow, and Ningpo marked *W N;* Yangchow, Mid-China, Ssūch'uan and Peking, marked *CN;* and Corean, Japanese, and Annamese marked *L.* The latter have often been separated by a hyphen.

To show the relative frequency with which sounds occur in a group of dialects, I have arranged them in a regular succession, those most commonly found being placed

1 Schlegel and Kühnert both mistake the meaning of a simple phrase of K'ang-hsi giving directions for this class, which would have become evident if they had critically examined the Rhyme Tables. Much learning was wasted in supporting the two mistaken views. (See Journal Akademie der Wissenshaften CXXII, CXXXI)

to the left in capital letters, while those found rarely are placed to the right in small type.

From the table of initials of the different dialects of China, it appeared that Wenchow and Ningpo possess a very complete series: the present comparative table shows that their initials correspond closely to the theoretical initials of Kang-hsi. It will also be seen that the sonants are supported by Japanese and Annamese.

VOWELS DIPHTHONGS AND FINALS.

It will make the subject clearer, and render comparisons more systematic, if inverting the chronological order, I premise the phonetic elements of the ancient language which I have obtained as the final results of my investigation.

The hypothetical reconstruction of these ancient phonetic elements is given on the next page.

HYPOTHETICAL PHONETIC ELEMENTS OF THE ANCIENT LANGUAGE.

Vowels.

o, ê, [1] a, e, é, i (perhaps short i and ï) u, ü.

Diphthongs.

oo, oi, ou;
ao, [2] ai, au;
eo, ei, éi, eu;
io, ii, iu.

Finals.

oang, on, om, êng, ên;
aang, ang, an, am;
eang, eng, en, em, éng, én, ém;
iang, ing, in, im, (perhaps in with a short i);
ung, üng.

(1) I adopt this spelling because it is followed by Parker, but the sound is really the Italian *o stretto*.

(2) This is represented as *êo* by Wade and Parker, but I cannot follow such an extraordinary combination for a sound so naturally rendered by the Italian diphthong *ae* which gives the two vowels uttered. As the vowel system of Wade is based on Italian, the spelling of that language has a right to be preferred.

As will be seen at a glance, this system of vowels diphthongs and finals, is very simple, coresponds to Cantonese and Hakka, and, as will be shown later on, agrees with the 24 Tables of K'ang-hsi, explaining each of them without the occurence of duplicates which deface the reconstruction of the ancient finals attempted by other authors.

It is now necessary to compare these theoretical elements, with those found in the dialectal variations of the 4,000 characters of K'ang-hsi's Rhyme-Tables, in the way we have already done with the initials. But as I have already pointed out, it is a far more difficult task: the variations of vowels, diphthongs and terminations are so complex, that they cannot be reduced to a system, compared and judged by mere observation, however diligent and reiterated. The mind cannot master hundreds and thousands of forms, and judge of their relative importance. It becomes indispensable to have recourse to figures, those convenient symbols which enable us to reason about facts whose multiplicity would baffle us if approached without their assistance, I decided to form a series of statistical tables.

To economise labour I omitted all the *Ju Sheng* sounds, as they could be readily constructed whenever the sounds in the other tones were ascertained. Whenever a final possessed two tables, for open and closed sounds, I only considered the former, because the latter could be deduced as a corollary from the table of open sounds once it was determined: after these deductions I still had over 22,000 sounds to analyse. This residium was dissected, and by six consecutive series of tables, reduced to condensed statements of the relative frequency with which any

given final sound occurs in any of the Tables of K'ang-hsi, pronounced according to nine different dialects and the three foreign languages. Up to the last set of tables I kept the sounds divided into the same four groups which I gave in the Comparative Table of Initials, but the tables were too cumbersome and presented such difficulty for printing, that I had regretfully to condense them into a single statement for all the dialects and languages given by Parker. This curtailment hides many important facts, the conservative tendency of certain linguistic groups and the facile phonetic decay of others, become neutralised and lost in the general mass. But even with these disturbing causes, the action of general laws is still apparent.

