Journal
OF THE
North-China Branch
OF THE
Royal Asiatic Society.

VOL. XXXIX.

1908.

Agents for the Sale of the Society's Publications:—

SHANGHAI, HONGKONG, YOKOHAMA AND SINGAPORE:
KELLY & WALSH, LIMITED.

LONDON: KEGAN PAUL, TRENCH, TRÜBNER & Co., LD.

PARIS: ERNEST LEROUX, Rue Bonaparte, 28.

LEIPZIG: O. HARRASSOWITZ.

KELLY AND WALSH, LIMITED, PRINTERS AND PUBLISHERS, SHANGHAI.

ATIC SOCIETY CHINA
SHANGHAI

Exhibition

of

Old Chinese Porcelain and Works of Art.

The attention of the members of the Society is directed to this Exhibition which it is proposed to hold during the second week of November, 1908. The Council of the Society has appointed a special Committee to have charge of the Exhibition and to arrange for the exhibits. Members who have good specimens of old Chinese porcelain, or of pottery, agate, jade, crystal, lacquer or enamelled ware, are requested to communicate with Mr. A. W. Bahr, care of Hopkins, Dunn & Company, Shanghai, from whom they may obtain copies of the Rules and Regulations concerning this Exhibition. It is desired that as many as possible who have good specimens should send them to this Exhibition.

ROYAL ASIATIC SOCIETY CHINA
SHANGHAI

Journal
OF THE
North-China Branch
OF THE
Royal Asiatic Society.

VOL. XXXIX.

1908.

Agents for the Sale of the Society's Publications:—

SHANGHAI, HONGKONG, YOKOHAMA AND SINGAPORE:
KELLY & WALSH, LIMITED.

LONDON: KEGAN PAUL, TRENCH, TRÜBNER & Co., LD.

PARIS: ERNEST LEROUX, Rue Bonaparte, 28.

LEIPZIG: O. HARRASSOWITZ.

KELLY AND WALSH, LIMITED, PRINTERS AND PUBLISHERS, SHANGHAI.

BYE-LAWS RELATING TO COMMUNICATIONS TO THE SOCIETY.

1. Every paper which it is proposed to communicate to the Society shall be forwarded to the Hon. Secretary for the approval of the Council.

2. When the Council shall have accepted a paper, they shall decide whether it shall be read before the Society and published in the Journal, or read only and not published, or published only and not read. The Council's decision shall in each case be communicated to the author after the meeting.

3. The Council may permit a paper written by a non-member to be read and, if approved, published.

4. In the absence of the author, a paper may be read by any member of the Society appointed by the Chairman or nominated by the author.

5. No paper read before the Society shall be published elsewhere than in the Journal, without the permission of the Council, or unless the Council decide against publishing it in the Journal.

6. All communications intended for publication by the Society shall be clearly written, on one side of the paper only, with proper references, and in all respects in fit condition for being at once placed in the printers' hands.

7. The authors of papers and contributors to the Journal are solely responsible for the facts stated and opinions expressed in their communications.

8. In order to insure a correct report, the Council request that each paper be accompanied by a short abstract for newspaper publication.

9. The author of any paper which the Council has decided to publish will be presented with twenty-five copies ; and he shall be permitted to have extra copies printed on making application to the Hon. Secretary at the time of forwarding the paper, and on paying the cost of such copies.

Applications for Membership, stating the Name (in full), Nationality, Profession and Address of Applicants, should be forwarded to "The Honorary Secretary, North China Branch of the Royal Asiatic Society, Shanghai." There is no qualification for Membership other than acceptance of an applicant's name by the Council. *Remittances of Subscription for Membership ($5 per annum, which entitles the Member to a complete annual set of the Journal for the year in which payment is made) should be addressed to* "The Honorary Treasurer, North China Branch of the Royal Asiatic Society, Shanghai." A Member may acquire "Life Membership" by payment of a composition fee of $50.

Editors and authors wishing to have their works reviewed in the *Journal of the North China Branch of the Royal Asiatic Society* are requested to send *two* copies (not a single one) to the Hon. Secretary of the Society, one copy being presented to the reviewer, the other remaining in the Society's Library.

It has been decided by the Council that the Society's publications shall not for the future be issued to any Member whose Subscription is one year in arrear.

It is requested that Subscriptions be sent to the Treasurer at the beginning of each year.

For information in connexion with the publishing department, Messrs. KELLY & WALSH, LIMITED, Shanghai, should be addressed.

ROYAL ASIATIC SOCIETY CHINA
SHANGHAI
上海

JOURNAL

OF THE

NORTH-CHINA BRANCH

OF THE

ROYAL ASIATIC SOCIETY

FOR THE YEAR 1908.

VOL. XXXIX.



SHANGHAI, HONGKONG, YOKOHAMA & SINGAPORE:
KELLY & WALSH, LIMITED.
LONDON:—Messrs. KEGAN PAUL, TRENCH, TRÜBNER & Co., LD.
PARIS:—M. ERNEST LEROUX, Rue Bonaparte 28.
LEIPZIG:—O. HARRASSOWITZ.

Council.

President	Sir Pelham L. Warren, K.C.M.G.
Vice-President	T. W. Kingsmill, Esq.
Hon. Secretary	John C. Ferguson, Ph.D.
Hon. Treasurer	J. West, Esq.
Hon. Librarian	Mrs. F. Ayscough.
Hon. Curator	Dr. A. Stanley.
Councillors	Dr. S. P. Barchet.
	W. E. Leveson, M.A.
	J. D. la Touche, Esq.
	Hon. Charles Denby.
	Lieut.-Col. C. D. Bruce.
Editor of the Journal	John C. Ferguson, Ph.D.

CONTENTS OF THIS VOLUME.

Edited by JOHN C. FERGUSON, Ph.D.

	PAGE.
Chinese Musical Instruments. By A. C. MOULE, B.A.	1
Notes and Queries	161
Literary Notes :—	
Japan's Beziehungen zu China	177
Lun-Heng ; Part I. The Philosophical Essays of Wang Chung ...	180
How to Identify old Chinese Porcelain	186
The History of Babylonia and Assyria	186
Peking to Paris : an Account of Prince Borghese's Journey Across two Continents in a Motor Car	186
The Trade and Administration of the Chinese Empire	187
Heiligtümer des Konfuzianismus	189
The Awakening of China	194
The Ancient History of China	198
A Sketch of Chinese History	199
Hors d'œuvre	200
In the Footsteps of Marco Polo	201
List of Members.	

A List of the Musical and other Sound-Producing Instruments of the Chinese.

By A. C. MOULE, B.A.

Trinity College, Cambridge.

The following account of the Musical Instruments of the Chinese is intended to include not only those now or formerly employed in the services of the State religion and representing the "classical" aspect of the subject, but also those in popular use in the theatres and temples, and found as musical toys at the great fairs, or in the hands of blind men, hawkers, beggars, and so forth. In so vast an empire the area of observation must necessarily be restricted,[1] and it must not be forgotten that local forms may occur differing from those here described, for in this, as in most things connected with China, what is true or untrue of one place is not necessarily so of other places. The descriptions of instruments used in the Confucian services apply for the most part to the instruments in the Temple or College of Hangchow *Fu*, some of which are said to have been made at Soochow. The worship of Confucius, itself not of very great antiquity, seems gradually to have adopted, in name at least, the majority of the instruments traditionally used in religious or social ceremony by the ancient Chinese. For other instruments, if the locality to which the particular description

[1] It has in fact been restricted to the great cities of Hangchow and Peking and to parts of the provinces of Kiangsu and Shantung.

refers is not directly stated, it will be indicated by a place name printed in italic type; and it should not be assumed that the statements made apply to other places than those which are named. Completeness cannot be claimed either for the list itself or for the account of any one of the instruments. The aim has been to make the number of instruments as complete as possible in limited time and to secure that whatever information is given shall be accurate; but I am very conscious that even this has not been achieved. Where books have been used, more or less detailed references are generally given.

The origin of Music and musical instruments in China must be extremely remote, for it seems unreasonable to doubt that the great classical instruments existed in the second millennium B.C. in possibly as perfect a form as they have to-day. But lacking the ability to examine for this purpose the civilization of ancient China from a more critical point of view, I have not thought it worth while to repeat the traditions, however much truth they may contain, of the invention of this and that instrument which may be found in several European books.

A distinction may be noticed between the ancient native instruments with well defined monosyllabic names and the comparatively modern, perhaps foreign, instruments. The names of the latter are often transliterations, or of a descriptive nature. The ancient reed and stringed instruments especially, though few in number, yet seem to be superior to the more modern in construction; and in this connexion it may be interesting to remark the different relative importance given to noisy instruments of percussion in the Confucian, and in popular, orchestras. Of the forty-four instruments which accompany the hymn to Confucius all play the tune or a part in harmony except the six scarcely

audible *Ch'ung Tu*, while even between the lines or verses only three drums and the *Chu* and *Yü* are used. But in a Taoist band of six instruments five may be untuned instruments of percussion; and in the theatre the proportion of noise to music is as four or five to one. China is like other Asiatic nations in not using mechanical appliances like keys, bellows, etc.; but is perhaps rather peculiar in having no harp or bagpipes. Mrs. T. Richard, however, reproduces a Chinese drawing of an "ancient harp" with twelve strings, constructed like the old Persian harps [Engel, p. 59]. The foreign instruments and music seem, according to Chinese authorities, to have come chiefly from or through the tribes west and north of China, while the musical systems of Persia and Arabia seem to have had but little effect on Chinese music, and the use of only a few instruments can at all probably be traced to the great intercourse which existed between those countries and China in the middle ages. The Reverend F. W. Galpin writes: "I cannot help thinking that India has supplied some instruments, specially those used with a bow. In much later times the *single beating reed* as seen in the popular *La Pa* or *Ch'un Kuan* must have come from the west. It is characteristic of Arabia and the Mohammedan countries, and is also found in India."

In the following list the name of each instrument is given first in Roman letters according to the spelling of Professor Giles' *Chinese-English Dictionary*, secondly in *Italics* according to the *Petit Dictionnaire Chinois-Français* by F. S. Couvreur, S.J., and lastly in Chinese characters.[1] The names of several instruments and especially of musical toys are often vague and are subject to local variation, and

[1] Some exceptions will be found to this statement, but it is hoped that they are not such as to cause real difficulty or confusion.

no very definite principle has been followed in the selection of one from several names to appear in capital letters at the head of an article. Names of places are, with the exception already mentioned, printed in *Roman* letters, and all other Chinese words in *Italics* and, with very few exceptions, according to the spelling of Giles' Dictionary. The French spelling of at least one name for each instrument is added out of respect for the fact that several of the most useful books on the subject are in the French language.

It may be convenient to give here the dates of the chief Dynasties referred to below :—*The Three Dynasties* B.C. 2205—255, namely *Hsia* 2205, *Shang* 1766, *Chou* 1122—255, *Han* B.C. 206—A.D. 220, *Chin* 265—419, *Sui* 589—618, *T'ang* 618—907, *Sung* 960—1278, *Yüan* (Mongol) 1264—1368, *Ming* 1368—1644, *Ch'ing* (the present Manchu Dynasty) 1644.

The books referred to are :—

BOOKS ON MUSIC AND CEREMONIES.

Lü Lü Ching I 律呂精義, six volumes, dated the first day of the year *ping shên* of *Wan Li*, *i.e.* in 1596, and written by one *Chu* 朱, a member of the Imperial family, with the titles *Tsai Yü* 載堉 and *Chêng Shih Tzŭ* 鄭世子. It is divided into the Inner Section, the first four volumes, and the Outer Section, volumes five and six. The names of sixty-eight books consulted are given besides the *Twenty-one Histories* and the *Thirteen Classics*. The first three volumes deal with the theory of music, giving the dimensions of the standard pitch-pipes, the mathematical proportions of the notes of the scale and so on. The fourth volume gives a careful account of the ancient musical instruments with very good drawings. In the copy used the fifth volume was

missing. The sixth volume treats of many subjects connected with ancient music, introducing further remarks on several of the instruments and a number of tunes to songs from the *Book of Odes*. Music and musical instruments are dealt with from a purely antiquarian point of view. The book is very highly praised by Amiot, and seems indeed to treat the subject in a scientific and unbiassed way. It seems to have had but little influence on the authorized music of the present dynasty.

References to this book, unless otherwise marked, are to the leaves of the fourth volume ; and the author is called by his title *Tsai Yü*, for the sake of conformity with Amiot.

A number of works by the same author are printed in a uniform edition with this. Those which have been looked at are chiefly occupied with the posture dances of different periods and for various services.

Wên Miao Yo Shu 文廟樂書, eight volumes, 1629. This was apparently the Music Book of the Confucian temple at Yangchow. The musical system used is nearly the same as that of the *Lü Lü Ching I*, which is often quoted. The history, measurements, scale, etc. of each instrument are given, followed by the special notation required, and the part to be played, by each, in full. The book is remarkable for clear and simple arrangement.

Yü Chih Lü Lü Chêng I 御製律呂正義, five volumes, 1714. The first two volumes deal with the scales, the third and fourth give the history, measurements, etc. of the classical instruments. The fifth volume is about European music. See Additional Note B and Wylie's *Notes on Chinese Literature* (1901) p. 120.

P'i P'a P'u 琵琶譜, three volumes, 1818. *See* IV, B. a. §§ 3 (1), below.

Wên Miao Ssŭ Tien K'ao 文廟祀典考, ten volumes, 1878. A manual of the Confucian ritual, intended apparently as a book of reference and not to be used as a service book.

Wên Miao Ting Chi P'u 文廟丁祭譜, one volume, 1878. This is the service book used at the Confucian temple at Hangchow. See Vol. XXXIII of this *Journal*, *Notes on the Ting-chi, etc.*, by the Rt. Rev. Bishop Moule.

MISCELLANEOUS WORKS.

Ch'üeh Li Tsuan Yao 闕里纂要, three volumes, 1694. This is an illustrated handbook of *Ch'üeh Li* or *Ch'ü Fu* 曲阜, the home of Confucius in Shantung. The pictures of the instruments and of the Mimes suggest that there at least the old fashions of the *Ming* dynasty lingered long after the foundation of Manchu rule.

Ch'i Hsiu Lei Kao 七修類蒿. The reminiscences and miscellaneous knowledge of a native of Hangchow named *Lang Ying* 郎瑛, who lived in the fifteenth and sixteenth centuries.

Tsêng Pu Shih Lei Fu T'ung Pien 增補事類賦統編, forty volumes, nineteenth century. A collection of quotations from poems arranged by subjects. It was first published as *Shih Lei Fu* in the *Sung* dynasty and has been often enlarged and reprinted.

Tui Hsiang Tsa Tzŭ 對相雜字, one volume. A school book containing long lists of nouns, proper names, and so forth. Each word is accompanied with a picture.

Ch'ên Chung Mêng Hsüeh T'ang Tzŭ K'ê T'u Shuo 澄衷蒙學堂字課圖說, eight volumes. An illustrated book prepared for the school founded at Shanghai by *Ch'ên Chung (Ching Chong)*. It is quoted below as *Tzŭ k'ê t'u shuo*. On music it is not necessarily a great authority.

DICTIONARIES.

Êrh Ya T'u 爾雅圖. A recent photo-lithograph reproduction of an edition of the *Êrh Ya* which was re-printed early in the nineteenth century from the illustrated edition of the *Sung* dynasty. The *Êrh Ya* is said to have been written c. B.C. 400, but the medieval illustrators fortunately made little or no attempt to "restore" the ancient musical instruments, and so probably show what the various things were like in the Sung period.

K'ang Hsi Tzŭ Tien 康熙字典, 1716, is quoted as *K'ang Hsi.*

EUROPEAN WORKS.

Mémoire sur la musique des Chinois, tant anciens que modernes; par M. Amiot, Missionaire à Pekin. 1776, forming the sixth volume of *Mémoires concernant les Chinois.* This is probably the best European work on Chinese music which exists. The author bases his work principally on the books of *Tsai Yü* and *Li Kuang Ti.* The illustrations and a great deal of the First Part (on musical instruments and the origin of Music) are taken direct from *Tsai Yü.* It is curious that Amiot's list of authorities is an exact copy of the list given by *Tsai Yü*, and excludes the *Lü Lü Ching I* and the book of *Li Kuang Ti.* The Second Part is an intricate discussion of the question whether the intervals of the scale are of different magnitudes or all the same, like those of the tempered European scale. It seems that the scale was formed of a series of twelfths which would give *unequal* intervals, but that at a very early date the octave was divided artificially into *equal* semitones. This was again forgotten at the end of the *Chou* dynasty, so that the *Han* musicians considered the transposition of tunes on instruments of fixed

pitch impossible. It is interesting to note that the Greeks used "equal temperament" in the fourth century B.C. The Persians had it in A.D. 800; and it is also found in India.

Musical Instruments in the South Kensington Museum, London, 1874, by Carl Engel. Besides the descriptive catalogue of the instruments, the book contains a history of musical instruments in general. It is quoted below as "Engel."

Chinese Music, Shanghai, 1884, by J. A. Van Aalst.

Catalogue . . du Musée Instrumental du Conservatoire Royal de Musique de Bruxelles, par Victor-Charles Mahillon. Gand 1886, 1893. It is quoted as "Brussels Catalogue" with the number of the instrument. My indebtedness to this book will be constantly apparent in the following pages.

A Paper on Chinese Music, Shanghai, ? 1899, by Mrs. Timothy Richard.

The Chinese Repository, Vol. VIII, contains an interesting article on some Chinese musical instruments by G. T. Lay.

The China Review for August 1882 contains an article on the *Shêng* by F. Warrington Eastlake.

The Journal of the North China Branch of the Royal Asiatic Society contains articles bearing on the present subject by Dr. Syles, Dr. Edkins, N. B. Dennys, G. E. Betts, and Bishop Moule.

My attention was first directed to Chinese musical instruments by my Father's Paper on the Half-yearly Sacrifice to Confucius, printed in Vol. XXXIII of this *Journal*, and my interest increased by a correspondence with the Rev. F. W. Galpin which that Paper elicited. Mr. Galpin is too well known for it to be necessary to say what an advantage I have enjoyed in having his most kind and constant help in the preparation of this list. And I have to

thank him specially for having finally taken the trouble to read through and re-arrange with many valuable annotations the whole of my manuscript. Three friends to whose keen interest and wonderful fund of information I owe very much are gone beyond the reach of earthly thanks, my sister Mary, Mr. *P'an Sung-chou* of Hangchow, and a Pekingese gentleman named *Wang* who was introduced to me by Mr. W. H. C. Weippert. To Mr. *Wang* and to Mr. Weippert himself I owe among other things all the information embodied in Additional Note D; and to Mr. *P'an*, besides countless smaller debts, great help in the preparation of Additional Note F. My original design was to give an accurate description of all the existing instruments I could find, excluding all mention of their past history or present use. The addition, almost insensibly and in a very partial and irregular manner, of some remarks on the history and uses of several instruments, as well as of a few notices of instruments no longer found, has not I hope made the work less interesting. That I have been able to make such additions at all is very largely due to the kindness of the Rev. Timothy Richard in lending me his copies of the books *Wên Miao Yo Shu* and *Lü Lü Chêng I*, of Mr. *Ting Hsiu-fu* in allowing me to use the *Wên Hsien T'ung K'ao* from his great library at Hangchow, and especially of my brother H. W. Moule who gave me fifteen volumes of *Tsai Yü's* works including the great *Lü Lü Ching I*. The addition of historical notes has turned my list to some extent into a sad record of stagnation and too often of change *and decay;* but my work, which was chiefly done in the leisure hours of a year spent at Shanghai, will be more than repaid if it succeeds in helping towards the understanding of even an insignificant detail of Chinese life or in rousing a little even of pitying interest in this great empire of the East.

CLASS I. Sonorous Substances.

Section A. Rhythmic.

1. CHU *(TCHOU)* 柷. A wooden tub with the sides sloping outwards towards the top, about two feet square, and standing on a pedestal three or four inches high. It is constructed with a square frame at the top and uprights at the corners, the sides being fitted in as panels. The frame is golden bronze coloured, three of the sides are painted green and white outside, and all the inside is black. In the fourth side, which is painted grey, is a round hole, and on the inside of each of the other sides a raised disc [*see* Plate XII].

The *Chu* is only used at State services, and at the Confucian festival[1] it stands to the north-east on the terrace in front of the Hall, with the round hole facing west. The performer stands on the east side of the instrument and strikes it with a mallet inside (on the north disc) three times before each verse of the Hymn to Confucius. The mallet, called *Chih* 止, has a small green head and a red handle. Anciently it was fixed to the bottom of the *Chu* on a pivot, and the performer reached it apparently through the hole in the side which still survives[2] although the mallet has been disconnected since the *Sung* dynasty.

[1] On the worship of Confucius, *see* Vol. XXXIII of this *Journal* :— *Notes on the Ting-chi, etc.*, by the Rt. Revd. G. E. Moule, D.D.

[2] At P'ing-yin in Shantung the *Chu* has no side hole, nor corner uprights. It is 28 inches square at the top, 23 inches at the bottom, and 17 inches high. The pedestal is 7 inches high.

I. A.

The ancient *Chu* had not the top frame or the uprights, but consisted merely of five boards of *Ch'iu*[1] wood half an inch thick, and was 24 inches square at the top, 18 inches at the bottom, and 18 inches high ; the hole was six inches in diameter, and the mallet had a head 10 inches long.—*Tsai Yü*, *f.* 77.

The form of the *Chu* is that of a grain measure ; and it is said to have been used in the worship of Heaven from primeval days as an acknowledgement of the advantages which men derive from a civilized life.—*Amiot*. See also the reference to *Tsai Yü* under No. 2 below.

2. YÜ *(IU)* 敔. The figure of a couching tiger carved in wood, about 2 feet long, and lying on a wooden pedestal. On the back of the tiger is a piece of wood with twenty-eight parallel grooves cut across the top and down either side, leaving a row of teeth, *Chü Yü* 鉏鋙, along which a bamboo stick called *Chên* 籈 (about 16 inches long, with the upper end split into twelve divisions) is rapidly drawn three times to mark the end of the music at the Confucian services. The tiger is painted yellow with red and black markings, and the pedestal red bronze and gilt. The *Yü* stands to the north-west of the Terrace in the Temple of Confucius. The sound seems to be caused largely by the rattling together of the divisions of the stick. The *Chü Yü* were formerly like the teeth of a saw and extended all along the back of the tiger. *Tsai Yü* says that the *Yü* is made of *Ch'iu* wood, and that the stick should be of the same wood 10 inches long, 1 inch wide, and 0.1 inch thick.—*f.* 78. The use of the bamboo stick dates from the *T'ang* dynasty. It is not right to hit the tiger on the head. The pedestal was originally a plain inverted box, perhaps acting as a resonator.

[1] *Catalpa Kæmpferi*, Giles s.v. 楸.

I. A. Amiot says that the attitude of the tiger shows the submission of all animals to man, and that the teeth were anciently tuned to give six whole tones[1] [*see* Plate XII].

Tsai Yü says [*f.* 76] that the *Chu* and *Yü* derive their respective uses and positions from their correspondence with the two Diagrams *Chên* 震 and *Kên* 艮; and the *Chu*, as proclaiming the beginning, typifies Music, while the *Yü*, marking a finished act, typifies ceremony. The hammer fixed inside the *Chu* is called *Chih* to signify the calm uniformity which is characteristic of Music as naturally inborn; while the *Yü* is made like a tiger to signify the variety (文) characteristic of ceremony which is artificial and external. . . . "The *Book of Changes* says '(Lî [*lü*] suggests the idea of) one treading on the tail of a tiger, which does not bite him. There will be progress and success,'[2] and so the *Yü*, shaped like a tiger, is what the ancient kings took to display a warning not to forget danger in the midst of peace."

3. (1) CH'UNG TU *(TCH'OUNG TOU)* 舂牘. A clapper formed of twelve slips of bamboo strung on a leather thong. Each slip should measure 12 inches long and 1 inch wide. They are used, tied up in a sheaf, by the

[1] On this Mr. Galpin remarks: "In its earlier form therefore it was an instrument with a distinct tonality. Wooden tongue-vibrators giving a perfect scale are found amongst many Eastern and Central African tribes." The instrument is, however, put in this Section rather than in Section B, because (i) it seems *possible* that Amiot mis-read *Tsai Yü*, who says [f. 78] that in the *Sung* and *Yüan* dynasties the *Yü* was struck *six times*, (ii) the *Yü* for at least some centuries has been *rhythmic* and not *tonal*, and (iii) it is from a Chinese point of view inseparably connected with the *Chu*.

[2] Legge's note to this, in *Sacred Books of the East*, says: "The coming scatheless out of such danger further suggests the idea of 'progress and success' in the course which King Wăn [*Wên*] had in his mind. And according to Appendix VI, that course was 'propriety,' the observance of all the rules of courtesy [? typified by the tiger]. On these, as so many stepping-stones, one may tread safely amid scenes of disorder and peril."

singers at the State services, being held in the right hand and struck against the palm of the left hand to mark the time. The words to be sung should be engraved on the slips. According to Van Aalst [p. 74] the clappers now used at the Confucian service are called *Shou Pan* 手版; and are made of wood, each piece being about 16 inches long, 2 inches wide at the upper, and 2.5 inches at the lower end. It seems to be uncertain whether wood was anciently used as well as bamboo or not. I. A.

The thing is interesting as preserving the form of book which was used before the invention of paper; but the use in music may also be very ancient, as it is perhaps mentioned in the *Chou Li*, c. B.C. 1000. Amiot says that the *Ch'ung Tu* holds a distinguished place amongst the representative instruments less because it produces the "wood sound" than because it recalls the invention of writing; and that it is used at the Sacrifice to Heaven, when thanks are given for the gift of writing as well as for all other benefits.

Tsai Yü, whose description is given above, does not seem to allude to the very different thing given in the *Chou Li* and in the *Wên Hsien T'ung K'ao* [*v.* Additional Note F] under the name *Ch'ung Tu*. This was a bamboo tube about 7 feet long and 5 or 6 inches thick, which was struck against the ground to beat time. Other varieties called *Ying* 應, and *Ya* 雅, seem to have been more like the *Chu*.

3. (2) A CLAPPER used at Tientsin. It is formed of two pieces of wood or split bamboo, each about 6 inches long and 2 or 3 inches wide. A small stick is fixed across the middle of each piece as a handle, and the ends of these handles are joined together by a hinge so that the two pieces of wood can be clapped against each other. It is used, not very commonly, by men who have nothing else in their hands

I. A. as they walk along the street. The man generally raises the clapper above his head and gives one loud clap at about every tenth step. What inquiries I was able to make only received the answer that the thing was a toy, but it seems possible that it has some further meaning or use than the mere occupation of idle hands.

3. (3) CHIEN PAN (*KIEN PAN*) 簡板. Two slips of bamboo, each measuring $30\frac{3}{4}$ inches long and $\frac{3}{4}$ inch wide, and having $4\frac{3}{4}$ inches at the top bent back. Much larger specimens may also be seen, and they are sometimes ornamented with notches cut along their edges. The *Chien Pan* are held up in the left hand and tapped slowly against each other by a movement of the fingers. They are used with the *Yü Ku* [II. A. 3.] principally by blind men, and are said to belong to the country north of the Yang-tze where they are often met with, though they may also be seen at Shanghai. Those measured were made at Hangchow, but the *Yü Ku* and *Chien Pan* are very rarely used there. In Shantung the long slips of bamboo are commonly replaced by two pieces of hard wood a foot or less in length.

Two small oval plates of iron joined together with string are sometimes used like the *Chien Pan* with a drum to accompany songs and recitations.

3. (4) A CLAPPER made of a piece of red-wood about 8 inches long, 1 inch wide, and $\frac{1}{2}$ inch thick. The lower side is cut away for about two-thirds of the length, the piece cut off being joined on again with a brass hinge so that it can be clapped against the upper part. At the end of the upper surface is a thin brass plate pierced by two brass pins with polygonal heads; and on each pin is hung a small disc of brass with five or six holes in it. This instrument was seen in the City Temple at Shanghai, used to accompany

songs in a dramatic recitation. In his right hand the performer held a thick piece of bamboo with which he would strike across the end of the clapper at frequent intervals. I. A.

4. (1) A RATTLE, similar to the above, said to be used by singing girls north of the River. It is formed seemingly of two *separate* pieces of wood or bamboo which are held in the left hand ; and the elaborate brass discs are replaced by two cash. The piece of bamboo held in the right hand has teeth along the edge like a saw, and the vibration caused by drawing it across the edges of the other pieces makes the cash dance and jingle.

4. (2) A *SISTRUM* or rattle said to be used by singing girls north of the River. It is described as a bamboo pipe two or three feet long. Two narrow slits are cut in the pipe, extending nearly its whole length, and on opposite sides. Four or five bamboo pins are put through the pipe at right angles to the slits, and on each pin, inside the pipe, are hung two cash. The instrument is held in both hands, and is struck rapidly against the shoulders and other parts of the body keeping time with the song. It may occasionally be seen at Shanghai.

4. (3) LIEN HUA LO [or LAO] (*LIEN HOUA LO*) 蓮花樂. A rattle formed of four slips of bamboo, each about 4 inches long and 1 inch wide, with a fifth piece about 7 inches long, joined together by a tape which passes through two holes near the top of each slip. Between each of the smaller slips of bamboo eight very small brass cash are threaded on the tape, four on either side. The longer piece has the top pointed and two large notches below the point on either side, and below these the holes for the tape. This piece is held in the right hand and is shaken so as to make the four smaller pieces clap against each other. Rattles of different form are said to be also called *Lien Hua Lao*. One

1. A. seen at Soochow had the long piece longer and the shorter pieces replaced by one quite short and broad piece of bamboo or wood. The specimen described above was used by a beggar at Shanghai, and smaller ones have been seen in Hangchow, but the rattle is said to come properly from further north and it has been met with at Chi ning and Chou ts'un in Shantung. The performer holds in his left hand bamboo castanets [1. A. 5.].

Lien Hua Lao is said to be the refrain of the *Lotus Song* which this instrument properly accompanies.

4. (4) NAO CHIN CHIEH *(NAO KIN KIAI)* 鬧金街. This consists of four or five oblong iron plates joined loosely together by two strings (tied to holes in the two upper corners of each plate) so that they overlap each other when the strings are stretched out. It is the sign of itinerant knifegrinders at *Shanghai*, Hangchow, and occasionally at Peking. The man holds one piece of iron in his hand letting the others hang loose and swing against each other as he walks; and at frequent intervals he shakes the instrument so that the plates clap against each other in turn three or four times, and then brings them up into his hand with a jerk. The first piece, which is held in the hand, is sometimes made of wood or bamboo.

4. (5) CH'UAN LING *(TCH'OUEN LING)* 串鈴. A metal ring made to produce a sound by being twirled rapidly on a stick. It is one of the signs used by itinerant physicians. The professional skill of the man is said to be judged by the height at which he is able to spin his ring, very little being thought of one who cannot keep it at least level with the top of his head. A specimen seen at *Shanghai* was a hollow ring containing small balls and with a slit round the outside, and it was twirled on the man's finger instead of on a stick.

Some doctors make rattles by putting loose iron discs on to the handles of the files which they use for reducing their drugs to powder. Such rattles may be seen in the City Temple at *Shanghai*. The file is a heavy one, with one end made thin to form a handle; on this are two thin convex discs about 3 inches in diameter, with a flat one between them thicker and rather smaller. The end of the handle is split and the two parts bent back into rings so that the discs cannot fall off. Others again put similar discs on to the middle prong of a sort of trident to form a rattle. I. A.

4. (6) Corn-cutters [修脚] at *Hangchow* and elsewhere put two or three brass rings on to the axis of the little leather-seated campstool which they carry with them, and use that as a rattle.

4. (7) SHOU CH'IU *(CHEOU K'IOU)* 手球. A pair of hollow iron balls without any opening, each containing a smaller iron ball which makes a tinkling sound when it is moved. The diameter is about $1\frac{3}{4}$ inch. Pao-Ting, the capital of Chih-Li Province, is noted for the manufacture of these balls, which are twisted about in the hand for the primary purpose of keeping the fingers supple. They may constantly be seen at *Peking*, but are not common about Shanghai.

4. (8) YEN MA *(IEN MA)* 簷馬, T'IEH MA *(T'IE MA)* 鐵馬, or YÜ K'O *(IU K'O)* 玉珂. These are described as being a number of small plates of metal, stone, or commonly now of glass, hung by silken threads to a wire hoop which is hung under the eaves of a summer-house. The plates make a tinkling and ringing sound as they touch one another moving in the breeze. They are also hung from the lintels of doors or windows. *Yü K'o* is an ancient literary name. They are mentioned as early as the eighth century.—*K'ang Hsi* s.v. 鐸.

I. A.

4. (9) Tinkers have a number of oblong brass plates strung on two parallel pieces of wire, which are fixed to their apparatus so that the spring of the yoke by which it is carried makes the plates clash against each other. The rhythmic jingle thus caused is a characteristic sound at *Hangchow*, Shanghai and elsewhere. The device is [?] not used in the north.

Certain pedlars have a small iron plate which they tap with an iron bar to announce their presence. Others will clink two of their tools together for the same purpose.

4. (10) At the great annual fair at T'ai An in Shantung vast quantities of toy rattles are sold. They are generally either hollow clay figures of men or animals, or closed wooden cylinders with a handle fixed to one end. A third kind is made of two small tin plates fitted together so as to leave a small space between their edges, with a tin handle fixed through the centre. All three kinds enclose a few loose balls—probably small pellets of clay or hard dry seeds.

5. P'AI PAN (*P'E PAN*) 拍板. Castanets formed of three pieces of wood tied loosely together. Red-wood or box seem to be the woods most commonly used. The measurements at Shanghai are: length, 10.5 inches; width, near either end, 2.5 inches, in the middle, 2 inches. The outer surface of each of the two outer pieces is slightly convex. They are used in the theatre, being held in the left hand by the man who beats the *Pang Ku* [II. A. 2], and also at other musical performances, at funerals, and by beggars. The performer holds one piece of wood firmly in his hand so that a slight turn of his wrist brings it against the other two pieces which hang loosely over his thumb.

I. A.

Tsai Yü [*f.* 50] mentions the *P'ai Pan*, but from his drawing and description elsewhere[1] the thing seems in his day to have consisted of six pieces of wood. And each piece was broader at one end than at the other, and thinner at the edges than in the middle, and near the narrow end had two holes for the string. Castanets with six pieces of wood seem to be still used in some places; and there is also a small variety of which each piece is about 3.75 inches long.—*Brussels Cat*: 651, 652. At Peking, besides the common kind, there are smaller castanets made of three straight flat slips of wood 7 inches long and 1.5 inch wide; and also larger ones 16 inches long and 2.5 inches wide, consisting either of three pieces or of eight thin pieces with two thicker pieces at one side tied rather tightly with yellow silk cord. [*see* Plate XII.]

The fondness of the Chinese for audible time-beating is very characteristic, and from these common castanets is derived, perhaps, one name for musical time—*Pan yen* 板眼. *Pan* stands for a 'bar', and also for the accented beat in a bar. Time is described as 'one *pan* one *yen*' or 'one *pan* three *yen*', quick time is called *chin pan* 緊板, slow time *man pan* 慢板, and so forth.

Castanets made of two thick pieces of split bamboo joined together by a string are seen in strolling bands at Shanghai, and are used by certain pedlars and by beggars.

6. WOOD-DRUMS. (1) PANG TZU *(PANG TZEU)* 梆子. This consists of two pieces of red-wood measuring, at Shanghai, about 7.25 inches in length. One piece is 1.25 inch wide and 1 inch thick, flat below and rounded above. This is held over the hollow palm of the left hand and is struck with the second piece, which is round—

[1] *Ling Hsing hsiao wu p'u* 靈星小舞譜 f. 5.

1. A. measuring 0.75 to 0.875 inch in diameter. For the accompaniment of certain tunes both in the theatre and at private performances, the *Pang tzŭ* takes the place of the *Pang Ku* and *P'ai Pan*, and is used with the smaller *Ti* [III. A. b.] and *Hu Hu* [IV. B. c. §§]. The tunes in question are known as *Pang tzŭ Tiao*.

A similar thing, with the larger piece of wood replaced by a piece of split bamboo, is used by hawkers of sweetmeats.

6. (2) A short stick held in the left hand and struck on the end with a slip of wood about 2 inches wide and 0.25 inch thick. This has been seen used by a fortune-teller at Chi-ning-chow in Shantung. A beggar in the same town was observed with a similar instrument, only the stick was heavier and the slip of wood was shaped something like a spade.

6. (3) HSIANG CH'IH *(HIANG TCH'EU)* 響尺. This is a piece of red-wood about 2 feet long with a cord passed through a hole in the middle of it. It is struck with a short stick. A pair precedes the coffin at funerals in *Peking*. The gentle irregular tapping of the *Hsiang Ch'ih* has a most weird effect.

At funerals in Hangchow a large slip of wood or bamboo is carried in the procession and beaten with a regular rapid stroke.

6. (4) PANG *(PANG)* 梆. A tube of bamboo 15 to 25 inches long and 3 or 4 inches thick. It is closed at each end by a knot of the bamboo, and has a slit cut in one side extending nearly the whole length. It is beaten with a wooden stick. It is used by night-watchmen at *Hangchow* and [?] many other places, and also by itinerant cooks who hang it to their apparatus so that they can beat it as they walk. It does not seem to be common north of the Yang-tze.

6. (5) PANG *(PANG)* 梆 or T'O *(T'OUO)* 柝. A wood-drum used by watchmen in *Peking* and elsewhere. It is a piece of *ch'iu* wood 9.75 inches long, 4.25 inches high, 1.875 inch thick at the bottom and 0.875 inch at the top—the sides slightly convex. In the top is a slit about 7.5 inches long and 0.5 inch wide from which the block of wood is hollowed out to a depth of about 3.5 inches, the sides being left about 0.2 and 0.25 inch thick respectively. The thing is very roughly made, and the measurements of different specimens vary considerably. One much smaller and a little different in arrangement is described in the Brussels Catalogue, 649. Specimens about 30 inches long are used in the guard rooms at the Gates of Peking. A small one may be seen at Shanghai used by a street cook, and the instrument is not unknown at Soochow. A long narrow specimen has been observed at Chou-ts'un, but elsewhere in Shantung the variety with a handle seems to be preferred. A straight piece of hardwood is used for the stick. [*see* Plate XII.] I. A.

6. (6) PANG 梆. An instrument differing from the above chiefly in having a handle fastened into the under side. It is very common in western Shantung where it is called *Pang-tzŭ* and is the sign of vendors of bean-curd. It is often made of mulberry wood. A variety seen in Peking had the handle fixed to the thinner edge and was shaped and hollowed[1] just like the *Mu Yü* [6. (8) below], except that the ends were cut off straight instead of being rounded, and there was no carving.

6. (7) YÜ PANG *(IU PANG)* 魚 梆. A piece of wood carved to represent a fish, with a slit along the back from which the body is hollowed out. The mouth is also

[1] That is the slit is carried the whole length of the instrument and returned down the ends, finishing about the middle of either end in a round hole through which the hollowing is chiefly done.

I. A. hollow, a ball of wood being left inside which is loose but too large to come out. It is often found hung horizontally in the cloisters of Buddhist monasteries—for instance, at the *Ling Yin Ssŭ* near Hangchow. At this monastery it is said to be struck before the *Tien tzŭ* [I. B. I (2).] to announce the meal hours. At the *Chao Ch'ing Lŭ Ssŭ* at Hangchow the fish [about 7 feet long] and the iron *Tien tzŭ* hang side by side in the cloister outside the refectory. A small specimen in a Taoist temple near Shanghai measures about 3 feet in length. The *Yü Pang* is also used in the offices of certain officials. Specimens differing slightly in form from those in the temples may be seen outside the guard rooms at city gates.

This instrument is said to be the true *Wooden Fish*, the thing now so called representing perhaps only the head of a fish. In general appearance it is not unlike the *Teponaztli* of the Aztecs [*Engel* p. 77], but it is more simple than that in construction.

6. (8) MU YÜ *(MOU IU)* 木魚. The Wooden Fish. This is a block of camphor wood, wedge-shaped and partly hollow, and with the thick part rounded on the outside. The thin edge is ornamented with carving, and in the middle of it is a loose ball in a cavity from which it cannot fall out. The whole is usually painted scarlet with the carved work gilded. It is struck with a heavy wooden stick with a pointed knob. The thing is laid on a special stand, or on a cushion on a table ; or when small it is carried in the hand ; but it is rarely hung up. The width varies from 1 inch to about 3 feet. It is used constantly by Taoist and Buddhist priests at services both in the Temples and in private houses, and when they are collecting alms ; and the small sizes are used also by pilgrims. The fish, with no eyelids, is a symbol of wakeful attention, and so the wooden fish is used at prayers. A fish

of *T'ung* wood is mentioned by *Huai Nan Tzŭ*, a famous philosopher of the second century B. C., as used when praying for rain in the Autumn. [*see* Plates VII, fig. 1, and XII.] I. A.

6. (9) AO YÜ (*NGAO IU*) 鰲魚. An instrument only distinguished from the last by being wider in proportion to its length and thickness. Very large or very small specimens are rarely seen at Hangchow or Shanghai; the ordinary width is about 10 or 12 inches. It is specially used by Taoists. The *Ao* is a "certain sea-monster said to carry the *P'éng Lai* mountain on its back; this mountain is the abode of the *Hsien*, *Genii*. The *Ao* sustains the pillars of heaven. *Ao T'ou*, the *Ao's* head, is an ornament on the outside of the roofs of Chinese temples. *Tu chan Ao T'ou* [to stand alone on the *Ao's* head]—to attain the highest degree of literary rank" [Morrison's Dictionary s.v. Ngaou].