In the tables which follow, the Roman numbers at the top of each column indicate the Divisions of the table, I. meaning the upper one, and IV. the lowest. The arabic numerals in the different columns indicate the number of times any final occurs, and to know their just relative importance, they must always be referred to the total at the bottom of each column: they are the numerators of fractions whose denominator is the total. In another columm, the same number may have a different relative value owing to the difference in the total.

It may be objected that statistics are inapplicable to such phenomena, because in philology exceptions often are of the highest value, and irregularities may indicate lost forms, but I do not pretend to give an *absolute* value to my figures, nor should I decide in favour of a vowel or a diphthong by a simple addition like a political division in Parliament. I use figures, because they are the only symbols that can render manageable such an unwieldy

mass, they can condense evidence and render it clear. The reasoning on such evidence is not affected by their use, and can proceed with the customary canons of the science.

My general principle for drawing conclusions from the material accumulated and arranged, has been to subordinate everything to the plan on which the Rhyme-Tables of K'ang-hsi were undoubtedly constructed. I have asked from figures only a clue to show the nature of the arrangement, I have not followed blindly the indications of an arithmetical majority; whenever the Tables required that a difference should be found between two finals, I have taken guidance even from numerical minorities.

In the comparative study of the fifteen terminations of K'ang-hsi, at first, I found much difficulty in keeping some of them distinct; my hypothesis that the 4 Divisions (四等) corresponded to the four vowels *o, a, e, i*, seemed to multiply the number of finals, and give a larger number than the nature of the language consented. But a diligent study of terminations, arranged according to natural groups, enabled me to distinguish finer degrees of vowel differentiation.[1]

I shall therefore present my tabular material, and the conclusions I draw from it, divided, when ever possible, in groups of two or three terminations; most of these groups had already been formed by native philologers, and may either be found mapped out in K'ang-hsi, immediately preceding the 2nd set of Rhyme-Tables, or may be surmised by the ancient arrangement of the 24 Tables which was different from that given in K'ang-hsi. This latter point will be discussed later. Only in one case have I ventured to form a group of my own.

[1] I thus discovered the narrow vowels and the *u* series.

N.B.—In the Tables illustrating the Terminations, for brevity and clearness, I omit the vowel in all but the first form; for the successive ones only the terminal consonants or vowels are given.

1st Termination.

(1st and 2nd tables of K'ang-hsi.)

This has both open and closed sounds, and is contained in the 1st and 2nd Tables of K'ang-hsi. It may be characterised as a simple vowel ending, because out of a total of 2,263 dialectal forms collated, only 3 in the Wen-chow and Ningpo dialects end in a feeble nasal peculiar to that region. We must now examine how the vowel varies in the 4 Divisions.

I. Division

The vowel *o* is well established: a glance at the Table will show that out of 730 forms 433 contain that vowel.

II Division.

Here also the vowel *a*, given by my hypothesis, is well established, as it appears in 509 out of the 646 different sounds.

III Division.

The hypothetical vowel *e*, is also represented in a majority of cases, as it occurs either simple, or in a diphthong 252 times out of the total 433.

IV Division.

If we take into account all the diphthongs containing the letter *i*, it will be found in a majority of cases, but if we consider the diphthongs *ia*, *iau*, *ie*, etc., as they probably are, corrupt forms of *a*, *au*, *e*, then the vowel *e*, is the one represented in the majority of forms. This would bring us to the same result as the III Division which is not

1st TERMINATION.

	(Open Sounds).			
	I	II	III	IV
o—	332	77	22	1
a	22	...	1	...
u	69	3	4	...
uñ	...	2	...	...
ñ	1	...	...	...
ê—	1	10	4	3
a—	202	460	58	68
u	12	...	...	...
e	2	...	3	2
i	13	2	1	3
êo	4	...	...	...
e—	6	19	141	81
i	...	3	2	2
ô—	...	1	28	13
e	1	...	...	...
i—	4	...	1	8
i—	3	12	29	57
o	1	...	2	1
au	...	...	...	2
a	10	47	45	49
ae	...	...	1	...
e	8	3	72	141
ei	...	...	1	4
ôe	...	1	...	1
y—	...	...	12	9
ü	...	...	...	1
ö	...	...	3	4
u—	36	1	1	...
ü—	...	...	...	...
o	3	5	1	...
a	...	...	...	1
e	...	...	1	3
	730	646	433	454

logical, therefore to differentiate the two last Divisions, and bearing in mind that the vowel *i*, (or *y*), appears rarely in the three first, and in many cases in the IV Division we may safely assume it as the characteristic vowel of this Division.