The making of Wooden Fish is a separate craft, and the shops where they are made and sold contain, as a rule, very little else.

6. (10) HSÜ PAN (*SIU PAN*) 序板. A board measuring about 30 inches by 18 inches and 2 inches thick. One hangs in the cloisters of the *Ling Yin* Monastery near Hangchow, and is said to be used as a curfew—being struck about eight o'clock in the evening—and also to summon the monks to extraordinary meetings. The two upper corners of the board are cut off. It is hung by a cord passed through a hole near the upper edge.

7. HUAN T'OU (*HOUAN T'EOU*) 喚頭. An instrument used by itinerant barbers at Peking and elsewhere. It consists of two curved claws of iron, joined together at their thick ends, with the points just touching each other. A short bar of iron is put between the claws and pulled

I. A. rapidly out between their points, causing them to vibrate violently and produce a loud ringing sound. The length is about 13 inches. [*see* Plate XII.]

8. (1) PO (*POUO*) 鈸. Brass cymbals joined together by a long string put through a hole in the centre of each. The size varies considerably. They are perhaps universally used in theatres and by priests, as well as at the performances which take place in private houses at the New Year. Large cymbals are used by the priests of the great Lama temple at Peking [III. C. 2 (4)]. A pair about 24 inches in diameter and producing an astonishingly loud sound, have been seen attached to the *Lo-Ku-T'ing* [II. A. 2 (2)] at *Shanghai*. [*see* Plate VII, fig. 2.]

There seems to be some uncertainty about the names used to distinguish the different varieties. At *Hangchow* the larger ones are said to be called *Nao Po* 鐃鈸 or *Ta Po* 大鈸, the smaller, *Ch'a Po* 岔鈸 [at Peking, *Hsiao Ch'a êrh*]. Others asy that *Nao* are small cymbals formed of simple convex plates without the flat rim of the *Po*. At a shop in Peking the larger were called *Ta Ch'a*, the smaller *Nao*. *Nao* seems also to mean a kind of bell used in the army, and to be used for brass instruments as opposed to drums—[Morrison s.v.]. Small toy cymbals, called at Hangchow *P'in p'in ch'a*, are very common.

Dennys says that "the smaller kinds were invented by *Mu Shih-so*, in the after *T'ang* dynasty [A.D. 923—936]. The larger sort were first brought from India"; and elsewhere that but slight mention is made of gongs and cymbals by the old writers.

It is said that at Soochow cymbals are made to 'fly', meaning perhaps some trick of throwing them up so that they clash in the air. Cymbals so used are called *Fei Po* 飛鈸.

8. (2) HSING ÊRH (*HING EUL*) 星兒. A pair of hemispherical or conical bells without tongues, struck against each other. Each has a hole in the centre through which a string is passed. They are said to be used by priests. They are not common about Shanghai, but may be seen at Hangchow and at Peking. A pair at Peking, 2½ inches in diameter, were shaped more like cymbals, but made of thicker metal. They are called also *P'éng Chung* 捧鐘. The Indian *Munjeera* [Engel p. 171] seems to be the same instrument. [*see* Plate XII.] I. B.

9. A toy very common at Hangchow. It is formed of a cardboard body like a deep pill box. A short string attached to a little stick passes through a hole in the bottom of the box and is kept from slipping out by being tied to a cross-bar rather shorter than the diameter of the box. When the box is twirled round the stick it also revolves on the string and the friction of the cross-bar inside produces a very loud harsh noise.

Section B. Tonal.

1. (1) T'IEH PAN (*T'IE PAN*) 鐵板, or T'IEH P'AI 鐵牌. A piece of iron about 1 foot long and 2 inches wide, thicker and broader in the middle than at the ends and slightly curved both in its length and breadth. It is used by blind fortunetellers, who give it four or five rapid strokes with a short iron bar, which they then allow to lie loosely against the end of the instrument so that the vibration makes it rattle. It will produce two different notes. It may be seen at Hangchow, *Shanghai* and elsewhere.

1. (2) TIEN TZŬ (*TIEN TZEU*) 點子. A gong of elaborate ornamental outline cast of iron or brass and hung in a wooden frame. It is seen at city gates and in temples, and also at *Yamên* gates, where it is struck when the magistrate

I. B. passes in or out. An iron one in a temple near Peking has a date of the sixteenth century. A good modern brass gong, about 4 feet in diameter, hangs near the refectory at the *Ling Yin* Monastery and is used to call the monks to meals. The size varies from about 1 to 4 feet in width or diameter. The shape is difficult to describe. The whole would generally fit, roughly, into a circle. In the upper half there are two deep indentations leaving between them a sort of peninsula, which forms the head [generally foliated] by which the gong is hung. The remainder of the outline [more than a semicircle] is more or less indented or foliated in the manner of the conventional Chinese representation of a cloud. The surface of the gong has generally some ornament and an inscription, both in relief.[1]

Each watch of the night [*kêng*] is divided into five *tien*. Soldiers on guard are supposed to sound the watches on a drum, and the *tien* on a *Tien tzŭ*.

1. (3) LO (*LO*) 鑼. A circular brass gong. The larger specimens used in processions are sometimes made like a plate with the outer edge of the rim turned over, others are merely a slightly convex disc with the edges turned over. It is used in the processions of Mandarins and at funerals, and for various domestic purposes, as well as by watchmen and pedlars, and on the stage. In a procession there are usually a pair of the largest size each hung to the end of a small beam which the performer puts on his shoulder with a couple of bricks tied to the other end to counterbalance the gong. The surface of the large gongs is often polished in one or two concentric zones, the intervening spaces being left dull. The diameter varies from a few inches to 2 feet or more. There is a variety with a deep depression in the centre, and the two kinds are said to be distinguished as *yin* and *yang*, but this distinction is at least not universally known. Gongs of this sort are beaten with a wooden stick with a head of plaited

[1] See *Chinese Art* vol. I. fig. 63.

string or rags, sometimes covered with cloth or leather. Their use is perhaps universal. The best gongs are said to be made at Soochow. The metal is called *hsiang t'ung* 響銅, *sounding brass*, and is said to be composed of copper and zinc with perhaps five per cent of tin. The ordinary gongs are said, at Hangchow, to be hammered when the metal is red hot, and not cast as has been sometimes stated. [*see* Plate VII, fig. 4.] I. B.

1. (4) TANG TZŬ (*TANG TZEU*) 鐺子. A flat brass gong about 1 foot in diameter, with the rim 2 inches wide turned over at right angles. It is hung to the roof of the *Lo ku t'ing* [*see* II. A. 2 (2)] at *Shanghai*, where the name seems to be doubtful. At Hangchow it is called *Tang tang tzŭ*, and is said to be invariably used at Buddhist services. Taoist priests use it also, beating it more rapidly than the Buddhists do. The name *Tang tzŭ* is applied to smaller gongs of this shape used in processions at Peking, and also to a slightly different gong there, which is said to be used by priests and is hung from an horizontal arm fixed into an upright, which the performer holds in his hand. Both upright and arm are usually turned, and painted red; the gong is attached to the former by one and to the latter by two strings.

1. (5) CHIN KU (*KIN KOU*) 金鼓. A circular brass gong about 14 inches in diameter, with the rim curved over. There is a raised boss in the centre and a depression carried round near the edge. The sound has very little ring in it. At *Hangchow* it is called *Tang Lo*. It is said to accompany the bride's sedan in wedding processions. At Peking it is called *T'ung Ku* 銅鼓. A smaller gong of something the same pattern is used in processions at Peking and called *Tien êrh* 點兒. [*see* Plate VII, fig. 3.]

1. (6) PAO CHŪN CHIH (*PAO KIUN TCHEU*) 報君知. "To let gentlemen know." A circular brass gong, 4 to 6 inches in diameter and nearly flat. It is hung

I. B. by two strings to a light bar, to the middle of which is fastened a small wooden hammer. It is used at *Hangchow* and elsewhere by blind men when walking along the streets. It is rarely seen at Peking or at Shanghai. The gong used for this purpose in Shantung, and called *Hsüan tzŭ*, is like a cymbal, with a raised boss at the centre. A larger flat gong, hung and struck in the same way, is used at Soochow by pedlars. [*see* Plate VII, fig. 5.]

1. (7) TANG LO (*TANG LO*) 鐺鑼. A brass gong about 8 inches in diameter. The surface is flat, the edges turned up and finished with a narrow flat rim. It is fastened at three points to a wire ring which is fixed into a wooden upright with a broad base. It is used, standing on a table or held in the left hand, by Buddhist and Taoist priests, and is struck with a small wooden or bamboo hammer.

1. (8) LING TZŬ (*LING TZEU*) 鈴子. The *Peking* name for a pedlar's gong[1] similar to, but usually smaller than, the above. The gong is hung by three or four strings in a wire ring which is fixed to the end of a wooden handle. To the ring one or two beads [or hard pads of cloth] are hung by a leather lace and horn ring, so arranged as to hit the middle of the gong when the instrument is twirled. It is used by sellers of thread at Peking and elsewhere. The wire ring is larger in proportion to the gong at Peking than in other places.

At Hangchow a similar gong, 4 or 5 inches in diameter, with the beads tied to holes in its edge, is attached directly to the wooden handle instead of being hung in a ring.

At Peking itinerant menders of crockery hang a small gong to their apparatus, and on either side of the gong a small iron hammer with brass head is hung by a chain from a

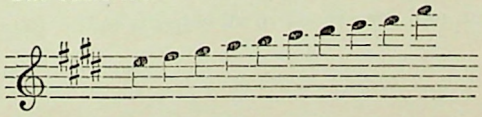
[1] Called *Tang* 鐺 in *Tui hsiang tsa tzŭ*.

sort of brass outrigger, so as to hit the gong as it swings with the man's walk. This arrangement is also seen in other parts of Chih li and in Shantung. I. B.

1. (9) T'I TANG (*T'I TANG*) 提鐺. A brass gong shaped like a shallow bowl, about $4\frac{1}{2}$ inches in diameter and $1\frac{3}{4}$ inches deep. The metal is much thicker than that of most other gongs. It is carried by a loop of string passed through two small holes in the rim, and is struck with a slip of wood about 7 inches long and 2 inches wide called *Lo pan* 鑼板. It is used sometimes in funeral processions in *Shanghai* [II. A. 2. (2)] where it is played by one of a band of small boys, and in Peking ; and its pathetic note is also the well known sign of sweetmeat sellers from north of the river. The name is not certain.

1. (10) HSIANG PAN (*HIANG PAN*) 響板. A thick oblong plate of brass about 16 inches long and 10 inches high with the two top corners cut off and with a string loop attached to a hole [or two holes] near the upper edge. It is struck with a long stick. It has been seen in use [? by some pedlar] in the streets at *Hangchow*, but is said, at the shops there, to be used by Buddhist priests.

1. (11) YÜN LO (*IUN LO*) 韻鑼. A vertical wooden frame standing on a carved base. The framework is so constructed as to form ten square spaces arranged in three vertical rows, two with three squares each, and the middle row containing four squares. In each space is hung a circular plate. The ten plates have all the same diameter, but vary in thickness so that they give different notes. The plates are struck with a light hammer with an ivory head. The instrument is said to be chiefly used by Buddhist priests, and also by the bands which give performances in private houses. The scale is :



I. B. The total height is about 30 inches, the width 18 inches, and the diameter of each plate 3.74 inches.

The above description is taken chiefly from the Brussels Catalogue, 661. M. Mahillon adds the statement that the number of vibrations of plates of the same substance and shape varies as the thickness of the plates and in inverse ratio to their surface. The same rules seem to apply to bells also; and the application of the two rules together produces the rule that the vibrations of [similar] bells vary inversely as the cube roots of their weights [Brussels Cat. 667].

The *Yün Lo* is very common at Peking where it is used in processions; but is rarely seen about Shanghai.

2. (1) T'Ê CH'ING (*T'E K'ING*) 特磬. A slab of sonorous stone. It is used at the Confucian Services, hanging at the west side of the terrace opposite to the *Po Chung*. The frame in which it hangs is like that of the *Po Chung* except that it is supported on the backs of white ducks instead of tigers. It is struck at the close of each line of the Hymn to Confucius, and like the *Po Chung* is tuned to the key note appropriate to the season. The one used at *Hangchow* for the Spring service and tuned to *Chia chung* 夾鐘 is shown at Plate I, fig. 1. The average thickness is 17.5 sixteenths of an inch.

The stone is of a blackish colour with white veins. *Wén Miao Yo Shu* does not give this instrument, so that it possibly was not used in the *Ming Dynasty*.

2. (2) PIEN CH'ING (*PIEN K'ING*) 編磬. A set of sixteen stones of the same shape as the above. They stand in the Confucian temple at the front of the terrace and to the west, and correspond in all respects to the *Pien Chung*.

The *Pien Chung* and *Pien Ch'ing* both play the tune at the Confucian Service, but the bell is struck at the beginning of each long note and the *Ch'ing* at the end. I. B.

The set at *Hangchow* are not, as a fact, in tune with the bells. The stones are all of the same superficial size but differ in thickness. The thickness of each piece [in sixteenths of an inch] at a given angle is shown below :—

Note.	Thickness.	Note.	Thickness.	Note.	Thickness.	Note.	Thickness.
A sharp	10	D	14	F sharp	15.5	A sharp	20
B	11	D sharp	14.5	G	16	B	22
C	12	E	14	G sharp	17	C	21
C sharp	15	F	16	A	22	C sharp	26

The thickness of each piece is intended to be uniform but they have all been rubbed down in parts in the process of being tuned. The sides of the stones are decorated with gilt clouds and dragons, and on the edges of each are the date [at Hangchow, 1870], the name of the place and the note, all in gilt letters. [Plates I, fig. 1, a. and XII.]

The present system of tuning the *Ch'ing* by their thickness alone dates from the *Sung* Dynasty ; *Tsai Yü's* rule for both bells and *Ch'ing* is to take the length of the pipe for any given note of the scale as the unit of measurement in making the bell or *Ch'ing* of the same note; the *nominal* measurements of every piece are thus the same, but 'inch,' '*fên*,' etc. mean the 10th, or 100th, part of the length of the pipe giving the note in question. He supports his view that this was the ancient method by the fact that a set of *Chou* Dynasty *Ch'ing* discovered in Shansi at the end of the twelfth century varied in size from 5 to 30 inches [f. 62]. Plate I, fig. 2 shows the ancient *Huang-chung Ch'ing* after *Tsai Yü*. *Tsai Yü* does not give the shape of the *Ming* Dynasty *Ch'ing*; *Wén Miao Yo Shu* shows them rectangular, but a drawing of the kind

I. B. cannot be taken as a proof. The illustrated *Êrh Ya* shows the single *Ch'ing* of a shape which is fairly common in curiosity shops, with the two arms equal and the lower angles rounded off. A specimen of uncertain date is shown at Plate I, fig. 3. It was discovered at Shao Hsing in 1899 and is now built into a wall there. It is said to be a sham. The use of sham or dummy *Ch'ing* is mentioned by *Tsai Yü* who says that *T'ai Hu* stone—a dark blue lime-stone with white veins—was commonly employed for the purpose. The proper stone to use then, as now, was a blackish stone with thin white veins obtained at Ling-Pi (靈 壁) in An Hui. Various kinds of jade were anciently used to make the *Ch'ing*. Amiot has a long article on sonorous stone. He says that true jade is agate, and mentions the allusion to metallic sounding stone in Pliny. The Aztecs had instruments made of a very resonant stone, but they were quite unlike the Chinese in shape [Engel p. 81].

Pieces of sonorous stone are also cut into various fantastic shapes. They are used as ornaments or curiosities and not in musical performances. One procured at Hangchow was in the shape of a narrow leaf about one foot long. A second from the same place was carved to represent clouds and would be called *Yün Pan* 雲板. It was about 18 inches high and 17 inches wide. There were five deep incisions in its edges, and the divisions so formed gave notes of different pitch. The stone is reddish brown and looks like coarse-grained wood. Others are made of half-transparent green or white 'jade,' and of other stones. They differ from the proper *Ch'ing*, among other points, in often having the surface of the stone more or less carved. There seems to be no general name for these ornamental stones.

Good specimens of sonorous stone exist at Chü-fu, the home of Confucius in Shantung. They are not musical

instruments, but are built into a balustrade or put to other uses as ordinary stones. These stones are a kind of lime-stone and come from a quarry not far from the city. I. B.

The earliest mention of stone gongs by a European writer is perhaps in Trigault's *De Christiana Expeditione* [p. 369], in what may be Ricci's own account of the Confucian orchestra as he saw it at Nankin at the close of the sixteenth century :—ij . . . ad pulsanda quilibet instrumenta se accinxerunt : è quibus erant ex ære campano tintinnabula, pelues, alia è saxo, è pelle quædam velut tympana, è fidibus nonnulla, tibiæ inflabantur, & organa quædam, in quæ ventus non follibus, sed ore insufflabatur : quædam alia brutorum figuram referebant, & bacillis in eorum dentes adactis, ex inani ventre sonum reddebant. hæc simul omnia pulsabantur, eo concentu, quem fingere sibi quisq; potest.

3. (1) CH'ING (*K'ING*) 磬. A brass bowl which at Buddhist services sometimes stands on a cushion on a table in front of the principal shrine. It is struck with a straight round stick. A small specimen at Hangchow measures about 7.5 inches in diameter and 3.25 inches deep; and the metal is 0.125 inch or more thick. They are perhaps generally deeper than this in proportion, and 10 or 12 inches in diameter. Cast iron or brass *Ch'ing* of various sizes with inscriptions and ornament in high relief are also common. The small plain variety is said to be hammered and not cast. The *Ch'ing* is often seen in Taoist temples also; there is a large one, for instance, in the Tai Miao at T'ai An in Shantung.

A fine specimen, of brass or white copper, about 30 inches in diameter covered with inscription and ornament, may be seen at the *Chao Ch'ing* monastery at Hangchow.

I. B. It stands to the east close in front of the chief shrine of the temporary Large Hall. The stick is about 1 foot long and perhaps 2 inches thick; the handle, which is thinner, having red string plaited round it. This large monastery, one of the most flourishing about Hangchow, may perhaps be taken as a typical instance of a Buddhist establishment. East of the shrine is a *Wooden Fish*, about 30 inches wide, on a square wooden stand. The two heavy sticks [each about 3 feet long] with which it is beaten are placed in two hollow bamboos tied to the front of the stand. Before the shrine are twelve tables on which are laid vestments, incense and other things wanted for the services. On three of these tables [along the front of the Hall] are musical instruments:—On the first, a pair of cymbals and two small *Wooden Fish* of different sizes; on the second, a small *Ch'ing* of beaten brass, a *Yin Ch'ing* and a gong [*Tang Lo* I. B. 1. (7)]—the last with a very light springy bamboo hammer, the head of which is formed by leaving part of the bamboo thick while the rest is cut away very thin; and on the third table a hand drum [II. A. 5. (1)]. To the east of this last table stands a large drum [*T'ang Ku* II. A. 6.] over which is hung on a curved piece of wood a small plain brass bell. High up in the south-west corner of the Hall is a yet larger drum lying on its side in a wooden chamber, and in a similar situation, in the south-east, hangs a bell. In the great Hall at the back, built for a famous bronze statue of Buddha, is another large *T'ang Ku*; and high under the eaves hangs a small bell. In the cloister close by lies an old cracked bell of rather unusual shape and ornament. It is about 4 feet 6 inches high and 3 feet in diameter, and the metal is 4 inches thick at the mouth. Wind-bells are hung from the corners of the temple roofs. For a description of the *Fish* and *Tien Tzŭ*, *see* I. A. 6, (7) and I. B. 1. (2).

3. (2) YIN CH'ING *(IN K'ING)* 音磬 or CHI *(KI)* 擊 [*Tui hsiang tsa tzŭ*]. A brass hemispherical bell without a clapper, 2 or 3 inches in diameter. It is fixed by a string or nail put through a hole in its centre to a wooden or bamboo handle about 10 inches long. There is sometimes a pad of cloth between the bell and the top of the handle. It is used by Buddhist priests at *Hangchow*, being held mouth upwards and struck with a light iron rod which is tied to the handle. The bell is sometimes cased in a lotus flower made of red, blue and white cloth. The best *Yin Ch'ing* are said to be made at T'ien T'ai, and specimens from that place seem to be superior to others in tone and in finish. The bell is fixed to the handle with a brass pin and rests on a small brass lotus flower. The rod with which it is struck is of brass with a slightly swelling iron head welded on. [*see* Plate XII.] I. B.

4. (1) CHUNG *(T'CHOUNG)* 鐘[1]. This is the general name of bells without clappers. The common form is circular with a dome-shaped crown, the diameter of the mouth being not much greater than that of the crown, and there is usually a round hole in the middle of the crown. The lower edge or mouth of the bell is generally waved or scolloped.[2] The bell is hung by cannons, which in smaller specimens generally take the form of a dragon attached to the crown by its four feet, in a cage which is as a rule moveable, though in the northern provinces the monasteries often have a tower or a small stone pavilion for their principal bell instead of the movable wooden cage. Such bells are hung so as to swing slightly when they are struck, but perhaps never in any way that resembles the hanging of Church bells in England.