N.B.—For facility of calculation, and in the present uncertainty about the primitive forms, I shall consider every diphthong as belonging to each of its constituent vowels, and reckon it with both.

2nd, 3rd, and 4th Terminations.

These terminations are grouped together in K'ang-hsi, and their similarity justifies such a proceeding, the characteristic trait is the nasal *ng*: out of 4,472(1) sounds, 3,276 end with *n*, *ng*, or *ng* and 488 end in *u*, most of which are Japanese renderings of this nasal: *n* only claims 385 and other miscellanens terminations only 323 sounds.

2nd Termination.

(3rd and 4th Tables of K'ang-hsi).

This termination has only three divisions, the first is wanting.

II Division.

The vowel should be *a*: out of 606 dialectal sounds 238 contain *a*, 188 contain *e* and *ï*, (which I consider as the mute *e* of the French) and 144 *o* and *ê*.

III Division.

This should have the vowel *e*: out of 536 sounds only 101 give the hypothetical vowel, while *i* appears in 353.

(1) This total does not agree with the addition of the totals in the appended Tables because some sounds have been omitted in the latter.

IV Division.

This should be *i*: out of 795 sounds, 617 give that vowel.

The vowel *i* is given in both III and IV Divisions, but there is a larger average in the latter, while *e* appears more frequently in the former.

3rd Termination.

(5th and 6th Tables of K'ang-hsi).

This may be considered to have only two Divisions, because the II. only contains 3, and the IV only 7 characters, exclusive of *Ju Sheng*.(1)

I Division.

Out of 465 sounds 236 give *o* and *é*, as the latter predominates, I consider the vowel to have been a narrow *o*, such as exists in French and Italian.

III Division.

Out of 481 sounds, *e* appears in 92, and *i* in 261. By analogy with the preceding Div. this was probably a narrow *e*, as also exists in French and Italian.

4th Termination.

(7th Table of K'ang-Hsi).

This termination only contains closed sounds, and forms therefore a different series with the vowels *u*, and *ü*, (*u* + *e*).

I. Division.

Out of 565 sounds , 467 contain the vowel *u*.

(1) The *Ju-Sheng* characters have little importance, as they are often repeated in different Tables.

	2nd Termination. (Open Sounds.)			3rd Termination. (Open Sounds)		4th Termination. (Closed Sounds.)	
	II	III	IV	I	III	I	III
o—	2	...	...	2	...	3	1
ng, n̄g	9	3	...	4	...	43	46
n̄	1	...	...	...	...	...	...
ung	3	1	...	4	...	43	11
u	...	...	...	57	13	49	23
a	1	...	...	...	...	...	...
ëng	89	34	12	129	49	13	23
n	38	28	3	40	32	...	...
a—	...	...	...	1	...	...	...
ng, n̄g	93	26	22	31	8	1	1
ung	3	...	...	...	...	...	...
u	37	6	5	6	3	3	4
öng	...	...	...	1	...	7	4
ing	39	13	17	5	3	...	...
i	...	1	...	9	...	...	...
e	26	...	2	2	...	...	...
ăng	...	...	...	23	11	...	...
e—	...	6	...	2	...	...	...
ng	29	9	17	...	2	...	...
n	19	1	8	18	...	..	...
u	...	...	...	...	12	...	4
ing	24	12	24	19	17	...	1
i	6	34	56	...	8	...	...
ö—	...	1	...	4	...	1	...
ng	8	21	49	...	3	15	4
n̄	...	...	3	...	...	1	...
ŭng	...	...	...	...	...	1	7
i—	...	...	...	...	16	...	...
ng	88	...	...	24	32	...	...
a	...	...	...	...	2	...	...
i—	...	1	...	...	13	...	...
ng	...	208	400	9	161	4	1
n	21	44	72	...	35	...	...
ong	1	1	2	...	...	1	1
ou	...	...	...	...	30	6	24
ang	7	36	45	...	6	2	...
au	33	28	46	...	9	...	1
ae	...	3	...	...	...	...	...
eng	2	...	...	3	...	...	...
en, eñ	...	...	5	...	...	...	...
êo	...	...	...	...	...	...	1
[illegible]	...	...	...	1	...	...	3
[illegible]	...	...	..	...	...	...	1
öng	12	17	4	...	...	...	...
ei	...	...	1	...	...	...	...
ung	...	...	...	...	4	...	55
u, uu	...	...	...	4	3	3	32

IV Division.

ld be *i*: out of 795 sounds, 617 give

i is given in both III and IV Divisions, but
er average in the latter, while *e* appears
in the former.

3rd Termination.

ND 6TH TABLES OF K'ANG-HSI).

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	2ND TERMINATION. (OPEN SOUNDS.)			3RD TERMINATION. (OPEN SOUNDS)		4TH TERMINATION. (CLOSED SOUNDS.)	
	II	III	IV	I	III	I	III
o—	2	...	...	2	...	3	1
ng, n̄g	9	3	...	4	...	43	46
n̄	1	...	...	...	...	...	...
ung.....	3	1	...	4	...	43	11
u	...	...	...	57	13	49	23
a	1	...	...	...	...	...	...
êng	89	34	12	129	49	13	23
n	38	28	3	40	32	...	...
a—	...	...	...	1	...	...	...
ng, n̄g	93	26	22	31	8	1	1
uug.....	3	...	...	...	...	...	...
u	37	6	5	6	3	3	4
ông.....	...	...	...	1	...	7	4
ing.....	39	13	17	5	3	...	...
i	...	1	...	9	...	...	...
e	26	...	2	2	...	...	...
ăng	...	...	...	23	11	...	...
e—	...	6	...	2	...	...	...
ng	29	9	17	...	2	...	...
n	19	1	8	18	...	..	...
u	...	...	...	...	12	...	4
ing.....	24	12	24	19	17	...	1
i	6	34	56	...	8	...	...
ö—	...	1	...	4	...	1	...
ng	8	21	49	...	3	15	4
n̈	...	...	3	...	...	1	...
n̈ng.....	...	...	...	...	...	1	7
ï—	...	...	...	...	16	...	...
ng	88	...	...	24	32	...	...
a	...	...	...	...	2	...	...
i—	...	1	...	...	13	...	...
ng	...	208	400	9	161	4	1
n	21	44	72	...	35	...	...
ong.....	1	1	2	...	...	1	1
ou	...	...	...	...	30	6	24
ang.....	7	36	45	...	6	2	...
au	33	28	46	...	9	...	1
ae	...	3	...	...	...	...	...
eng.....	2	...	...	3	...	...	...
en, eñ.....	...	...	5	...	...	...	...
êo	...	...	...	...	...	...	1
eu	...	...	1	...	...	...	3
oe	...	...	..	...	...	...	1
öng	12	17	4	...	...	...	...
ei	...	...	1	...	...	...	...
ung	...	...	...	...	4	...	55
n, uu	...	...	...	4	3	3	32
y—	1	1	...	...	...	...	...
ng	14	...	...	...	...	...	...
u—	...	...	...	34	...	40	11
ng	...	...	...	34	7	329	400
n	...	...	...	...	1	...	...
ü—	...	1	...	...	...	...	5
ng, ung	...	...	1	...	1	...	43
ong	...	...	...	...	...	...	1
oa	...	...	...	...	...	...	18
	606	536	795	465	481	565	726

III. Division.

Out of 726 sounds we have 512 giving *u*, but we have also 67 with *ü* (which does not appear in the last Division) and 87 with *iu*, which is an easy corruption from *ü*.

5th, 6th, and 7th Terminations.

These are grouped together by K'ang-hsi, and though the last one differs from the two former, it is useful to keep them together as they form a parallel to the group we have just examined.