[1] *Tsai Yü* always writes 鍾.

[2] In Shantung this is done to a ridiculous extent, the indentations reaching sometimes halfway up the bell.

I. B. Small bells are generally made of brass, larger ones of brass or other alloys of copper, or commonly of iron. Bell metal according to the *Chou Li* [*Tsai Yü f.* 53] should consist of 6 parts of copper 赤金 and 1 of tin 錫, and it may be inferred from Van Aalst [p. 52] that this rule is still sometimes followed more or less. These proportions are very different from those used in England, where the old bell founders used 3 pounds of copper to 1 pound of tin with sometimes a little more tin or antimony—addition of tin making the metal more brittle. The metal of the Westminster bells is composed of 22 parts of copper to 7 of tin, and 13 to 4 is the proportion of copper to tin recommended by Lord Grimthorpe. Chinese bell founders early in the seventeenth century used 4 parts of copper to 1 of '*Ling An* tin'—*Wên Miao Yo Shu, III f.* 7; and in the eighteenth century, copper 63 parts; zinc[1] 27 parts; lead[2] 10 parts—*Lü Lü Chêng I, IV f.* 41. From information obtained at a foundry at Hangchow it seems that when bells are cast of brass [or bronze] the metal is now usually got by melting down other brass things; but if new metal is to be used it is made of 75 parts of copper to 25 of zinc [*ch'ien* 鉛]. The addition of tin [*hsi* 錫] improves the tone but makes the metal so brittle that not more than 2 or 3 parts in 100 are added.

The height of these bells varies from a few inches to about 14 feet—the height of the Great Bell near Peking. The bells in Confucian and Buddhist Temples are generally from 2 to 5 feet high. The Great Bell was cast in the years of

[1] 倭鉛. Zinc is still known by this name, *Wo yüan*, in parts of Shantung.

[2] 鉛. The Hangchow founders distinguish lead and zinc as *black* and *white ch'ien*.

Yung-Lo, that is at the beginning of the fifteenth century. I. B.
The diameter of the mouth is between 9 and 10 feet, and the metal there is about 8 inches thick. The weight has been estimated at 53 tons. There is a large hole in the crown. Outside, the surface is divided into seven horizontal bands. On the east side is the date, and on the west a raised disc on which the bell is struck. The cannons and hanging gear are covered with Sanskrit characters; there are several concentric circles of the same on the crown, a row round the outer border of the lower edge and a few more in other parts; the rest of the bell, inside and out, is covered with extracts from the Buddhist classics in Chinese, containing probably not less than a 160,000 words. All the characters are in sharp high relief. The bell is only rung while the Emperor prays for rain; it is struck with the end of a heavy beam hung horizontally so that it can be swung against the disc mentioned above. The sound is very good in quality and deep. Every note of the scale sung under the bell by an English visitor was repeated very softly by echo, and certain notes seemed to make it ring. The bell is hung on a timber frame standing in a small square hall at the back of a Buddhist Monastery, and an altar with censer and candlesticks is placed before it. [*see* Frontispiece]. The difference between Chinese and European bells is well shown by a comparison of the above measurements with those of the great bell at Moscow, as given by Engel [p. 127]: "Its weight is 443,772 pounds [about 198 tons—this suggests that the weight of the Peking bell has been over-estimated], its height, 21 feet 4 inches; its diameter, 22 feet 5 inches; and its thickness, 23 inches. It was cast in the year 1653." M. Mahillon points out that the comparatively poor and weak sound of Chinese and Japanese bells is due to the thinness of the metal [Brussels Catalogue, 667].

I. B. Another very large bell is said to hang in the Bell Tower at Peking, and to be used to strike the watches of the night and as an alarm bell. And a third used formerly to be at Nankin, lying on its side half-buried in the ground. The part above ground afforded lodging to beggars.

The connexion of bells of various kinds with religious services seems to be at least as close in China as it is in Europe, and it is interesting to note that the ceremony of baptizing bells which dates from the eighth century has had its counterpart in China. We read: "The King [*Hsüan* of *Ch'i*] asked, Where is the ox going? The man replied, We are going to consecrate a bell with its blood."—*Legge's Chinese Classics, Mencius Bk I. Pt I. Cap* 7, 4.

Bells of the form described are perhaps comparatively modern.[1] They are found in Buddhist and Taoist temples. In Confucian temples one hangs in the principal hall or, more correctly, at the *Ta Ch'êng* Gate. This Confucian bell is perhaps properly called *Yung* 鏞, and it is tolled for several minutes at the beginning and end of the services. *Wên Hsien Ssŭ Tien K'ao* [Sect. VI f. 7] says that a *Yung Chung* existed at Ch'üeh Li in Shantung, but that the state music only required the *Po Chung* [see below], and so the use of such a bell at Hangchow may be a recent revival, or perhaps a local survival, of an old custom. The name *Yung* occurs in the *Book of History* and in the *Book of Odes*, and is explained as meaning a large bell by both the *Êrh Ya* and the *Shuo Wên—K'ang Hsi s.v.* The bell in the Soochow *Fu* temple

[1] An iron bell, perhaps 7 feet high and 4 feet 6 inches in diameter, which is in constant use in a temple (鳳林寺) near Hangchow is said to date from the *T'ang* dynasty. The earliest dated bell I have noticed is a small iron one in T'ai An of the year 1303. The earliest bell date in Europe seems to be 1202, and in England 1296 [*A Book about Bells* p. 45].

stands at the west of the *Ta Ch'éng* Gate. The body of it is decorated with large separate leaves in high relief and round the edge are the eight Diagrams. I. B.

In Buddhist monasteries in the north, and in the chief Confucian temple at Peking [*Van Aalst*], the large bell and drum have each a small tower in one of the front courts, the bell usually being on the east and the drum on the west side.

Bells without clappers are perhaps peculiar to Eastern Asia.

4. (2) PO CHUNG (*POUO TCHOUNG*) 鎛鐘. A bell of pointed oval section with a flat crown to which a round handle is fixed: low down on the handle is a ring by which the bell is hung to a large ornamental frame. The uprights of the frame stand on the backs of two carved tigers, and it is surmounted by a long-legged hawk. This bell is used at the Confucian services, standing on the east side of the terrace, and it is struck once before each line of the Hymn to Confucius. The body of the bell is divided into two parts, the upper part being adorned with thirty-six bosses in four groups of nine. Modern specimens have smaller bosses on the lower half also, which in the old bells was left plain.

Each Confucian Temple is supposed to have two *Po Chung*, one tuned to F for the spring service, and the other to B for the Autumn. The use of this bell is a revival of ancient usage. At one period a *round Po Chung* may have been used [Van Aalst], and it seems possible that no single bell was used in the Confucian worship at the beginning of this dynasty or at the end of the *Ming* dynasty, though little evidence has been found to show when they fell into disuse. The revival may possibly date from the discovery of an ancient specimen in Kiangsi in the year 1759 [*Wén Miao Ssŭ Tien K'ao*, § VI].

I. B. The illustration [Plate II, fig. 1] is taken from *Tsai Yü* [*f.* 53], who in his turn took it from the *Po Ku T'u* 博古圖, published in the reign of *Hsüan Ho* [A.D. 1119—1126]. On *f.* 55 he says that many ancient bells were dug up in the *Sung* dynasty and were accurately described in the *Po Ku T'u* and that bells of three sizes, dating from the *Chou* dynasty, which he had himself seen, corresponded with those in that book.

The *T'ê Chung* 特鐘 was a bell of the same kind, smaller than the *Po Chung* and larger than the *Pien Chung*. The use of it is not required by the modern state ritual.

4. (3) PIEN CHUNG (*PIEN TCHOUNG*) 編鐘. A set of 16 bells hung in two rows of eight, one row above the other, on a frame like that of the *Po Chung*. They are tuned to the twelve notes of a complete octave and the four top notes of the octave below, and are used at the Confucian services, where they lead the orchestra. All the bells are externally of the same size and differ only in the thickness of the metal; they are barrel-shaped, with a flat crown to which is fixed a sort of loop of metal for a handle—*see* Plate II, fig. 2. At Hangchow the bells are decorated with dragons in relief, and have engraved inscriptions giving the date, note, and so forth; but the decoration ought apparently to consist of the eight Diagrams. This pattern is said by Van Aalst to date from the reign of K'ang Hsi [A.D. 1662—1722] and is shown in *Lü Lü Chêng I*, of that date. The measurements in that book are:—height 9.5 inches; diameter, at the top 6.5 inches; in the middle, 9 inches; at the mouth, 6.375 inches; the metal is about 0.2 inch thick for the middle *huang chung* note and twice as thick for *huang chung* an octave higher. In the Brussels Catalogue, 667, M. Mahillon gives the rule for finding the relative weights of bells required to produce certain notes, with the result that a

bell giving the note C will be twice as heavy as one giving the third, and eight times as heavy as one giving the octave above C. *Tsai Yü* attains the same result by making each dimension of the C bell double the corresponding dimension of the bell giving the octave. *Lü Lü Chêng I* gives the following :— I. B.

Note.	Weight.	Thickness of Metal.
Huang chung	216 oz.	0.1598 inch (Chinese)
Huang chung (octave higher)	432 oz.	0.3196 „ „

thus applying another rule which has been quoted above [1. B. 1. (11)] from M. Mahillon. But the octaves of the other notes are found apparently on quite another principle !

Anciently the *Pien Chung* were of the same shape as the *Po chung*, and continued so down to the end of the *T'ang* dynasty [A.D. 900]. The first alterations were made in the *Sung* dynasty, when the ring at the side of the handle was moved to the top so that the bell hung straight instead of obliquely——*Tsai Yü f.* 48. A bell answering to this description is shown at Plate II, Fig. 3. The drawing was made from a specimen in a curiosity shop at Shanghai. The handle seemed to be solid : on the inside were four vertical raised ribs, two on either side : the metal was thin.

The ancient bells differed in size according to their note, and it does not seem to be certain when the plan of making them all of the same apparent size was first introduced, but it was certainly before the end of the *Ming* Dynasty. *Tsai Yü* [*f.* 48] says that the then modern bells were "round like an earthenware jar" and all the same size ; and *Wên Miao Yo Shu* shows the sixteen all of one size,—— straight-sided round bells with convex crowns[1], and each one

[1] The section of a bell of this shape from the Confucian Temple of T'ai Ts'ang in Kiangsu is given on Plate II, Fig. 4. ; but there is nothing to show the date of the bell or that it was one of the *Pien Chung*.

I. B. with a distinct form of ornament; but it does not seem certain that they were different in *shape* from the modern bells.

The curious and very handsome frames to which the bells and stone *Ch'ing* [I. B. 2.] are hung in the Temple of Confucius are probably innovations of the enterprising *Sung* dynasty, which it is hard for us to regret, though they appeared very vulgar to *Tsai Yü* in the sixteenth century. The illustrated *Êrh Ya* of the *Sung* dynasty has the frames of both bell and *ch'ing* standing on the backs of ducks, the pendants of the former hang from the beaks of phœnix heads, and of the latter from the mouths of dragons, and there are no "hawks" at the top. *Wên Miao Yo Shu* shows the frames supported on tigers [or lions] and ducks respectively, as at the present day, but the phœnix and dragon heads above are transposed and the hawks have been added. The frames now used at *Hangchow*[1] are much the same as this except that the phœnix heads are replaced by dragons and that the hawks also carry long tassels. *Wên Miao Ssŭ Tien K'ao* [A.D. 1878] say that *phœnix* heads are correct for the frame of the *Ch'ing* according to Imperial Edict.

5. (1) LING (*LING*) 鈴. This is the general name for bells with clappers,[2] and, standing alone, perhaps refers more particularly to the small hand bells used by Taoist and Buddhist priests. These are not often more than 4 inches high, excluding the handle which is usually large in proportion and often elaborately constructed. A common form of handle is a trident, others represent the *Eight Genii*, and so on. The whole bell is generally made of brass, and the outer surface and the handle are covered with ornament.

[1] *See* Vol. XXXIII of this *Journal*.—Notes on the Ting-chi, *illustrations*.

[2] It is also applied to quite different instruments.

I. B.

At a service at the *T'ien Hou Kung* in Shanghai the band consisted of six instruments:—Flute [*Ti*], drum [*T'ang Ku*], gong [*Tang Lo*], cymbals, a small bell [*Chung*] and a hand bell [*Ling*]. The *Ling* was held in the right hand with the handle inclined outwards, the clapper being held in the left hand and allowed to fall at regular intervals; and at the end of a section of the service it was rung by being rapidly shaken. All the instruments were played very quietly except the flute which played the tune, which the priests were singing, rather loudly.

The *Ling* is common at *Hangchow*. And several have been seen at a service in the *Lung Fu Ssŭ*, a Lama temple in Peking, used with cymbals, etc. and a large horn. [*see* Plate VII, fig. 6.]

5. (2) LO T'O LING TANG (*LO T'OUO LING TANG*) 駱駝鈴鐺. A Camel bell, used in the north of China. Camels usually go in strings of about seven—the nose of one tied to the tail of the next in front. The driver leads or rides the first camel and the bell is hung round the neck of the last, in order, as it is said, that the driver may know as long as he hears it that his string is intact. The bell is made of six pieces of metal—the circular iron crown, 5.5 inches in diameter; the sides about 13.5 inches high formed of two pieces of thin sheet iron; and a rim, also in two pieces, of thin copper 2 inches wide: a curved iron handle is rivetted to the crown. The mouth is oval. The clapper is a piece of the branch of a tree about 3 inches high and 2.5 inches in diameter, and it is hung by means of an iron staple driven into one end and a bit of string passed through a hole in the centre of the crown. Better bells have a carefully made wooden clapper[1] about 3.5 inches in diameter

[1] Bells with wooden clappers have been known in China for a long time. The *wood bell*, to which Confucius is compared in a well known passage (子爲木鐸) of the *Analects*, is explained as a metal bell with a wooden tongue.

I. B. with two brass rings below to which are fastened tufts of camels hair. An alternative clapper is a spherical iron bell, about 2.5 inches in diameter like the horse bells described below. It is made of two cups with rims welded together: at the top is a large ring, and below two pairs of holes joined by narrow slits. Inside is a small loose piece of iron.

The outside of the bell is sometimes painted and, at the New Year, decorated with a square of red paper, with a lucky character written on it, pasted on either side; and tassels are sometimes hung to the clapper. The measurements and shape given are subject to considerable variation. The steady clank of this rude bell is one of the most characteristic sounds of the *Peking* winter.

5. (3) MA LING (*MA LING*) 馬鈴. *Horse bells.* *a.*—A single hemispherical brass bell with an iron clapper, hung to the collar of a horse, mule, donkey or camel. This is used at Peking, Hangchow and elsewhere. The diameter of the mouth is about 3 inches. At Peking it often has a curious double clapper. At Hangchow it is also called *Tu Ling* 獨鈴 or *single bell* to distinguish it from—

b.—The more common string of small bells fastened in a row round the collars of horses, donkeys, etc. These are very much like the *Yotl* of the Aztecs [Engel p. 81], having no opening but a narrow slit, and each containing a loose ball of metal instead of a clapper. They are of various shapes and sizes; the most common being a sort of oval or pear-shaped, and unusually large specimens measuring 3 inches long and 2 inches in diameter. Another common form is like a pair of slightly opened oystershells.

At Soochow and at Peking little bells with clappers are very commonly used in this way. At the former place the pear-shaped kind are occasionally used by pedlars—four or

five of them tied to a pliant twig which is fixed to the man's apparatus. Very small specimens are tied round the necks of pet dogs. I. B.

The use of bells on horses is, or used to be, enforced by law at Hangchow.

Horse bells are also called *Hua Ling* 花鈴 [*Tzŭ kê t'u shuo*] and *Hsiang Ling* 響鈴, and at Hangchow '*Lion's heads*' [*Shih tzŭ t'ou* 獅子頭]. Large bells of this kind—4 or 5 inches across—may be seen in Peking, where they are said to be fastened to the paper lion in certain processions, and are called *Lion bells* [*Shih tzŭ Ling*]. [*see* Plate VII, fig. 7, 7.]

c.—The above varieties are usually made of brass. Iron bells like the camel bells, but far smaller, and usually more flat in horizontal section, are most commonly used, singly, for pack mules and donkeys in North Kiangsu and Shantung and Chihli, though the other varieties are not unused. The clappers of these flat bells are often made of an iron ring. Such iron bells are also fastened to the collars of mules drawing luggage carts in Peking—carts for passengers seem very rarely to use bells of any sort—and to the beam by which a mill is turned. Yet more roughly made bells of the same general pattern are occasionally used by beggars. These bells are in some ways not unlike the ancient iron bells found in Ireland and other parts of Europe.

5. (4) FÊNG LING *(FOUNG LING)* 風鈴. *Wind Bell.* A bell with a clapper hung under the corners of the roofs of temples, pagodas, pavilions and occasionally of private houses. The head of the clapper is formed of an horizontal cross of nearly the same length and breadth as the diameter of the bell, so that a slight movement in any direction will bring one arm of it or another against the bell. To the middle of the cross is hung a thin plate of brass shaped like a

I. B. fish's tail and projecting below the mouth of the bell so that it may be moved by the wind and swing the clapper. At Peking plain brass bells about 7 inches high are used ; the clapper has a trefoil plate instead of a cross. A curious specimen may be seen hanging on a *pailow* [a rather unusual situation] inside the south gate of P'ing-yin in Western Shantung. The bell is perhaps 8 inches high, with its edge so deeply indented that it looks more like an iron tassel than a bell, and instead of having a clapper it is hung inside a hemispherical cage formed of a belt of iron supported by two bent straps of iron crossed. Iron seems to be the metal preferred for these as for other bells, both small and large, in Shantung. The familiar name at *Hangchow* is *Fêng To* 風鐸.

The effect produced by the bells on a pagoda is curiously like that of the bells of a large flock of sheep on the South Downs. It is said that the orignal intention of these bells was to scare away birds. Bells on a pagoda in Burmah are mentioned by Marco Polo in the thirteenth century [Engel p. 300]. See also Additional Note F.

Wind bells are, I believe, sometimes made *square* in section.

5. (5) LING TANG (*LING TANG*) 鈴鐺. A bell used by itinerant sellers of oil in the neighbourhood of P'ing-yin in Shantung. The body is of cast iron and of the same pointed oval shape as the *PO CHUNG* [4. (2) above], but with a simple loop for handle. It is hung by a long cord or strap to the yoke on which the oil is carried. The lower edge is notched or waved like that of a *Chung*, a feature not common in bells with clappers, and the surface usually has some simple ornament.

Ling Tang merely means a bell and is not, even locally, appropriated to the present instrument.

6. K'OU CH'IN (*K'EOU K'IN*) 口琴. The *Jews harp*. In Peking it is commonly played by street boys. It is made of iron and appears to be nearly identical with the European instrument and with the Indian *Murchang* [Engel p. 172]. The length of the frame is $3\frac{3}{8}$ inches, the greatest width $1\frac{1}{8}$ inch; width at the points, $\frac{5}{16}$ inch. The length of the tongue, measured straight, is $4\frac{1}{4}$ inches, of which $\frac{7}{8}$ inch projects behind the frame: an additional $\frac{5}{8}$ inch at the thin end is bent down at a right angle and the end is turned over to form a ring. It seems to be quite unknown about Shanghai or in the south. Mrs. T. Richard writes on p. 20 of her Paper:—In a Chinese book of the twelfth century there is a picture of the Jews harp. I. B.

CLASS II. Vibrating Membranes.

Section A. Rhythmic.

1. PA FANG KU (*PA FANG KOU*) 八方鼓. A tambourine formed of an octagonal frame in each side of which is a quatrefoil hole. In seven of these holes are little brass jingles on pins, and from the eighth hang silk tassels. One side of the frame is covered with snake skin. The diameter is 5.75 inches, the depth 2 inches. It is said to be used by singing girls at *Peking*.

2. (1) PANG KU (*PANG KOU*) 梆鼓. A circular frame, made of six wedges of [?] *chü* wood kept together by a brass hoop and having a round hole in the middle, covered with cow skin which is fixed with iron nails—professedly 128 in number. The skin is stretched so tight as to be perfectly rigid. It is beaten with two light bamboo sticks without heads. The diameter of a Shanghai specimen is 10.25 inches, the diameter of the central opening 2.25 inches, the height 3 inches. It stands on a folding wooden or bamboo tripod when in use. The name is vulgarly pronounced *Pêng Ku* among Pekingese actors. At Shanghai it is said to be called *Pan Ku* 板鼓.[1] [*see* Plate VII, fig. 8.]

This hoop-drum is a very common instrument, used chiefly in the theatre where it acts as leader of the orchestra, which seems to be generally composed of the following instruments:—*Pang Ku*, *T'ang Ku*, a large and a small gong [*Lo*], cymbals, *P'ai Pan* and, during the songs, a fiddle

[1] At Hangchow this is written 班鼓.