The two first may be considered to have had the termination *i*, because out of 3,464 modern dialectal forms 2,122 have this termination.

6th Termination.

(10th and 11th Tables of K'ang-Hsi.)

For uniformity it is better to commence with this one.

I. Division.

Here the vowel *o*, is represented only in about 14°/₀ while *a*, occurs in more than 55°/₀ of the sounds.

II. Division.

Here the vowel *a*, appears in about 74°/₀ of the total.

III. Division.

Here the vowel *e*, occurs in over 54°/₀ of the total.

IV. Division.

The hypothetical vowel *i*, appears as first or only sound in over 55°/₀ of the total: no account has been

taken of those sounds, where *i* appears as the second vowel, because then it might be the *i* of the termination.

5th Termination.

(8TH AND 9TH TABLES OF K'ANG-HSI.)

As there are only 21 characters in the I Div. and 11 in the II. Div., exclusive of *Ju Sheng*, and as some of these are printed in smaller type, and are not found in older works, we may confine our attention to the remaining Divisions.

III. DIVISION.

Out of 726 sounds, the vowel *e*, appears only in 237 nearly a third, while *i*, occurs in 467, I think the vowel must have been originally an *é fermé* of the French phonetic system. This Div. is a parallel to the III Div. of 3rd Termination.

IV. DIVISION.

Here the vowel *i*, occurs in about 75°/₀ of the total. It may have been a shorter *i* than the one of IV Div. 6th Termination.

7th Termination.

(12TH TABLE OF K'ANG-HSI.)

In the II. Div. there are only 12 characters, and in the IV. Div. only 18, and as there are no rhymes we may safely neglect these two Divisions.

I. DIVISION.

This should have the vowel *u* as the 7th termination has only closed sounds: the hypothesis is borne out by over 71 °/₀ of the modern dialectal sounds, as out of 721 sounds 514 contain this vowel.

K'ANG-HSI.	S.	W. N.	C. N.
K	K.	K, Ch, Tsz, Dj, Hs, Y,○	K, Ch, Tsz, Dj, Hs, Y,○
K'	K, H, Ng, Y,○	K, Ch, dj, h, g, hs,○	K, Ch, Ts, Dj, H, Ng, Y, W
G	K.	G, Dj, c, d.	Ch, K.
Ng	Ng, Y, W, ○ H.	Ng, Y, W, ○ H.	Ng, N, L, j, jw.
T	T, ch.	T, D, tsz, dz, ch, dj.	T, ch, ts.
T(r)	Ch, t, ts.	Ts, Dz, t, d, ch, dj, c, s, ts.	Ch, Ts, t, tsz.
T'	T', ch.	T', d, ts, ch.	T'.
T'(r)	Ch, ts, t.	Ts, t, d, ch, dz, dj, c.	T, ch, ts, c.
D	T, ch, s.	D, t, dz.	T, ch, ts, c.
D(r)	Ch, t, sh, ts, s.	Dz, dj, z, j, ts, ch, tsz.	Ch, Ts, sh, hs, t, ch, sz.
N	N, L, ng, y.	N, ng, ny, z, j.	N, L, j.
N(i)	N, L, ng, ny, y,○	N, ng, y, j, z.	N, L.
P	P, f, h, m.	P, B, f, v, h.	P, f.
F	F, h, p.	F, v, h, p.	F.
P'	P, h, f, m.	P, B, V,	P.
F'	F, h, p.	F, p, h, b.	F.
B	P, f, b, m.	B, P, v.	P.
V	F, p, h.	V, f, b, w.	F.
M	M.	M.	M.
W	M, N,○	V, m, w.	W, m.
Ts	Ts, ch.	Ts, ch, dz, z.	Ts, ch, tsz.
Ts(r)	Ch, Ts.	Ts, ch, j, z.	Ts, Ch.
Ts'	Ts' ch, s.	Ts', ch', dz.	Ts', Ch'.
Ts'(r)	Ch, Ts, s.	Ts, Ch, dz, z.	Ts, Ch.
Dz	Ts, Ch, s, tsz.	Dz, Z, ts, dj.	Ts, Ch, tsz.
Dz(r)	Ch, Ts, Sh.	Dz, Z, j, ts, s, sh.	Ts, Ch, sh, s, hs.
S	S, ts, sz.	S, hs, sh, ts.	S, Hs, ts.
S(r)	Sh, S, Ch, Ts.	S, sh, z, dj, ts.	S, Sh, hs.
Z	Ts, S, ch, tsz.	Z, dz, dj, j, y.	Hs, s, tsz, ch, y, i.
Z(r)	Sh, s, ch.	Z, Dz, j, dj.	Sh, ch, ts, hs.
Hh	H, h, f, w, y.	H, K, hs, f, w, y,○	H, Hs, K, y.
H	H, k.	○ W, Y, h, k, ng.	H, Hs, y, k.
*	Y,○	Y, W,○	Y, W, ○ ng, h.
Y	Y, w, ○ h, ch, t.	Y, h, w, hs.	Y, w, i, h, hs.
L	L.	L, n.	L, n.
Jr	Y, l, n, ny, i, w.	Z, J, n, ng, dz, y.	J, n, l, ng, y, erh, w.

N.B.—The sign ○ means absence of initial.

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here *i* appears as the second
t be the *i* of the termination.

mination.

LES OF K'ANG-HSI.)

aracters in the I Div. and 11 in
Sheng, and as some of these are
are not found in older works,
n to the remaining Divisions.

DIVISION.

he vowel *e*, appears only in
le *i*, occurs in 467, I think
originally an *é fermé* of the
This Div. is a parallel to the
n.

DIVISION.

irs in about 75°/₀ of the total.
i than the one of IV Div.

mination.

OF K'ANG-HSI.)

are only 12 characters, and in
s there are no rhymes we may
visions.

IVISION.

vowel *u* as the 7th termination
e hypothesis is borne out by
dialectal sounds, as out of 721
vel.

COMPARATIVE TABLE SHOWING DIALECTAL CHANGES IN K'ANG-HSI'S INITIALS.

K'ANG-HSI.	S.	W. N.	C. N.	L. COREAN–JAPANESE–ANNAMESE.
K	K.	K, Ch, Tsz, Dj, Hs, Y,○	K, Ch, Tsz, Dj, Hs, Y,○	K.
K'	K, H, Ng, Y,○	K, Ch, dj, h, g, hs,○	K, Ch, Ts, Dj, H, Ng, Y, W.	K, H.
G	K.	G, Dj, c, d.	Ch, K.	K—G—G.
Ng	Ng, Y, W, ○ H.	Ng, Y, W, ○ H.	Ng, N, L, j, jw.	○ W, Y, H—G, K—Ng.
T	T, ch.	T, D, tsz, dz, ch, dj.	T, ch, ts.	T, d, sh, ch, hs, tr.
T(r)	Ch, t, ts.	Ts, Dz, t, d, ch, dj, c, s, ts.	Ch, Ts, t, tsz.	Ch, t, d, tr, s, hs, sh.
T'	T', ch.	T', d, ts, ch.	T'.	T, d, ch, j, tr.
T'(r)	Ch, ts, t.	Ts, t, d, ch, dz, dj, c.	T, ch, ts, c.	T, D, ch, dj.
D	T, ch, s.	D, t, dz.	T, ch, ts, c.	T, D, ch, dj.
D(r)	Ch, t, sh, ts, s.	Dz, dj, z, j, ts, ch, tsz.	Ch, Ts, sh, hs, t, ch, sz.	D, Ch, Tr, t, s, hs.
N	N, L, ng, y.	N, ng, ny, z, j.	N, L, j.	N, D, T, j, y.
N(i)	N, L, ng, ny, y,○	N, ng, y, j, z.	N, L.	N, D, T, y, j.
P	P, f, h, m.	P, B, f, v, h.	P, f.	P—H, f—T, f.
F	F, h, p.	F, v, h, p.	F.	F.
P'	P, h, f, m.	P, B, V,	P.	P, H, B, f, t.
F'	F, h, p.	F, p, h, b.	F.	P—H—F, b.
B	P, f, b, m.	B, P, v.	P.	P—H, B, f—B, t, f.
V	F, p, h.	V, f, b, w.	F.	P—F, H, B—F, b.
M	M.	M.	M.	M—M, B—M, j.
W	M, N.○	V, m, w.	W, m.	M—M, B, f—V, f.
Ts	Ts, ch.	Ts, ch, dz, z.	Ts, ch, tsz.	Ch—S, Sh, z, j —T, tr.
Ts(r)	Ch, Ts.	Ts, ch, j, z.	Ts, Ch.	Ch—S, Z—Tr, Ch, t.
Ts'	Ts' ch, s.	Ts', ch', dz.	Ts', Ch'.	Ch—S, sh, z—T, tr, s, h.
Ts'(r)	Ch, Ts, s.	Ts, Ch, dz, z.	Ts, Ch.	Ch, s—S, Sh, t—Hs, S, t.
Dz	Ts, Ch, s, tsz.	Dz, Z, ts, dj.	Ts, Ch, tsz.	Ch,—S, Sh, Z, Dj—T, Tr, hs.
Dz(r)	Ch, Ts, Sh.	Dz, Z, j, ts, s, sh.	Ts, Ch, sh, s, hs.	Ch, S—S, Z, J—T, Tr, hs, s.