[*Ching Hu*]. The *Hsien tzŭ* and *Yüeh Ch'in* are also used. The *So Na* is heard when military or funeral processions are introduced, and the *La Pa* [blown apparently off the stage] in certain military pieces and to mark the close of each scene. The above orchestra is replaced for certain plays by the *Pang tzŭ* as leader with its proper accompaniment of *Hu Hu* and *Ti tzŭ*. II. A.

2. (2) PAN T'ANG KU (*PAN T'ANG KOU*) 半堂鼓. A circular wooden frame about 14 inches in diameter, 3 inches high and 1 inch thick; kept together with an iron hoop and with skin stretched over one side. It is hung in a horizontal position in front of the performer by means of a blue and white cord passed over his shoulders and fixed to two opposite points of the frame. To the half of the circumference furthest from the performer is fixed a square apron of red cloth embroidered. It is played with the usual thin bamboo sticks. Eight of these drums formed part of one of the many bands in a large funeral procession seen at *Shanghai* in 1902. Other instruments used in the same procession were:—by Taoist priests, *Shou Ku*, cymbals, hand bell [*Ling*], *Hsien tzŭ*, *Shêng*, *Ti tzŭ* in pairs, and *Hsiao* singly. The lay bands used all the above except the *Ling*, and in addition, *Pang Ku*, *Tien Ku*, *Chang Ku* [carried under the left arm], the ordinary gong about 2 feet in diameter and always in pairs, *Tang Lo*, *P'ai Pan*, *Shuang Ch'in*, *Êrh Hu*, *So Na*, *Chi Na*, large *T'ai P'ing Hsiao*, and one small *Hao T'ung*. A military band on horseback played several of the above instruments and also a pair of large *Cha Chiao*. A *T'ang Ku* was carried in the *Lo Ku T'ing*—a sort of shrine carried by four men—to the roof of which were hung a gong [I. B. 1 (4).] and a gigantic pair of cymbals. The foot soldiers in attendance were preceded by a pair of the large variety of *La Pa*.

II. A. At Peking this drum is hung in an iron hoop only slightly larger than the drum, and is carried in the way described above. At Hangchow a similar drum, called *Pao Ku*, is placed in a tray formed of a hoop of bamboo laid on two sticks, of which the ends rest against the performer's body.

2. (3) MAN T'OU KU (*MAN T'EOU KOU*) 饅頭鼓. The *Loaf Drum*. A hollow hemisphere of wood constructed like the *Pang Ku* and kept together with a brass hoop. There is a round hole, about 2 inches in diameter, at the top. The convex side is covered with skin fixed with iron nails. The diameter is about 9 inches. It is said to be used on the stage like the *Pang Ku*, and to be a southern instrument. It is fairly common at *Hangchow* but rare at Shanghai. [Plate XII.]

2. (4) HSIAO KU (*SIAO KOU*) 小鼓. The *Little Drum*. A circular body of wood, made in four pieces, about 2 inches high. The larger head, which is covered with cow skin, is about 3 inches in diameter. The skin is fixed with large-headed iron nails. This drum is used by rag collectors in Peking, and is struck with a split withy 9 or 10 inches long with a strip of leather wound round the end to form a head.

3. YÜ KU (*IU KOU*) 魚鼓, or YÜ T'UNG (*IU T'OUNG*) 魚筒. The second is the commoner name, and *Yü Ku* is sometimes applied to a somewhat similar drum said to be made at Soochow and described as a bamboo pipe painted red or black, about 12 inches long, 4 inches thick at the larger end, with one head covered with snake skin and with a vibrating tongue inside. The *Yü T'ung* is a bamboo pipe 26.5 inches long, and about 2.75 inches in diameter, with the larger end covered with a piece of bladder. It is said that it should be held with the *open* end downwards in the palm of the right hand and struck with the fingers of this hand.

the upper end resting against the right shoulder. It is used chiefly by blind fortune-tellers and by beggars and is properly and usually accompanied with the *Chien Pan* [I. A. 3. (3)] held up in the left hand. The specimen measured was made at Hangchow. At Shanghai it is called a northern instrument, and it is not uncommon in Northern Kiangsu and in Shantung. Specimens seen in use have been invariably tapped on the *covered* end. Both *Yü T'ung* and *Chien Pan* may be seen 3 feet or more in length. The outside of the pipe is sometimes carved, and the ends and knots of the bamboo mounted with bands of brass. The name *Yü Ku* is perhaps more common in Shantung. II. A.

In December 1903 a small company of strolling musicians were seen at P'ing-yin in Shantung using the *Yü T'ung* in a rather unusual way. One man was sitting down with his brass mounted *Yü Ku* laid across his knees and was tapping the covered end of it with his right hand. The second performer was a boy standing and holding a *Yü Ku* more or less horizontal and tapping it with his right hand, and occasionally turning it up and blowing on the bladder so as to produce a loud whistle—thrice repeated. The third man was holding a cymbal which he was using as a gong. No *Chien Pan* was used.

"The *Yü Ku* dates from the *Sung* dynasty, when it was called *T'ung T'ung Pu* 通同部."—*Ch'i Hsiu: Sect.* 24.

4. (1) T'AO KU (*T'AO KOU*) 鞉鼓. This is the old and book name of the common rattle drum vulgarly called *Yao Ku* [*Iao Kou*] 搖鼓 or, at Ningpo, *Huo Lang* [*Houo Lang*] 貨郎. It is a small drum with a stick passing through the body and projecting on one side to form a handle. When the drum is twirled quickly backwards and forwards the ends are hit by two beads hung one on each side of the body. The modern drum varies from 2 to about

II. A. 12 inches in diameter, the larger ones being flatter in shape than the smaller. It is used at Hangchow by itinerant sellers of cotton cloth and braid and at *Shanghai* by sweetmeat sellers, when it is called *Yao t'ang ku* 搖糖鼓, and measures about 3.5 inches in length and 2 inches in diameter. [*see* Plates VII and XII]. At Chi Nan in Shantung a very small drum on a handle about 2 feet long is used. The heads of this variety are of snake-skin. In the same part of Shantung sellers of cloth use drums about 12 inches in diameter and 2 inches deep,[1] their instruments being sometimes made entirely [including the 'heads'] of copper or of foreign 'tin'. At Peking the drum is occasionally made hexagonal, and as many as three may be seen threaded on the same handle. Sometimes there is on the same stick with the drum and struck in the same way a small gong either hung in a wire ring or fixed directly to the stick. This may be seen for instance at Hangchow, Soochow and Peking. At Hangchow the combined drum and gong is called *Ting ting tang êrh* or *Ting tung tang êrh*, and would-be purchasers hail the pedlar by this name. At Peking a large drum surmounted by two gongs is used.

A toy rattle drum sold with the *Mi Ta Lang* at Shanghai is made of a piece of split bamboo bent into an oval and entirely covered with paper. It is pierced with a stick which projects about 6 inches. The greater diameter of the drum is 2.5 inches, the thickness about 0.5 inch. A thread finished with a small knot of wax is fixed to either end of the oval body. Tiny tin rattle drums are sold at the T'ai An fair.

Tsai Yü mentions the *T'ao Ku* in the *Ling hsing hsiao wu p'u* as a common instrument in his day. The ancient

[1] This drum is called *Huo Lang Ku êrh.*

II. A.

T'ao Ku was much larger than the modern, but was barrel-shaped like the smallest modern varieties. It was used in religious ceremonies.[1]

4. (2) MI TA LANG (*MI TA LANG*) 密達郎. A toy rattle sold at *Shanghai*. It is a clay drum attached to a small clay figure. The opening, over which a paper 'head' is stretched, is $\frac{3}{16}$ inch in diameter, reduced to $\frac{5}{16}$ at the back, which is not covered. The whole drum is about $\frac{3}{8}$ inch thick and 1 inch in diameter. The height of the clay figure is $2\frac{1}{2}$ inches. A wire arm from the shoulder is bent downwards at right angles and fits loosely into a thin bamboo stick, just below whose top are fixed four tin arms. The drum is struck with a little slip of bamboo which is passed through a twist of string, stretched from the wire arm to a lower bamboo arm, and alternately lifted and let drop by the tin arms of the stick when the thing is twirled. A similar toy is made in the form of a man sitting in a cart and beating a drum. At T'ai An in Shantung this toy is common at the great Spring fair, and is called *Hsien Jên Ta Ku* 仙人打鼓—the fairy drummer.

5. (1) SHOU KU (*CHEOU KOU*) 手鼓. *Hand Drum*. A ring made of five or six pieces of wood, with the outer edges bevelled and skin stretched over both sides. The measurements at *Shanghai* are: greatest diameter, 8 inches; diameter of the central opening, 5 inches; height, $2\frac{1}{4}$ inches. It is sometimes fixed by the side to a wooden upright standing on a circular base. It is used by priests, who tap it with their fingers, at funerals and at services in private houses, where it may stand on a table opposite to a small bell [*Chung*].

[1] A pair of these drums is still in use in the Confucian temple at T'ai An in Shantung. The same temple also possesses a *Chu* (with no side hole), *Yü*, set of *Pien Ch'ing*, set of *Pien Chung* of small size, two *Po Fu*, three larger drums, and two *Shê* without strings.

II. A. 5. (2) A flat DRUM is used by blind men in the streets at *Peking*. It is about 12 inches in diameter and 3 inches thick, and is carried by a string loop—the man holding the drum and drum-stick in one hand.

5. (3) TIEN KU (*TIEN KOU*) 點鼓. A drum said at *Shanghai* to be used in the theatre in place of the *Pang Ku*. It is a wooden disc made in five pieces, with a circular hole in the middle and covered on both sides with skin. The shape is like that of two plates put face to face. The greatest diameter is 8 inches; diameter of either head, $5\frac{1}{4}$ inches; diameter of the central hole, 2 inches; height, $2\frac{1}{4}$ inches. It is beaten with two light bamboo sticks. [*see* Plate VII.]

5. (4) A flat DRUM, about 2 feet in diameter, with a wooden handle fixed into the side and probably traversing the body. It is used by the Lamas of the *Yung Ho Kung* at Peking, and is perhaps a Tibetan instrument. In a procession an attendant carries it on his shoulder, and it is beaten by a priest walking behind. The stick is curved like the shaft of a carriage, and has a small knob at the top. The Japanese have a similar but much smaller drum [Brussels Cat. 684].

Beggars in Peking sometimes use a small drum which they hold by a cord handle underneath.

6. (1) CHIN KU (*TSIN KOU*) 晉鼓. A drum used in Confucian Temples, placed vertically in a box or frame. In the Temple at *Hangchow* it is at the west side of the *Ta Ch'éng* Gate and is beaten before and after the service, when the Sage's spirit is welcomed and bidden farewell. The head of the drum is about 6 feet in diameter[1].

[1] At Soochow this drum is about 6 feet long and 6 feet in diameter, and stands horizontally on trestles at the east side of the *Ta Ch'éng* Gate, with a similar drum about 3 feet long by its side.

It does not seem to differ essentially from the *T'ang* or *Chan Ku*. It appears that this drum should be hung [?] horizontally, and in the great Temple at Peking one still hangs in the Eastern Tower [Van Aalst pp. 53, 75]. The true name is not easy to find. *Wên Miao Ssŭ Tien K'ao* says that the *Yung* bell and the *Fén* drum still exist at *Ch'üeh Li*, standing at the *Ta Ch'êng* Gate [Sect. VI f. 7]. The *Êrh Ya* says "The large drum is called *Fén* 鼖", and the drum in question is the largest used at the Confucian services. The *Sung* dynasty illustration of the "large drum" shows the modern *Ying Ku* and *Tsai Yü* [f. 65] gives *Fén* as an alternative name for the *Tsu Ku*, a large drum of the same nature as the *Ying Ku*. *Chin* is *Tsai Yü's* name for his drum which is most like the modern *Ying Ku*; so that neither *Chin* or *Fén* seem quite satisfactory names of the present instrument. *Fén* (*Fenn*) may perhaps be thought the better of the two. II. A.

The bodies of barrel-shaped drums seem to be called *K'uang* 匡, and are said to be made of willow 楊.

6. (2) YING KU (*ING KOU*) 應鼓. A barrel-shaped drum supported in a horizontal position by a post which stands on a foot made of four wooden tigers arranged in the form of a cross. The post passes through the drum and has a large silk canopy fixed to its top. The drum stands in the south-east corner of the terrace in the Confucian Temple, and is struck three times after each line of the Hymn to Confucius. The whole drum with its stand is elaborately ornamented with gilt and painted designs. The length is 43¾ inches, the diameter of the heads 29½ inches.

Wên Miao Yo Shu calls this drum *Ying* 楹 or *Chien* 建; under which names Van Aalst gives quite a different instrument, saying that the two kinds of *Ying Ku* are in use together. *Tsai Yü* in his list of ancient drums [f. 66 etc.] has the one in question under the name *Chin* 晉 [also called *Chien*, *Lu* 路,

II. A. Lei 雷, or *Ling* 靈], 66 inches long; and a similar but yet larger and undecorated drum called *Tsu* 足 or *Fén* 鼖. Two drums just like the modern *Ying*, but with small side drums attached, are called respectively *Hsüan* 縣 [or *Tʻien* 田] standing to the west, and *Ying* 應 to the east. *Tsai Yü's Ying* 楹 is Amiot's *Yn*, 100 inches long and with the post driven into the ground. In Vol. VI f. 50 he says that the modern *Ying* 應 is the *Chien Ku* of the *Sung* and *Yüan* Dynasties, with the side drums taken off; and that the *Po Fu* was wrongly made to do duty for the side drums[1]. The *Ying* 應 of the illustrated *Érh Ya* is hung by a ring in its side to a crossbar supported on two uprights. Garnier's *Voyage d'exploration en Indo-Chine*, Vol. I p. 415, shows a large drum hung in precisely the same manner in a Temple in the North of Laos. *Chʻüeh Li Tsuan Yao* shows the *Ying* 應 *Ku* like the modern instrument. [Compare Plate XIII.]

6. (3) PO FU (*POUO FOU*) 搏拊. A barrel-shaped drum 18 inches long, 9 inches in diameter at the ends, and about 13 inches at the middle. The body is coloured scarlet and has a scarf of yellow silk fastened to rings on the upper side; and the heads are painted with a dragon's head and with clouds. The performer strikes it on both heads with his fingers. A pair of these drums, laid on stands which vary from about 1 foot to 3 feet in height, are used at the Confucian services and struck twice after each beat of the *Ying Ku*. [*see* Plate XII.]

The ancient *Po Fu* seems to have been a straight-sided drum, and was played lying on the performer's knees. The modern instrument is more like the popular *Hua Ku*. In *Wén Miao Yo Shu* it is called *Fu Ku* 拊鼓. *Chʻüeh Li Tsuan Yao* shows the straight-sided *Po Fu*.

[1] The drum is made to this day with a ring at each side, as if for side drums.

6. (4) HUA KU (*HOUA KOU*) 花鼓. [*see* Plate VIII]. A barrel-shaped drum like the above. It was formerly called *Yao Ku*, and this name occurs in a verse of *Su Tung-p'o* who lived in the eleventh century :—'The sound of a hundred *Yao Ku* is like thunder in the Spring.[1]' It has two rings on one side to which a sling is attached. There is sometimes inside an arrangement of wires which make a slight jingling when the drum is beaten. It is used, hanging from the right shoulder, in theatres and by strolling bands. At *Shanghai* the body seems to be usually black, but the popular name—"Flower Drum"—is perhaps explained by Dennys' remark "The barrel is generally, but not always, ornamented with drawings of flowers, etc." The length is $10\frac{1}{4}$ inches, the diameter at the heads, $4\frac{5}{8}$ inches, in the middle, $6\frac{5}{8}$ inches. The size may vary considerably. A smaller specimen from Hangchow had no wires inside and was painted red [*see* Plate XII]. A toy variety about 7 inches long and 3 or 4 inches in diameter is sold in the instrument shops at Shanghai. The body, only slightly curved, is made of a piece of bamboo. Cheap wooden drums are sold to the pilgrims at T'ai An in great quantities. II. A.

The *Hua Ku* is an ancient instrument and was formerly used in the State services under the name of *Ya Ku* 雅鼓. Indeed it seems possible that it is the *Po Fu* that is disused, and that the so-called *Po Fu* is really the *Ya Ku*. *Ch'üeh Li Tsuan Yao* has both, calling the *Ya Ku T'ao Ku*, and saying that the skin should be painted with clouds and the barrel with flowers. The skin for both *Po Fu* and *Ya Ku*, Amiot says, was boiled as well as tanned, and the barrels were filled with rice husks. *Tsai Yü* [f. 70] says that the *Po Fu*, played

[1] 腰鼓百面如春雷. But see *Chang Ku* [II. B.] below, with the reference there to Additional Note F.

II. A. by a man sitting inside the Hall, marked the lines of the Hymn for the singers; the *Ya Ku* [identical with the *Hua Ku*] did the same for the Mimes, and the performer stood outside the Hall. Both drums measured 14 inches by 7 inches.

6. (5) T'ANG KU (*T'ANG KOU*) 堂鼓. [*see* Plate VII]. A barrel-shaped drum which is hung vertically by four or [three] rings in its sides in a frame consisting [for smaller specimens] of four [or three] curved uprights joined by cross pieces below. The actual size varies considerably, but the height is generally about equal to the greatest diameter. The heads are of cowskin, the barrel is usually painted black at Shanghai. Two wooden sticks without heads are employed. It is used in theatres, private houses, military camps and stations, etc., and in temples:—Large specimens being found in most Buddhist Temples and smaller moveable ones in Taoist Temples.

Tsai Yü shows a similar drum [called merely *Ku* and described as a common instrument] hung vertically by cords from two rings on opposite sides, in a square upright frame [*Ling Hsing hsiao wu p'u* f. 4].

The *T'ang Ku* is said at Shanghai to be the drum which is carried in processions in the pavilion called *Lo Ku T'ing* [II. A. 2 (2)]. The drum is placed on end in the bottom of the *T'ing* and is covered with a board in which is a round hole through which the top of the drum is visible. A different drum is perhaps used for this purpose in the south [Dennys].

It is commonly used at Peking for funeral ceremonies and processions, usually lacquered black with gilt ornament; the uprights of the frame sometimes straight and 6 or 7 feet high. Drums of the same shape are also carried in processions without frames, but slung at the back of a boy and beaten by

another boy walking behind. These are either black and gilt or plain gilt. [*see* Additional Note F.] II. B.

6. (6) CHAN KU (*TCHEN KOU*) 戰鼓. The *War Drum*. This appears to differ from the *T'ang Ku* only in its proportions, the height being about half of the diameter. It is used by soldiers; but it is perhaps interchangeable with the *T'ang Ku*, as soldiers may be seen using the latter and a priest has been seen buying the *Chan Ku*. At Peking drums of this shape are commonly used in processions, being slung over a man's shoulder by a ring in the side and beaten by another man following. The body is there commonly gilded, elsewhere it is usually black. Toy drums of this shape are made for the pilgrims at T'ai An.

6. (7) A DRUM said to be used by cavalry. A specimen seen at Hangchow had an urn-shaped body about 12 inches high. The diameter at the top was about 10 inches; at the bottom, about 6 inches. It is hung, probably over the shoulder, by a cord fastened to opposite sides of the top.

7. HA MA (*HIA MA*) 蝦蟆. A clay frog. The body is hollow and over the underside, which is open, a piece of stout paper is stretched. Through the middle of this paper a single horse hair is passed and prevented from coming out by a knot inside. When the wetted finger and thumb are drawn rapidly along the hair the vibration produces a loud harsh sound not unlike the croaking of a frog. This is one of the many toys sold at the fair which is held every spring for the benefit of pilgrims at T'ai An in Shantung.

Section B. Tonal.

1. CHANG KU (*TCHANG KOU*) 杖鼓. The body of this drum is formed of a bamboo pipe, 18 inches long and $2\frac{3}{4}$ inches in diameter, with a wooden bell fixed to either

II. B. end. One of these is cup-shaped, 5 inches long and 7 inches across the mouth; the other is like the bell of a trumpet and measures 9 inches in diameter. The heads are formed of skin stretched over iron rings. That at the cup-shaped end is of cow skin and is $10\frac{1}{2}$ inches in diameter; the other is a disc of snakeskin sewn into a ring of cowskin, and is $11\frac{1}{2}$ inches in diameter. The heads are kept in position by yellow cords which are bound tightly round the middle of the bamboo pipe. Eight loops of this cord are attached to eight wire hooks, which are fastened to the ring of either head. Each cord of every loop is connected with the nearer cord of the adjoining loop by means of a moveable leather ring. When these rings are pushed towards the heads they separate the pairs of cords, which would naturally be close together, and thus shorten the loops and tighten the heads. The whole body is painted black; the total length is $29\frac{1}{4}$ inches. The performer is said to hang the drum in front of him by a strap over his shoulders, and to beat both heads with his hands [but compare II. A. 2. (2)]. It is used in processions at *Shanghai* and perhaps in the south. The *Chang Ku* is perhaps the only Chinese drum of which the heads can be tightened by means of cords.

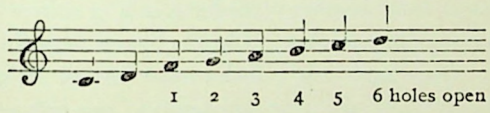
The Rev. F. W. Galpin writes: 'This drum with braces might have been introduced from India where such methods of tuning are common." This is perhaps confirmed by a passage in *The Middle Kingdom* [vol. II. p. 98]: 'One treatise on beating drums scientifically dates from about the year 860 A.D., and contains a list of about one hundred and twenty-nine symphonies, many of which are of Indian origin.' For the tuning of drums in China in former times, and for the various names of this particular drum, compare Additional Note F. [*see* Plate XII.]

CLASS III. Wind Instruments.

Section A. Flutes and Whistles.

a.—Vertically blown.

1. HSÜAN (*HIUEN*) 塤 or 壎. A small egg-shaped whistle made of black clay. It has a blow-hole at the apex, four small finger holes on one side and two on the opposite side. Amiot says that the addition of a sixth hole to the primitive five was an improvement of the *Chou* dynasty. *Wên Miao Yo Shu*, *Ch'üeh Li Tsuan Yao* and *Lü Lü Chêng I* however draw and describe the five holed variety, so that the sixth hole is more probably quite a modern addition.[1] The Reverend F. W. Galpin writes: "The *Hsüan* gives the following scale :—



The first note is got by turning the lips downward and blowing lightly. It will be noticed that the five hole *Hsüan* gives the octave C—C. The sixth hole gives D, and it seems probable that the low C was omitted—it is hard to get." It seems to make no difference in what order the holes are opened. [*see* Plate VIII.]

[1] *Wên Miao Yo Shu* [VI f. 3] says however that an instrument of the *Sung* dynasty had six holes; and that about A.D. 1035 a seven holed *Hsüan* is mentioned. *See* Additional Note F.

III.A.a

The *Hsüan* is traditionally one of the most ancient of Chinese instruments, and is highly prized. It is only used in the State services. The height is $2\frac{3}{4}$ inches; greatest diameter, $2\frac{1}{4}$ inches, diameter of the base, $1\frac{1}{2}$ inch, diameter of the blow hole, $\frac{3}{8}$ inch.

The ancient instrument was, according to *Tsai Yü* [f. 37], longer in proportion to its diameter, modelled apparently on a large goose's egg with the thick end cut off. The height was 3.5 inches, the diameter, 2.4 inches. There were four finger holes 1.7 inch from the bottom and equally distant from each other, and a fifth 0.5 inch from the bottom, forming an inverted isosceles triangle with two of the upper holes. The smaller variety was of the same height, but 1.75 inch in diameter. *Tsai Yü* says oddly that the goose's and hen's egg only gave the size and not the shape of the larger and smaller *Hsüan* respectively. The finger holes, whether five or six, have been unsymmetrically arranged throughout the present dynasty.

2. (1) P'AI HSIAO (*P'AI SIAO*) 排簫. Pandean Pipes. Sixteen small bamboo pipes fixed in a row in a wooden case. Each pipe has a notch cut in the upper edge like that of the *Yo*. The pipes are tuned to the twelve notes of a complete octave and the four top notes of the octave below. The pitch of this instrument and of the *Pien Chung* and *Pien Ch'ing* seems to have been lowered in this dynasty so that *Huang Chung* is the fifth note instead of the first as it was in the *Ming* dynasty and before. The pipes are now arranged with the longest at the ends of the row, and the shortest in the middle; and vary in length from 11.5 to 4.75 inches. *Wên Miao Yo Shu* called the *P'ai Hsiao*, *Fêng Hsiao* 鳳簫 [a name which appears in *Ch'üeh Li Tsuan Yao* also], and names eleven other varieties. But for the wooden case, the *P'ai Hsiao* retains

very nearly the form of the ancient *Hsiao*, which is thus the only one of the old wind instruments to survive practically unchanged. III.A.a

From *Tsai Yü* we learn that in the *Sung* dynasty the pipes were all of the same length and were fixed in a simple frame,—as is shown also in the illustrated *Erh Ya*. The lower ends of the pipes were stopped, and they were tuned by means of holes cut in the required positions in their sides. The wooden case [*Tu* 櫝] was added in the *Yüan* dynasty, and was then black with gilt ornament. In the old *Hsiao* the lowest note was on the left side, and the scale went consecutively from left to right; in the *Sung* dynasty this order was reversed [f. 16]. In the *Ming* dynasty the ancient plan had been restored. [*see* Plates XII and XIII.]

The *P'ai Hsiao* is used only in the State services.

The Rev. F. W. Galpin has Pan pipes called *Shao*, without a case. The instrument was perhaps got in the south, as it is, at least, uncommon about Shanghai, or in the north.

2. (2) YO (*IO*) 籥. A vertical bamboo flute open at both ends. A little notch with bevelled edge to blow against was cut at the upper end, and there were three [or possibly six] finger holes near the lower end. *Tsai Yü* [f. 17] says that with all the holes shut the instrument gave *Kung* [D], or, blown harder, *Chih* [A]; with the lowest hole open, *Shang* [E], or *Yü* [B]; with the two lower holes open, *Chiao* [F sharp], or *Ho* [C sharp]; and with the middle hole closed and the upper and lower holes open, *Chung* [G]. The *Yo* tuned to *Huang Chung* of the lower octave had the following measurements:—length, 20 inches; diameter, 0.707 inch; internal diameter, 0.5 inch. The diameter of the finger holes was 0.25 inch, and their centres were 3, 5, and 7 inches respectively from the lower end of the pipe.

III.A.a *Tsai Yü* had seen a genuine specimen of the ancient *Yo*, and another is recorded to have existed in A.D. 1119. [*see* Plate III, Fig. 1.].

The *Yo* is now obsolete except as a wand used by the Mimes in ritual dances; and this has been the case certainly since the sixteenth century, if not for two thousand years past. The form of pipe is preserved in the *P'ai Hsiao*. As now used the *Yo* is a pipe 22 inches long, open at both ends, and with six roughly made holes. *Wên Miao Yo Shu* shows a short pipe with two finger holes near the lower end and a blow hole near the upper end, which is adorned with a dragon's head carrying a large pendant [Fig. 1. a.]. This transverse *Yo* is mentioned by *Tsai Yü*.

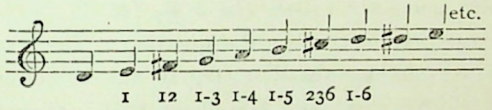
2. (3) FÊNG HUANG HSIAO (*FOUNG HOUANG SIAO*) 鳳凰簫, or TUNG HSIAO (*TOUNG SIAO*) 洞簫; Plate III, Fig. 2. A bamboo pipe made in the same way as the *Yo*, except that the top is closed by a knot of the bamboo. In this knot a notch is cut joining that in the side. There are six finger holes, the first five on the upper side and the sixth underneath. There are also lower down the pipe two holes side by side underneath, called in *Lü Lü Chêng I* 'holes for emitting sound'[1]. They are used for attaching a loop to hang the instrument up with. The pipe should be cut from the root of the bamboo with the knots [nine in number] close together at the lower end, which swells into a sort of bell and is tipped with bone. The length varies a good deal; a long specimen from *Hangchow* is about 27 inches long, and $\frac{7}{8}$ to $\frac{8}{8}$ inch in diameter. One at Shanghai measured $23\frac{1}{2}$ inches by $\frac{8}{8}$ inch. The pipe is stained dark brown or black and varnished, and usually has an inscription of some kind

[1] 出音孔. *Finger holes* are called in books *k'ung* 孔, *hsüeh* 穴 or *ch'iao* 竅; in common speech, *yen* 眼.

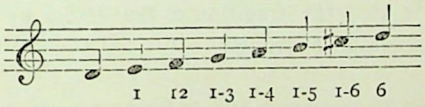
engraved on it. It is perhaps never seen with black bands like the *Ti tzŭ*. III.A.a

It is commonly used at weddings, funerals, and other religious ceremonies, and is said to be a favourite instrument with the educated classes. A cheap variety is sold in the streets of Shanghai. The partial covering of a hole to produce certain notes, as directed in *Wên Miao Yo Shu*, is pointed out in the Brussels Catalogue [714.—a Japanese flute] as '*intéressant*' and apparently rare; but it is a device constantly required with most Chinese flutes.

In the Confucian ritual this instrument is called simply *Hsiao*. It has no bell, and is coloured scarlet, and measures 22¼ inches in length. *Wên Miao Yo Shu* gives a special notation for the *Hsiao*, but this is not now used. The scale of the ritual variety ascertained by the Reverend F. W. Galpin, is:—



The Hangchow specimen described above gives:—



Of the origin of flutes with the above arrangement of finger holes little seems to be known; and the relation of the *Hsiao* to the ancient *Ti*[1] is not very clear. Van Aalst [p. 70] says that the *Hsiao* was invented in the *Han* dynasty, and introduced into state ritual in the *Yüan* dynasty, as will be seen also in Additional Note F. *Bamboo. c. Tsai Yü*

[1] The ancient *Ti* was certainly a *vertical* flute. The question is whether it was the *Fêng Huang Hsiao* or, as *Tsai Yü* maintains, a whistle.

III.A.a [f. 24] writes: 'The Annals of the *Chin* and *Sung* dynasties both have the rules and measurements of the *Ch'ang Ti* 長笛 . . . this . . . is the thing now called *Tan Hsiao* 單簫.' *Lü Lü Chêng I*, Vol. III, f. 11 has 'The *Hsiao* is what was anciently called *Ch'ang Ti*.' *Wên Miao Yo Shu* has: '*Chu Tzŭ* [twelfth century] says: what is now called *Hsiao Kuan*[1] is the ancient *Ti*; the *Yün-Hsiao* is the ancient *Hsiao* [Pan pipes], the *Yün Hsiao* is the *P'ai Hsiao*.' and 'from the *T'ang* dynasty the vertical flute was called *Ch'ang Hsiao*, the transverse, *Ti*.'—Vol. V, ff. 18, 22. The modern school book *Tzŭ k'ê t'u shuo* says that the *Hsiao* is the ancient vertical *Ti*, and this is clearly the common opinion.

Tsai Yü however seems to be right in saying that the *Hsiao* superseded [as a playable instrument] the *Yo*, which it very nearly resembles, rather than the *Ti*. He says too that the *Yo* was anciently called *Hsiao* 箾 [ff. 17, 24], though this perhaps does not affect the question. The invention of the *Hsiao* was perhaps the first step in the evolution of the *Ti* [whistle] from the *Yo*. It follows that either *Tsai Yü* is wrong in saying the ancient [*i.e.* c. B.C. 1000] *Ti* was a whistle, or that the tradition of the *Hsiao* by *Yeh Chung* in the *Han* dynasty is wrong.[2]

[1] The *Hsiao Kuan* is described in Additional Note F. *Bamboo. p*, and was certainly not the *Fêng Huang Hsiao;* but then it was identical with the *Ch'ang Ti*, and the *Ch'ang Ti* was what *Tsai Yü* called *Tan Hsiao*, and *Tan Hsiao* was at least probably what we now call *Fêng Huang Hsiao*. The extreme confusion of names and vagueness of description make the question too intricate.

[2] The origin of the arrangement of the finger holes of the *Hsiao* is in no degree made plainer by the determination of the relation of the *Hsiao* to the ancient *Yo* or *Ti*. *Possibly* what happened in the *Han* dynasty was the invention of a new arrangement of finger holes on a flute whose principle was already ancient.

The *Érh Ya* throws very little light on the question, unless it is by the omission of the name *Ti*. It gives *Hsiao* [Pan pipes], *Kuan*, and *Yo*. When the name *Ti* was revived, it may have been applied to the wrong instrument. III.A.a

The *Siaku-Hachi*—the corresponding flute in Japan—has the top open like the *Yo*, and part of the edge bevelled, but has no notch. There are *four* holes in front and one behind.—*Brussels Catalogue*, 714.

2. (4) KO LING (*KO LING*) 鴿鈴. Whistles carried by pigeons. The correct name is used at Hangchow. At Peking they are called *Shao-tzŭ* 哨子, *whistles*, or *Hu-Lu* 葫蔆, *gourds*. They are made either of a small hollow gourd, with the top replaced by a whistle, or of short bamboo pipes with similar whistles at the top, or, generally, of various combinations of these two methods. Horn is sometimes used instead of a gourd. At *Peking*, the place most noted for their manufacture and use, there must be thirty or forty different varieties, and the number of whistles on a single specimen varies from one to twenty-five. A simple variety differing very slightly from the Pekingese patterns is made at Hangchow. A slip of bone or bamboo fixed to the under side is used to attach the whistle. This slip of bone is put between the two middle feathers of the pigeon's tail and secured below with a piece of wire; and the two feathers are tied together so that the thing cannot slip out behind. The diameter of a large gourd is perhaps 4 inches, of a small one 1 inch.

The use of these whistles is *said* to date at least from the *Sung* dynasty. A reference to the *Ko Ling* is quoted from *Wang Yen-Hung* of the *Ming* dynasty, in the *Kuang Shih Lei Fu*, a sixteenth century revision of the *Sung* dynasty *Shih Lei Fu*, last published in 1700 or 1765. *Ma Tuan Lin* does not seem to have known the *Ko Ling*—*see* Additional Note F. [*see* Plate XII.]

III.A.a

2. (5) TI KO TZŬ (*TI KO TZEU*) 地鴿子. A whistling top. As made at Peking the body is a ring of bamboo with wooden top and bottom: the sides are convex with projecting rim at either edge, and are bound with two bands of silk. There are two openings with bevelled edge to form a whistle, on opposite sides of the body, and the inside is divided into two unequal compartments so that two different notes are produced. The body is pierced by a bamboo pin 6.5 inches long, the lower end, which is pointed, projecting 1.25 inch. The height of the body is nearly 1 inch, the diameter about 1.5 inch. The top is spun on the ground and is steadied, while the string is pulled, by a piece of bamboo with a hole at one end through which the string passes. The size varies. The wild shriek of this top as it starts is a well known sound at the temple fairs in Peking, where there are usually two or three stalls devoted to the sale of this and the double-headed top described below.

A roughly made top of the same kind is found in Shantung and elsewhere. At Shanghai it is called *Ti Wéng* 地嗡. *Ti Ko Tzŭ*, 'Pigeons on the ground,' is the Hangchow name, and the spinning of such tops is said to have been a very favourite amusement for the pleasure parties about the West Lake there before the T'ai P'ing rebellion.

2. (6) K'UNG CHÊNG (*K'OUNG TCHENG*) 空箏. A double whistling top consisting of two drums like that of the single top, one on each end of a short wooden stick. The top is spun in the air, balanced on a string which is passed twice round its waist. Each end of the string is tied to a stick, and a peculiar jerking of these sticks makes the top spin. When a great speed is attained the turn of the string is slipped off, and the performer then makes his top

run up and down on the string, flings it thirty feet or more into the air and catches it again on the string behind his back, and so on. III.A.a

There are many different sizes, of which the larger weighing some pounds and made of wood coloured black, are perhaps peculiar to Peking. The measurements of a small bamboo specimen from *Peking* are :—Total length, $4\frac{7}{8}$ inches: thickness of each drum, $\frac{7}{8}$ inch; diameter, $3\frac{1}{2}$ inches; diameter of the boxwood axle, at either end, $1\frac{1}{4}$ inch; in the middle, $\frac{1}{2}$ inch. Each drum has two openings giving different notes and is divided inside into two compartments ; the opening for the lower note measures $\frac{9}{16}$ by $\frac{7}{16}$ inch, and for the higher note $\frac{1}{16}$ by $\frac{7}{16}$ inch; and the compartment for the latter is about one fourteenth part of the whole interior space. There are sometimes four whistles in each drum. The drums are bound with silk in grooves near the edges. The sticks are willow sticks about 21 inches long, and the string is 78 inches long.

At Peking, when the days are cold early and late, but hot at noon, in the Spring or Autumn, it is called '*Ka Ka* weather' from a distant likeness to the shape of this top [large at the two ends and small in the middle], which appears to be the typical instance of the shape known as *Ka Ka*.

A rough instrument similar to the above is made at Shanghai, where it is known as *Ti Wang Niu*, *T'ien Wêng* 天嗡, *Ch'ê Ling* 扯鈴, or *Fei Ling* 飛鈴. The total length of an average specimen is $5\frac{7}{8}$ inches ; thickness of each drum, $2\frac{1}{8}$ inches ; diameter, $2\frac{1}{2}$ inches. Length of the sticks [bamboo], 10 inches; of the string, 55 inches. The tenth month and, more especially, the New Year seem to be popular times for spinning Tops at Shanghai, and certain shops are full of them at those seasons, making them of different sizes

III.A.a and proportions, but never very large, or with the drums so flat as those made in Peking. A slightly different shape is made in Shantung. [*see* Plate XII.]

2. (7) A toy sold at *Shanghai* about New Year's time, formed of a round piece of wood $2\frac{1}{4}$ inches in diameter. There are four notches in the edge into which are glued empty nutshells of the *Pai Kuo* (*Salisburia adiantifolia*) with a slit cut across each to make a whistle. There are two small holes in the wooden disc through which a long string is put, the two ends being afterwards tied together. One end of the string loop thus made is held in either hand, and it is alternately pulled and let go in such a way as to make it twist and untwist itself, spinning the disc with its nutshell whistles rapidly backwards and forwards as it does so.

3. (1) T'AI P'ING HSIAO (*T'AI P'ING SIAO*) 太平簫. A bamboo pipe 16 inches long and $\frac{7}{8}$ inch in diameter, with a whistle head formed by nearly closing the top with a wooden plug and cutting a hole in the pipe, $\frac{5}{8}$ inch from the top, and usually at the back. There are six finger holes $1\frac{1}{2}$ inch apart; $2\frac{1}{2}$ inches above the sixth is a hole covered with a thin membrane taken from the inside of a reed: underneath and $1\frac{5}{8}$ inch below the lowest finger hole are two holes side by side through which an ornamental tassel or a string to hang the thing up by may be tied; and below these again, but on the upper side, are two more holes. These latter, if the holes underneath are covered, will give two semitones below the ordinary compass, but they are not intended to be so used. A skilful player could probably get two complete octaves with the six finger holes. The fifth and octave of the lower notes are easily produced by leaving the sixth hole open: the octave of each note can also be got by blowing harder, and the lowest holes will give the twelfth also. The scale begins approximately on B flat. The membrane is sometimes

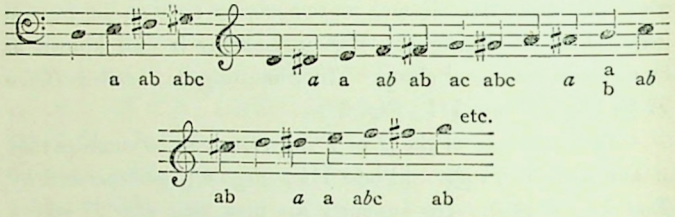
protected from the rain by a flap of leather tied to the pipe. The better instruments sold in shops are stained dark brown and varnished. The commoner form at *Shanghai* is a cheap kind sold in the streets, made of green bamboo and often prettily ornamented with patterns scratched on the surface of the pipe. The smaller ones have generally the finger-holes and the membrane-covered hole only ; a large specimen with the extra holes is about 14 inches long. III.A.a

All the holes of this whistle correspond very nearly with those of the *Ti tzŭ*. [III. A. b. 2.] It is not, as a rule, used in theatres or at religious ceremonies ; a large pair, bound with silk like the *Ti tzŭ*, may however be seen in funeral processions at Shanghai. The instrument is well known at Hangchow and at Peking. In Shantung it is called *Hsiao Ti* 簫笛. [Plate III., Fig. 3.]

The principle of the *T'ai P'ing Hsiao* is the same as that of the ancient *Ti* 邃. [Plate III., Fig. 4.], as described by *Tsai Yü* [f. 24.]. He supports his idea that the *Ti* was a *whistle* thus : An 'ancient poem' on the *Ti* speaks of it as the *Ch'u* 楚, a name which it seems to have got from being a favourite instrument with the people of *Ch'u* in what is now Hunan. And a *whistle* called *Ch'u,* with two finger holes, existed in the sixteenth century. The ancient *Ti* had three or, less probably, six finger holes. Secondly, he found the *Ti* described on good authority as identical with the *Yo* [2. (2) above] in all other respects, but longer. This, he argues, can only mean that, since the *Ti* and *Yo* were of the same pitch, they would need the same length of open pipe and consequently the wooden plug in the whistle head of the *Ti* would need a little extra length of pipe, or rather that the extra length of the *Ti* can only have been to accommodate such a plug. It is perhaps not unfair to add that a *whistle* is to this day called *Hsiao Ti.* This *Hsiao Ti* answers more nearly than any other

III.A.a existing instrument to the description of the *Hsiao Kuan* of the thirteenth century [Additional Note F.], and the persistent application of the name *Hsiao* to this whistle supports the idea of the possible identity of the two. If, as thus seems possible, the *Hsiao Kuan* was a whistle, *Tsai Yü* may probably claim *Chu Tzŭ* as a supporter of his view that the ancient *Tï* was a whistle [see above under *Fêng Huang Hsiao*].