S	S, ts, sz.	S, hs, sh, ts.	S, Hs, ts.	S, ch—S, Sh—Ts.
S(r)	Sh, S, Ch, Ts.	S, sh, z, dj, ts.	S, Sh, hs.	S, ch—S, Sh—S, T.
Z	Ts, S, ch, tsz.	Z, dz, dj, j, y.	Hs, s, tsz, ch, y, i.	S—Sh, dj, z—T, d, j.
Z(r)	Sh, s, ch.	Z, Dz, j, dj.	Sh, ch, ts, hs.	S, ch—Sh, z, dj—T, hs, j.
Hh	H, h, f, w, y.	H, K, hs, f, w, y,○	H, Hs, K, y.	H, k—K, w, g—H, K.
H	H, k.	○ W, Y, h, k, ng.	H, Hs, y, k.	H, k—k, G, w, y—H, k, g, j.
*	Y,○	Y, W,○	Y, W, ○ ng, h.	Y,W, ○ h—Y W—Y,W, n, ng, lu, n.
Y	Y, w, ○ h, ch, t.	Y, h, w, hs.	Y, w, i, h, hs.	YW○ —YW○ —V, J, g.
L	L.	L, n.	L, n.	NRY—R—L n.
Jr	Y, l, n, ny, i, w.	Z, J, n, ng, dz, y.	J, n, l, ng, y, erh, w.	NY○ —N, J, z, sh—N, N, Ny.

N.B.—The sign ○ means absence of initial.

	6th TERMINATION.				5th TERMINATION.		7th TERMINATION.	
	(Open Sounds.)				(Open Sounds)		(Closed Sounes.)	
	I	II	III	IV	III	IV	I	III
o—	11	10	1	1	1	...	142	51
i	54	1	...	1	1	...	...	...
ui	11	...	...	...	...	...	...	...
u	4	...	...	...	...	...	122	15
un	...	...	...	...	1	...	...	...
a	...	...	1	...	1	...	...	1
ng, n	...	...	...	...	2	...	...	1
ê—	1	1	6	4	1	5	...	39
ü	...	...	...	...	...	...	3	...
ng	13	...	...	...	5	...	...	...
n	...	...	...	...	...	...	1	...
a—	31	97	1	1	3	...	17	6
i	285	196	22	102	11	14	1	...
iu	...	...	...	...	...	...	1	...
u	1	...	...	...	...	...	2	...
ui	3	...	...	...	...	...	...	...
ing	1	...	...	...	...	...	...	...
e	47	41	2	24	5	3	...	...
ng	3	1	...	...	2	...	...	...
êoh	2	...	...	...	...	...	...	...
ă—	...	...	...	1	...	...	...	...
ng	2	...	...	...	...	...	...	...
aa	...	1	...	...	...	...	...	...
e—	92	51	33	80	11	13	...	7
i	54	10	15	58	60	40	1	4
u	...	1	...	...	...	...	2	...
ing, ıñ	5	...	...	...	...	...	...	...
ng, n	3	1	...	3	12	...	...	...
ō—	2	1	3	3	2	1	1	21
i	...	...	...	...	2	...	...	...
ñ	...	...	...	1	...	...	2	37
n, ñ	...	...	...	1	...	...	...	2
ī—	4	6	28	5	123	5	17	72
i	...	1	1	...	13	2	...	...
ng	1	...	...	...	...	...	...	...
i—	20	21	51	329	445	243	...	39
u	...	...	...	...	3	...	...	3
o	...	...	1	...	...	...	4	42
oi	2	...	...	...	...	...	...	...
ou	...	...	...	...	1	...	...	...
a	...	...	...	...	1	1	...	7
ai	...	13	...	1	...	...	...	...
ae	...	...	...	...	1	...	...	...
ei	4	...	...	3	1	3	...	...
e	2	15	19	25	7	10	...	...
ng	1	...	...	1	3	...	...	...
n	...	...	...	4	...	...	...	...
u—	1	...	...	...	...	...	386	281
i	14	1	...	1	1	1	...	...
ng	...	...	...	...	1	...	2	...
n	...	...	...	...	5	...	...	...