A *Ti* made from *Tsai Yü's* description gave the following scale. [*The letters under the notes indicate the holes to be opened.* a *means the lowest hole,* b *the second hole and* c *the third*; *a, b, or c means that the hole in question is only partially open.*]



3. (2) HUA MEI CHIAO TZŬ (*HOUA MEI KIAO TZEU*) 畫眉叫子. A whistle used to imitate the singing of birds. It is a pipe of bamboo 1.5 inch long and 0.875 inch in diameter, open at both ends. A square hole is cut in the side near one end, and the part immediately above this hole is left projecting 0.25 inch beyond the top of the pipe. This projecting part is split in its thickness from the top down to the hole, and the outer half is raised, and kept in position by two wedge shaped slips of bamboo. A square mouth-piece is thus formed which directs the breath against the sharp edge of the hole. The performer gets different notes by opening and closing in various degrees the upper end of the pipe with his chin and the lower end with his hand. The compass is considerably more than an octave. The measurements vary a good deal. Sellers of cheap whistles and flutes,

in the streets of Shanghai usually have a string of these whistles also. In Shantung they are called *Hua Mei Shao êrh*. *Hua Mei* is the name of a thrush *Leucodiopteron Sinense* (Giles s.v. 畵). [*see* Plate VIII.] III.A.a

3. (3) SHAO ÊRH *(CHAO EUL)* 哨兒. Toy whistles made of dark grey clay and sold in Peking. They are made of several different shapes. One is in the shape of a bird, with red and white markings on the back. It is blown through the head, the whistle being in the throat. On each side of the body is a finger hole, so that three notes can be produced. The length is 2.875 inches. Another specimen, shaped like a fish and better modelled than the bird, is about 2.5 inches long, and has no finger-hole. The notes are very shrill [*Brussels Catalogue*, 704, 705, 706.] Similar whistles, [called sometimes *Ku Kuai*] rather more roughly made and varying much more in size and note than those sold in the streets of Peking, may be had at the annual fair in T'ai An.

These whistles seem to be very much like those obtained in Mexico and Central America; and a somewhat similar thing is made in Spain. At Cairo there are plaster whistles of about the same size and make [Engel pp. 66, 143, 224].

A very small tin whistle in the shape of a cock can be got at Shanghai.

3. (4) Toy whistles sold at the fair in T'ai An.

a. *Mien Hua Ch'ê Tzŭ* 綿花車子. A bamboo pipe about 5 inches long with the whistle cut at the lower end. The wind passing through the pipe turns a tiny spinning wheel. At Peking a similar whistle is made with four or five wheels of gaily coloured crinkled paper, just touching each other so that when the first is turned it moves the rest.

b. A very small whistle forming the tail of a jointed bamboo dragon.

III.A.b

c. A piece of bamboo 3 or 4 inches long with a whistle at the upper end and the lower end nearly or quite closed.

d. Shui Ch'iang 水鎗. A small bamboo whistle 2.5 inches long inserted into the side of a larger bamboo 5 or 6 inches long. The latter is closed at the bottom with a knot and filled with water. The size varies. It is used to imitate the singing of birds.

4. CH'UI CHI ÈRH *(TCH'OUEI KI EUL)* 吹嘰兒. A toy made at *Hangchow*. It is a hollow brass disc, $\frac{3}{4}$ inch in diameter and about $\frac{1}{4}$ inch thick, concave below and convex above with a handle at one side $\frac{3}{4}$ inch long. The blow hole, $\frac{1}{6}$ inch large, is in the middle of the upper side, and there is a finger-hole of the same size in the middle of the lower side. The notes produced are very shrill. Street boys make a whistle on the same sort of principle with two copper cash.

At Peking a little whistle is made of a strip of tin of which one end is wrapped over with a second piece of tin so as to form a passage for the air, while the other end is curved over so that its edge meets the current of air.

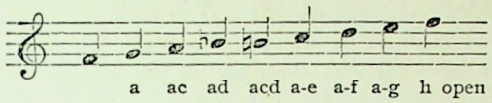
b.—Transversely blown.

1. CH'IH *(TCH'EU)* 篪. A bamboo flute used only in the State services. The length is 17.75 inches, the external diameter, 1.1875 inch. The blow hole is 5.6875 inches from the right hand[1] end, and the pipe is stopped close above it. The other end has a stopper with a small hole in the centre. There are six finger holes arranged like those of the *Fêng Huang Hsiao*, the first five on the side furthest from the performer, the sixth on the near side. The five holes are separated by spaces of about 1.25 inch,[2] the lowest being 3.375 inches from the end. The sixth hole is equally distant from

[1] *or* left hand. The *Ch'ih* is made in pairs—right and left handed.

[2] Compare Additional Note E.

either end. The scale, as ascertained by the Reverend F. W. Galpin, is :—[*vide* Plate III, Fig. 5.] III.A.b.



a ac ad acd a-e a-f a-g h open

The use of a flute of this nature under the name of *Ch'ih* seems to date at least from the *Sung* dynasty. The *Sung* illustrations to the *Êrh Ya* show a flute with three holes near one end and one on the opposite side near the other end [Plate III, Fig. 7.], thus perhaps preserving a likeness of the three-holed *Hêng Ch'ui*. *Lü Lü Chêng I* gives the modern instrument. In the *Ming* dynasty the small hole in the covered end was used as a finger-hole and there were only four holes in front, as may be seen in the picture in *Wên Miao Yo Shu* and is described by *Tsai Yü* in a section headed 'The modern *Ch'ih* is no *Ch'ih*.' *Ch'üeh Li Tsuan Yao* shows this four-holed instrument, and in *Wên Miao Ssŭ Tien K'ao* we read : 'The *Shih Tien K'ao* 釋奠考 says : *P'ao Hsi* made the *Ch'ih* of bamboo. The notes are mournful and in tune with the *Hsüan*. It is 14 inches long, with the ends open, and has variously ten, nine, eight, seven, or six holes. Nowadays there is one hole at the back, four in front, and one in the stopper.'

Tsai Yü had examined a genuine specimen of the ancient *Ch'ih*, and his account of it is here given as the instrument appears to be of special interest.

"While the contents of the illustrated books up to the *T'ang* dynasty all have some things correct and some mistakes, yet those that follow true principles are still many ; but from the *Sung* onwards the errors are increased greatly. For example, of the five sorts of Bamboo Sound[1]

[1] The Chinese distinguish eight qualities of sound, produced respectively by instruments of eight different materials. [Additional Note F.]

III.A.b

instruments not one is correct. As a rule the ancient instruments were delicately made, small and short; the modern are coarse, large and long. In fact, from the disuse of the millet foot [1] and the mistaken use of the contemporary foot, the *T'ai Ch'ang* [2] of recent times has made the transverse *Ti* 笛 act for the *Ti* 迪, the Single *Hsiao* for the *Yo*, and what is called the *P'ai Hsiao* has wrongly added a wooden case disregarding the old fashion of the *Han* and *T'ang*, and what they call *Ch'ih* and *Yo* are faulty, coarse, vulgar, and ridiculous. Once at the house of an antiquary I saw an ancient instrument, the copper [3] coloured as if it were varnished, rather like a poem jar [詩筒]: hollow in the middle, its two ends were covered; in the centre of neither of the covers was there any hole. In front, on either side left and right were three holes, in all six holes; the diameter of the holes was one *fên* and a half. Only in the middle one hole on top opened upwards, with a diameter of perhaps three *fên*. On the back were engraved three characters:—all of the ancient *Chuan* style exceedingly unusual, namely, *Huang Chung Ch'ih* 黃鍾匳."

"The size of the circumference and diameter of the two ends was identical with the cash of *K'ai Yüan* currency: laying cash side by side, fourteen of them corresponded with the length of the *Ch'ih*. What was called the Great *Ch'ih* was one foot and four inches long. Musicians credibly record that the diameter of the *K'ai Yüan* cash was one inch of the ancient millet foot. Measured with a thin slip of bamboo the diameter of the hollow was seven *fên*; the thickness of the pipe, one *fên* and a half. Blowing it produced a sobbing sound, its notes were harmonious and refined; a veritable relic of the Three Dynasties, rare and invaluable. The *Êrh Ya* [B.C. 400] says: 'The large *Ch'ih* is called *Yin* 沂. *Note*—The *Ch'ih* is made of bamboo; its length, 1 foot 4 inches; circumference, 3 inches; one hole opens upwards inch [*sic*] 3 *fên*, called *Ch'iao*; it is blown transversely: the small variety 1 foot 2 inches.'

[1] The 'millet foot' is equivalent to the ancient *Hsia* dynasty foot, which *Tsai Yü* generally uses. The length of the pipe giving the note *Huang Chung* was taken as one foot, and it was found to be equal to one hundred millet corns laid side by side. Thus the foot was divided into ten inches, and each inch into ten parts called *fên*. The inch is the same as the English inch.

[2] *T'ai Ch'ang* 太常 seems to have been the title of some high officer in the Board of Rites, or of the Board itself.

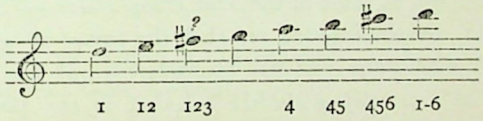
[3] On f. 17 this same *Ch'ih* is said to have been made of copper [or bronze].

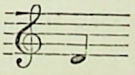
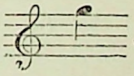
III.A.b

.....The *Kuang Ya* says: "Eight holes.....a quotation from *Sun Yen* says: 'The *Ch'ih* wails, the sound is like an infant weeping.' *Chêng Ssŭ Nung's* edition of the *Chou Li* says: '*Ch'ih*: seven holes;.....' .....". The works of *Chu Hsi* have: "*Ch'ih*: 1 foot 4 inches long, 3 inches round, seven holes, one hole facing upwards 3 *fên* in diameter, altogether eight holes; blown transversely." The instrument seen at the present day had only seven holes including the blow hole. The fact that former scholars have made eight holes is due to their mistaken following of the *Kuang Ya*. Only *Chêng Ssŭ Nung* is correct in making seven holes [ff. 24, 25]."

In a separate paragraph *Tsai Yü* gives the positions of the seven holes. They were so arranged that their centres divided the whole length of the pipe into six, and into four, equal parts. That is to say the blow hole was in the middle, and the three finger holes on either side were distant $2\frac{1}{3}$, $3\frac{1}{2}$, and $4\frac{2}{3}$ inches respectively from the centre of the blow hole [*see* Plate III, Fig. 6.]. He says too that it was impossible to assign definitely a given note to a given hole.

A pipe of the above dimensions, but with both ends open, gives a chromatic scale from E to A sharp. The Reverend F. W. Galpin writes:—With one end open I get the following rough scale[1]:—



With both ends stopped it will not give a proper scale at all, though notes ranging from  to , or even higher with harmonics, can be produced. Mr. Galpin writes again:—If the bore were larger it might be made

[1] Numbers placed below or above a musical note indicate the hole or holes to be opened to produce the note. Corresponding numbers will be found in the illustrations.

III.A.b to play in the same way as the *Hsüan* on the principle of the musical Resonator.

No authority has been found for opening either one end or both the ends; and it is to be noticed that the difficulty of producing a scale did not make *Tsai Yü* doubt the genuineness of his specimen.

The Chinese connect the *Hsüan* [III. A. a. 1.] and *Ch'ih* together, and in the *Book of Odes* it is written: 'The elder brother blows the *Hsüan*, the younger blows the *Ch'ih*.'[1] In the modern reproductions of the two instruments the similarity of their tone is quite noticeable, especially in the lower notes.

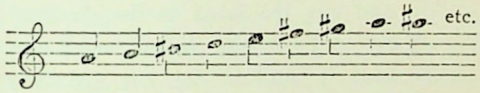
2. (1) TI (*TI*) 笛, Plate III, Fig. 8. A pipe of bamboo with generally not more than one knot, and tipped with bone. There is a variety with three or four knots, and the pipe stained and varnished like that of the *Hsiao*. The total length is 26.25 inches, the diameter not quite 1 inch. The pipe is stopped just above the blow hole, which is 10 inches from the left hand end. The part above this is often a separate piece of bamboo. The other eleven holes are the same in arrangement[2] and use as those of the *T'ai P'ing Hsiao* [III A. a. 3. (1).] Mr. Galpin informs me that the device of covering a hole with membrane was not characteristic of the English *Recorder* as is sometimes stated; but that in the early years of the last century a transverse flute, called the *Voice Flute*, was produced in London with a membrane exactly like that of the *Ti*. In China the membrane has been used for at least six centuries [*v.* Additional Note F.] It is now found as a rule on the *Ti* and *T'ai P'ing Hsiao*, and occasionally on the single reed *Kuan tzŭ* [III. B. c. 1.]

[1] 伯氏吹塤仲氏吹篪.

[2] "It is worth noting that the *Ti* has no back hole as on the *Hsiao*, but six instead of five in front."—F. W. Galpin.

The pipe is lacquered black or, more commonly, left the natural colour of the bamboo and bound with silk at frequent intervals—the silk bands being afterwards smeared over with some black material. *Ti tzŭ* is the common name at Peking and *Shanghai;* at Hangchow it is always *Ti êrh.* III.A.b

The *Ti tzŭ* is very commonly used by amateurs, by the popular bands called *Ku ch'ui pu* 鼓吹部 or *Ch'ui Shou* 吹手, at weddings and funerals, at the State services, by blind fortune-tellers [Brussels Cat. 689], by Taoist priests and a certain sect of Buddhists, and to accompany the *K'un Ch'iang* music in the theatre. Being the commonest instrument of fixed pitch it is used in the theatre as the standard for the strings and voice,—the different keys being named with reference to the position on the *Ti tzŭ* of the note *Ch'ê* [the outer string of the *Hu Ch'in*] in each. The part for the *Ti* in *Wên Miao Yo Shu* is written in the same notation as that used for the *Hsiao.* The scale of the modern ritual *Ti* is:—



For further particulars about the scale of the *Ti* and *Hsiao*, *see* Additional Notes B and C.

The *Ti* used at the State services has the ends ornamented with the head and tail of a dragon[1] carved in wood, and, like all the wind instruments for ritual use except the *Shêng*, is coloured scarlet. [*see* Plate XII.] The length, excluding the head and tail, is 23¼ inches. *Tsai Yü* mentions the gilded dragon's head [f. 24], and condemns the red colouring as intensely vulgar, saying that bamboo

[1] *Lung T'ou Ti* 龍頭笛. It is occasionally used at funerals also, but the pipe is then uncoloured, and has the ordinary black bands.

III.A.b instruments should be made of naturally black bamboo, and wooden instruments covered with black lacquer as the *Ch'in* and *Shê* still are. Flutes, he says, in the *Yüan* dynasty were coloured green like the *wu t'ung* leaf, with red bands [f. 26]. *Wên Miao Yo Shu* [V. f. 25] shows the *Ti* without the head or tail, and without the membrane hole or the two lower holes; and the string of both *Ti* and *Hsiao* passes through very small holes on opposite sides of the pipe instead of large holes close together underneath. *Lü Lü Chêng I* omits the membrane hole, but has the rest as in the modern *Ti tzŭ*. A specimen of the usual proportions, but made of brass and engraved with characters and with a very delicate "hawthorn" pattern, has been seen at Shanghai. Iron flutes are made at Hangchow. A cheap [bamboo] variety is sold in the streets of Shanghai, Peking, and other places.

We gather from *Tsai Yü* that the *Ti* was derived from the *Ch'iang* people, whose *Ti* had three holes according to the *Shuo Wên*, and was the same as the sixteenth century *Hêng Ch'ui* 橫吹. "From the *Han* dynasty onwards only popular bands used it, and it did not get into classical music..... Anciently there was no transverse *Ti*, and in fact it is a foreign instrument" [f. 22]. *Lü Lü Chêng I* says that it came from the North, and was used by cavalry, and again [III. f. 28] quotes from a book of the *Sung* dynasty: "The transverse *Ti*[1] is the small *Ch'ih;* if it has a mouth-piece it is called *I Tsui Ti* 義嘴笛." *Wên Miao Yo Shu* also, in a long list of *Ti*, mentions one with a mouth-piece.

[1] The popular transverse *Ti* [*see* under 2. (2)] is still called *Hêng Ti* 橫笛 in Shantung. This name, spelt *Hwang-teih*, is applied to the horns *Hao T'ung* and *La Pa* in some European books. *see* Brussels Catalogue, 139, 140.

2. (2) PANG TZŬ TI *(PANG TZEU TI)* 梆子笛. III.A.b [Plate III, Fig. 9]. A smaller variety of *Ti*, named from the fact that it is played with the *Pang tzŭ* [I. A. 6. (1)]. The total length is 17.5 inches, the diameter about 0.625 inch, and the centre of the blow hole is 4.5 inches from the end. The lowest note is in unison with the third note of the larger *Ti*. The connexion of this instrument with the *Pang tzŭ* suggests that it belongs properly to the North or North-west of China, but the specimen measured was made at Shanghai. The properly made flutes used in the North, where the bamboo does not grow well, are imported; the smaller popular instruments are often made locally of imported bamboo. One small shop in Shanghai stated that they exported about fifty flutes daily.

The larger and smaller *Ti* are sometimes distinguished as male and female, like the "male and female voice" of the clock of Trinity College at Cambridge.

A still smaller popular *Ti*, about 12 inches long, is sold in Peking and elsewhere in the North. It has generally blow hole, six finger holes, membrane hole and two holes below for the string.

The ancient flutes are clearly distinguished by *Tsai Yü* [f. 27] as follows:—

> "As to the four instruments *Kuan*, *Hsiao*, *Yo*, *Ti*, they are much alike; only a pipe without holes, blown separately is a *Kuan;* (several pipes) blown joined together, without holes, form a *Hsiao;* a pipe (with holes) blown like a *Hsiao* is a *Yo;* blown like a *Ch'u*, it is a *Ti*. These four instruments are all about the same in length and thickness. The *Ch'ih* alone is not the same in size, and the manner of blowing it is different."

With regard to the *Kuan*, *Tsai Yü* probably refers only to the most ancient times. The *Érh Ya* distinguishes three

III.B.a sizes of *Kuan;* and the name occurs also in *Mencius:*—"Now your Majesty is having music here . . . The people hear the noise of your bells and drums, and the notes of your fifes [*Kuan*] and pipes [*Yo*], and they all with aching heads knit their brows and say to one another 'That's how our king likes his music!'" A proper musical instrument, rather than a set of separate pitch-pipes, is evidently intended in both places. The *Sung* illustrations to the *Êrh Ya* show a double pipe very much like the modern *Kuan tzŭ* [III. B. a. 1. (1)]. It is possible that *Kuan*, in the *Êrh Ya* and *Mencius*, stands for *Ti*, which the *Êrh Ya* otherwise omits; and the *Tzŭ k'ê t'u shuo* says that the *Ya Ti* 雅笛 was anciently called *Kuan*. A note to '*Kuan*' in the *Chou Li* says: 'Like the *Ti* but smaller, two are joined together and so blown.' *See* Additional Note F.

Flutes now in use seem all to have six finger holes, either, as in the *Ti* or *T'ai P'ing Hsiao*, all on one side with a seventh hole covered with membrane, or five on one side and the sixth on the opposite side as in the *Hsiao* and *Ch'ih.*

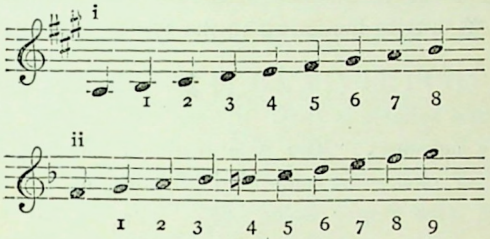
Section B. Reeds.

a.—Double Reeds.

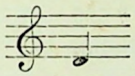
1. (1) KUAN *(KOUAN)* 管, Plate IV., Figs. 1, 2. A cylindrical pipe of redwood, tipped with bone and fitted with a reed about 3 inches long. There are seven oval finger holes on the upper side and either one or two underneath. The length is—with nine holes, 8.25 inches;—with eight holes, 7.25 inches; and the diameters of the two varieties, 0.75 inch and 0.5 inch respectively. The reed is kept in shape by a band of brass wire. The *Kuan tzŭ* [as it is generally called] is used—but not very commonly—at

weddings and funerals at *Shanghai* and elsewhere. The name means a *pipe* or *pipes*, and was anciently applied to a set of separate pipes without reeds, which gave the notes of the chromatic scale and were used as a standard of pitch. III.B.a

The scales, taken from the Brussels Catalogue [695, 696], are :—



i is taken from an instrument like the smaller one above; ii is the scale of a pipe nearly 11 inches long. The lowest note of the larger instrument described above is



At Hangchow the pipes are sometimes made of bamboo either naturally speckled or ornamented with a hot iron. A larger specimen examined was $7\frac{2}{3}$ inches long and $\frac{5}{8}$ inch in diameter; a smaller one, $7\frac{3}{8}$ inches long and $\frac{1}{2}$ inch in diameter. All the instruments seemed to be rather old. Except in the number of finger holes, eight instead of nine, they corresponded exactly with the description of the *Pieh Li* in *K'ang Hsi*.