	6th TERMINATION. (Open Sounds.)				5th TERMINATION. (Open Sounds)		7th TERMINATION. (Closed Sounes,)	
	I	II	III	IV	III	IV	I	III
o—	11	10	1	1	1	...	142	51
i	54	1	...	1	1	...	...	...
ui	11	...	...	...	...	...	...	...
u	4	...	...	...	...	...	122	15
un	...	...	...	...	1	...	...	...
a	...	...	1	...	1	...	...	1
ng, n	...	...	...	...	2	...	...	1
ê—	1	1	6	4	1	5	...	39
ü	...	...	...	...	...	...	3	...
ng	13	...	...	...	5	...	...	...
n	...	...	...	...	...	...	1	...
a—	31	97	1	1	3	...	17	6
i	285	196	22	102	11	14	1	...
iu	...	...	...	...	...	...	1	...
u	1	...	...	...	...	...	2	...
ui	3	...	...	...	...	...	...	...
ing	1	...	...	...	...	...	...	...
e	47	41	2	24	5	3	...	...
ng	3	1	...	...	2	...	...	...
êoh	2	...	...	...	...	...	...	...
ă—	...	...	...	1	...	...	...	...
ng	2	...	...	...	...	...	...	...
aa	...	1	...	...	...	...	...	...
e—	92	51	33	80	11	13	...	7
i	54	10	15	58	60	40	1	4
u	...	1	...	...	...	...	2	...
ing, ıñ	5	...	...	...	...	...	...	...
ng, n	3	1	...	3	12	...	...	...
ŏ—	2	1	3	3	2	1	1	21
i	...	...	...	...	2	...	...	...
ŭ	...	...	...	1	...	...	2	37
n, ñ	...	...	...	1	...	...	...	2
ĭ—	4	6	28	5	123	5	17	72
i	...	1	1	...	13	2	...	...
ng	1	...	...	...	...	...	...	...
i—	20	21	51	329	445	243	...	39
u	...	...	...	...	3	...	...	3
o	...	...	1	...	...	...	4	42
oi	2	...	...	...	...	...	...	...
ou	...	...	...	...	1	...	...	...
a	...	...	...	...	1	1	...	7
ai	...	13	...	1	...	...	...	...
ae	...	...	...	...	1	...	...	...
ei	4	...	...	3	1	3	...	...
e	2	15	19	25	7	10	...	...
ng	1	...	...	1	3	...	...	...
n	...	2	...	4	...	...	...	...
u—	1	...	...	...	...	...	386	281
i	14	1	...	1	1	1	...	...
ng	...	...	...	...	1	...	2	...
n	...	...	...	...	5	...	...	...
ū—	...	...	...	1	1	...	17	249
e	1	...	...	...	...	...	...	1
o	...	...		...	...	...	...	1
	675	471	184	650	726	341	721	879