Tsai Yü, in *Ling hsing hsiao wu p'u* f. 6, gives the larger variety as *Tan Kuan* 單管 or *single pipe* [elsewhere as *T'ou Kuan* 頭管], and two of the smaller, joined together, as *Shuang Kuan* 雙管 or *double pipe*; and both to be used

III.B.a in the lesser ritual of *Ling Hsing*. The smaller pipes have not bone tips, but otherwise both instruments seem to be identical with the modern *Kuan tzŭ*, and they are described as then in popular use. *Lü Lü Chéng I* includes the *T'ou Kuan* alone of popular instruments, so that it was probably used in some State service then also. The two varieties are distinguished as *Ta Kuan* 大管 and *Hsiao Kuan* 小管, and the instrument is said to have come from the *Ch'iang* 羌, a tribe bordering on the West of China.

1. (2) PI LI *(PI LI)* 觱篥. The Pekingese sound for the first syllable is *Pieh*. *K'ang Hsi* [s.v. 篥] quotes the following account: "The pipe made of bamboo, the head ['reed'] of reed,—the same kind of thing as the *Hu Chia*, but with nine finger holes [竅]. The note is *Chiao* 角, and the sound mournful [*pei* 悲]. It is also called *Pei Li*, and *Chia Kuan* 笳管. *Li* 篥 is also written *Li* 栗." *Tsai Yü* [f. 12] says that the *T'ou Kuan* [see above] is the same kind of instrument as the *Hu Chia* or *Pieh Li*. The Brussels Catalogue has "695. *Kouan, Kwan-tze* ou *Pi-li*." The instrument [or certainly the name] is now, to say the least, far from common in some parts of China; but from the above descriptions it was evidently very much like the *Kuan tzŭ*, except that the pipe was made of bamboo. An old scholar at Hangchow used to recall hearing the *Pi Li* used in the Examination Hall [貢院] there, for the ceremony vulgarly called *Ch'ui Kuei* 吹鬼, which does not now take place. He vaguely recalled it as "bamboo above and metal below." One long note was sounded on it at dusk, for the real purpose, he said, of inducing the *Yin Ch'i* 陰氣, and was at once followed by the drums and gong of the night watch. *See* also under *Kuan tzŭ* [above] and Additional Note F.

It should be added that Giles [s.v. 篳] translates *Pi Li* "the Tartar *horn*," and *K'ang Hsi*, under the same word, speaks repeatedly of a horn [角]. III.B.a

1. (3) HU CHIA *(HOU KIA)* 胡笳. *K'ang Hsi* [s.v. 笳] has: "The section of the *Shih Chi* 史記 [c. B.C. 90] on Music says the *Hu Chia* is like the *Pieh Li*, but without holes. In later ages it was used in the train of the Imperial carriage. The *Chia* made by *Po Yang* when he fled to *Hsi Jung* was a rush leaf rolled up and blown . . . ." It is said that at the same temple where the *Ku kuai* [III. B. b. 1.] is sold, wooden pipes without finger holes and with a reed made of a leaf rolled up are also sold to the pilgrims. Mr. Galpin writes: "This would be a double reed. Tubes of green willow bark slipped off the stem are used for double reeds in the same way in England."

An instrument called *Chia* is said to be still made at Peking in the Summer, and was described by a native as a reed or rush coiled up into a pipe.

At the festival of *Tuan Wu*, when onions are specially eaten, it is said that a similar thing is made by children at Shanghai of the onion leaves. The children in Shantung do this at any time when onions or leeks are available.

The illustration [Plate IV, Fig. 3.] is from *Tzŭ k'ê t'u shuo*, and though it does not agree with the above description, probably represents some real instrument. Mr. Galpin writes of this that it "reproduces in the Far East the *Hornpipe* of the Welsh, the *Cromorne* or *Krumhorn* of the European nations. It apparently consists of a *cylindrical* tube pierced with three holes terminated at the lower end with a natural horn and having at the upper end a double reed [similar to that used in the *Kuan tzŭ*] covered with a cap. The instrument is blown through a small orifice in the top of the cap. I can hardly believe that this is not a picture of a

III.B.a mediæval European instrument which had found its way out to China. A fine Stradivarius violin was discovered in the Celestial Empire, and in the Berlin Ethnographical Museum there is a specimen of a Rackett or Sausage Bassoon grouped with the Chinese instruments, but *made in Europe* in the sixteenth or early seventeenth century. The principle of the 'covered' reed is found in India, but only, I believe, with the single reed. The European Krumhorn had a double reed."

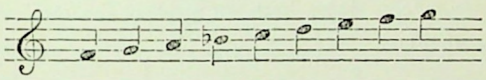
2. HUA CHIAO (*HOUA KIO*) 花角. An instrument of this name seems, if it is not still in use, to have only lately become obsolete; but it is hard to make out quite what it was. At Hangchow it is said to have been the same as the *Pi Li*. Dennys calls it 'a military *brass* instrument,' giving an alternative name, *Wu T'ung Chiao* 梧桐角, which suggests *wood*[1]. *Tsai Yü* [Vol. VI. f. 19.] arguing that certain ancient music cannot have been purely instrumental, says that words were sung even to the three note scale[2] of the *Hua Chiao*, an instrument which would not produce a complete scale. The picture book *Tui hsiang tsa tzŭ* has a drawing of the *Hua Chiao* [Plate III. Fig. 4.] on which Mr. Galpin writes: "The illustration is intensely interesting. It shows a covered reed applied to the resonator form of instrument we find in the *Hsüan*. The neck-like part is the blowing tube;—inside is the double reed [apparently the artist has tried to show it]: at the lower end of the globular resonator are three large finger holes. I have made a rough model of this instrument, of course with no definite scale to guide me. The instrument gave the following series of notes with a *Kuan tzŭ* reed:—all holes closed—nothing; one hole

[1] *Wu T'ung* is the name of a tree.

[2] 三弄之曲. Chinese scholars seem to be very uncertain what this phrase, which is well known, really means.

open—D ; two holes open—E ; three holes open—F natural. I do not know of any instance of the *reed* [either double or single] applied to a globular resonator." It will be noted that the somewhat vague recollection at Hangchow of the likeness of the *Hua Chiao* to the *Pi Li*, which certainly had a *double reed*, and *Tsai Yü* with his reliable evidence as to the scale of the *Hua Chiao*, both tend to confirm Mr. Galpin's very interesting interpretation of this at first sight unpromising illustration.

3. (1) SO NA (*SOUO NA*) 鎖吶. A conical pipe of redwood fitted with a brass mouth-piece to which a loose disc is attached by a chain, and with a moveable brass and copper bell. A small straw reed bound round the middle with copper wire is put on to the mouth-piece. There are seven finger holes on the upper side and one underneath. The total length is 17.75 inches; the length of the mouth-piece, 2.5 inches; of the pipe, 10 inches. The external diameter of the pipe is 0.5 to 1 inch; of the bell, 5.375 inches. The scale is :—



It is a common instrument almost invariably used at funerals at Peking, *Shanghai*, and many other places. At Peking the *So Na* is regularly made of two sizes, the larger being about 19 inches long; and an old and ornamented specimen seen there was about 23 inches long. At T'ai An, in Shantung, specimens made wholly of brass and copper may be obtained. The Shantung name is *Wa Wa êrh*.

The similarity of sound between *So Na* and *Zourna*, the name of a Persian oboe, is pointed out by M. Mahillon [*Brussels Cat.* 697], and the description of the *Zourna*

III.B.b [Engel p. 167] would do quite as well for the *So Na* except that the former has not the brass bell.

3. (2) CHI NA (*KI NA*) 嘰吶. This is a smaller variety of the *So Na*. At Peking and perhaps in the South[1], but not about *Shanghai*, it is called *K'ai Ti* 凱笛. The total length is 11.25 inches; the bell is 2.5 inches long and 3 inches across the mouth. A specimen at South Kensington [Engel p. 184] has nine finger holes instead of eight which is the usual number at Shanghai.

A specimen from Hainan [Plate IV., Fig. 5.] is 10.5 inches long; the mouth-piece, made of horn, about 2 inches long and with the disc fixed. The pipe and moveable bell are both of some hard wood with ornamental grain. The bell is made in three pieces, and is 2 inches long and 2.75 inches in diameter. The interior diameter of the pipe varies from 0.0625 to 0.75 inch. There are eight finger holes apparently bored with a hot iron. The local name for the instrument is *Ti tzŭ* 笛子.

The names *So Na*, a meaningless transliteration, and *Ti*, borrowed from the flute, both suggest a foreign origin for these instruments.

b.—Free Reeds.

1. KU KUAI (*KOU KOUAI*) 古怪. A toy which is sold or given every Spring to pilgrims to the *Mao Shan* 茅山, a hill south-east of Nanking. It consists of a drum of bamboo about 1.125 inch high and 1.75 inch in diameter. Both ends are covered with pieces of bamboo and there is a partition in the middle. In the centre of each end a small free reed tongue is cut. Two little bamboo pipes are put

[1] Another southern name is perhaps *Hsiang Ti* 響笛, which appears as *Heang-teih* in some European works.—*see*, e.g. Brussels Catalogue 119.

into the side as mouth-pieces and the reeds can be sounded either by suction or by blowing. Two different notes are produced. [*see* Plate VIII.] III.B.b

A similar thing [called *Shêng tzŭ* 笙子] is sold to pilgrims at T'ai An. Here the reeds are inserted into the sides of short bamboo pipes. Two pipes are fastened side by side, or the reeds are put at the two ends of a single longer pipe, which has a division in the middle. Each reed has a blowing tube, like those of the *Ku Kuai*, let into the side of the pipe.

These toys are interesting as preserving perhaps the original form of the free reed.

2. (1) SHÊNG (*CHENG*) 笙. A small hand-organ, composed of bamboo pipes with free reeds, fitted into the top of a wooden air-chamber which has a mouth-piece at one side. A detailed account of an ordinary specimen made at Shanghai in 1900 or 1901 follows, and will probably apply on the whole to those made in other parts of China. [*see* Plate XII.]

a. The *Air-chamber* [*Shêng Tou* 笙斗 or *P'ao* 匏] is of *wu-t'ung* wood scented with camphor and lacquered black; circular, with convex sides. The top is made of hardwood. The diameter at the top is $2\frac{5}{8}$ inches, at the bottom $1\frac{1}{8}$ inch, the height is $2\frac{3}{8}$ inches. The sides and top are about $\frac{1}{8}$ inch thick. A round piece of ivory, $\frac{1}{2}$ inch in diameter, is let into the bottom, perforated with five holes. There is a horizontal partition $\frac{1}{8}$ inch thick half way between the top and bottom. On the middle of this partition stands a solid drum of wood about 1 inch in diameter, reaching to the top and leaving a passage of $\frac{5}{8}$ inch round itself for the air. The air-chamber is sometimes made of redwood polished.

b. The *Mouth-piece* [*Chou* 咮 or *Tsui* 嘴] is of wood, $1\frac{1}{4}$ inch long. The height at the inner end is 1 inch, at the outer end, $1\frac{5}{8}$ inch, the greatest width is $\frac{3}{4}$ inch. The lower side

III.B.b is straight and level, the upper side curves so that the highest point is nearly level with the top of the air-chamber. The outer end is covered with a piece of ivory, egg-shaped and with concave surface, $\frac{3}{16}$ inch thick at the sides, with a hole $\frac{1}{4}$ inch high and $\frac{1}{4}$ inch wide below, growing narrower towards the top.

c. The *Pipes* [*Hsiu Chua* 脩 樧 or *Kuan* 管], seventeen in number, stand in holes round the top of the air-chamber, touching each other except in one place where there is a gap of about $\frac{3}{4}$ inch. They are kept together by a band of horn, level with the tops of the shortest pipes. Each pipe is of black bamboo with a tapering foot of hardwood about $1\frac{1}{4}$ inch long. Nearly half of this foot is visible above the air-chamber. At the lower end half the thickness of the foot is cut away for the length of $\frac{5}{16}$ inch, and the part of the central cavity thus exposed is covered with a very thin brass reed [*Huang* 簧]. The tongue of the reed is $\frac{3}{8}$ inch long and $\frac{1}{16}$ inch wide. It points upwards and has a little spot of wax stuck to it near the free upper end. The pipes are arranged so that all the reeds face the side of the air-chamber. Each sounding pipe has a long narrow slit on the inner side, and a circular finger hole near the lower end. The finger hole must be closed to make the pipe speak. The measurements of the pipe for the lowest note *Ho* [A] are:—total length, $11\frac{3}{4}$ inches; external diameter, $\frac{3}{8}$ inch; internal diameter, $\frac{7}{32}$ inch[1]. Length from top of the reed to bottom of the narrow slit, $9\frac{7}{24}$ inches. This last measurement, for the pipe which gives *Ch'é* [E] is $6\frac{1}{3}$ inches, and for the *Liu* [A] pipe, $4\frac{3}{24}$ inches. The lengths of the pipes, measured from the top of the air-chamber, are as follows:—three pipes [of which two are dumb] of 5 inches, four [of which one is dumb] of

[1] The diameters of all the pipes are nearly the same.

III.B.b

7 inches, four [of which one is dumb] of $8\frac{3}{4}$ inches, four of $10\frac{3}{4}$ inches, two of $13\frac{7}{8}$ inches. The dumb pipes have no reed or finger hole.

The *Shêng* is now tuned to the *Ti tzŭ*. Each pipe has commonly a red label bearing the name of its proper note and the notes which should be played simultaneously with it. In the table below the pipes are numbered consecutively, beginning at the left hand side of the gap in their circle.

Pipe.	Proper Note.	Approximate equivalent.	To be accompanied with
15	*Ho*	A	3. F sharp
7	*Ssŭ*	B	11. B Sve
5	*I*	C	—
14	*Shang*	D	13. D Sve
8	*Ch'ê*	E	15. A
4	*Ch'ê*	E	15. A
3	*Kung*	F sharp	7, 11. B, B Sve
6	*Fan*	G	—
2	*Fan*	G sharp	10. C sharp
12	*Liu*	A	14 15. D, A
11	*Wu*	B	8, 7. E, B
10	*I*	C sharp	—
13	*Shang*	D	6. G

The finger holes of 3 and 4 are on the inside of the pipes and are covered with the first finger of the right hand.

It will be seen in the above table that the European scale begins on *Shang* [D]. G sharp is *possibly* a mistake. Mr. Hermann Smith[1] gives the second pipe slightly *flat* as compared with the sixth, and suggests that it is so tuned in order to give a perfect fourth with the tenth pipe. In the instrument here described the second and tenth pipes are both raised a semitone as compared with the notes given by Mr. Smith. Compare Additional Notes A. B. C.

[1] *The World's Earliest Music* pp. 203—5, etc. This book, which I first saw after my own notes were written, contains far the best account of the *Shêng* that I am acquainted with.

III.B.b

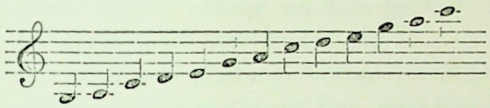
Lü Lü Chêng I gives the above notes, but with no C sharp, and with E repeated an octave higher. *Wên Miao Yo Shu* has the chromatic scale with the notes arranged so that the longest pipe gives the lowest note and so on. In modern instruments the notes seem to be arranged perhaps [as in the ancient instrument] to suit the fingers, and certainly without regard to the apparent length of the pipes. The slits on the inner side of the pipes are certainly designed to regulate the pitch of the notes.

Gentle blowing makes several reeds sound together, whether, in most cases[1], the finger holes are open or closed; as one blows harder other reeds sound, but with very hard blowing the pipes will speak only if the holes are closed, when each gives, as a rule, the same note as would be produced by suction. There can be no doubt, however, that the right way to sound the instrument is by suction, though the performer may possibly blow also to get certain effects. The only primitive instrument outside China sounded in this way seems to be the Mexican *Acocotl* or *Clarin*—a single pipe about 8 feet long [Engel p. 73]. The suction principle distinguishes the modern American reed organ from the harmonium. The free reed used in these instruments was copied from the *Shêng* in the eighteenth century, and had been unknown in Europe before that time.

Besides small variations there seem to be two recognized sizes of *Shêng*. The Brussels Museum has a specimen about $3\frac{1}{2}$ inches longer than the one described above. The small kind seems to be the only one known at Shanghai, and the larger is found at Peking. Those used by the Lamas from Peking [III. C. 2. (4)] seemed to be considerably larger than the common *Shêng*, and had also the old-fashioned coffee-pot

[1] Some of the reeds give their proper note thus only when the finger hole is open.

spout mouth-piece, perhaps made of pewter, which is now rarely seen. A manual[1] published in 1872 names and gives drawing of the larger and smaller *Shêng*, and shows the old mouth-piece—apparently fitted into one of the modern shape. The instruments used in the Confucian temple at Hangchow and dated 1870 have only the modern mouth-piece. A *Shêng* in the South Kensington Museum [Engel p. 188] is said to have the following scale :— III.B.b.



Compare Brussels Catalogue 137.

A specimen seen at T'ai An in 1906 was noticeably larger than the usual size, the total length being about 2 feet, and the diameter of the pipes nearly $\frac{3}{4}$ inch. The instrument had these peculiarities—of the seventeen pipes all had finger holes and only three [1, 16, 17] were dumb; the top of the air-chamber was covered with a brass-plate, and there was no hole in the underside; the mouth-piece was long and only slightly curved. There was no opportunity of taking accurate measurements or testing the scale.

What follows is taken from *Tsai Yü's* "Introduction to the Gourd Sound[2]" [f. 28]. In prehistoric times, when learning was scarce and manufactures rude, *P'ao*, the round gourd, was used to make the larger and smaller *Shêng*, *Hu* 壺, the bottle gourd, was used to put wine or medicine in. But the Princes of the Three Dynasties encouraged learning and handicrafts; and glue, varnish, horn, and wood took the place of the round gourd; gold and tin[3] of the bottle gourd;

[1] 皇朝祭器樂舞錄

[2] *See* p. 75, Note 1.

[3] 金錫

III.B.b and there can be no doubt that the wooden body of the *Shêng* dates from the Three Dynasties, although it retains its old name of Gourd. "It is clear that when [the ancients] speak of the *P'ao*, they mean what we now call *Shêng Tou*, and it is right to call it *P'ao*, but a mistake to call it *Tou*. The substitution of wood for a gourd is extremely good, and its origin also is remote. It cannot have been done but by the sages of the Three Dynasties. . . . I hear that the cave-dwelling *Man* 蠻 still use gourds for the bodies of their *Shêng*. . . . The second way [to make a *Shêng*] is to take *t'ung* wood, because it is light, and carve and fashion a gourd-shaped body, and to take *tsao* 棗 wood, because it is hard, and bore holes in it, to make the top face of the 'gourd'; in the middle make it solid like the common *Shêng*; if it is not solid you waste breath and it is hard to blow [吹]. Outside the 'gourd' fix the mouth-piece which is called the *beak* [*chou*], in shape like the neck of a goose, and varnish the whole black." The classical differs from the common *Shêng* in having the circle of pipes like a ring without break, and all the holes face outwards. "The difference from the common *Shêng* consists" *Tsai Yü* himself says "only in the gourd shape [*i.e.* globular], and the notes are not the same. . . ."

From this *Introduction* it appears that the common *Shêng* of the sixteenth century was practically identical with the modern instrument in the shape—elongated, not round like a gourd—and solid core of the air-chamber; and in the number and arrangement of the pipes—seventeen, with a gap in the ring and two holes facing inwards. The notes were "not the same" as the chromatic scale of the classical *Shêng*, and may have been those of the modern. On the other hand the words 'seventeen *reed Shêng*' and the absence of allusion to dumb pipes may show that all the pipes had reeds. *Wên Miao Yo*

Shu has organs both with seventeen and with thirteen reeds. The remarkable difference between the modern mouth-piece and that described is not mentioned, so that it is possible that the present shape had not been introduced. The old form is clearly drawn in *Ch'üeh Li Tsuan Yao*. There is no reference to the horizontal division of the air-chamber, or to the opening underneath in either the classical or the common *Shêng*. [*see* Additional Note F.] III.B.b

The Musical Annals of the *Yüan* History say that the *Shêng* introduced from Mohammedan lands at the time of the universal union [*i.e.* under Kublai Khan] had bamboo reeds [*Tsai Yü* f. 35]. Arabian and Persian instruments do not seem to include anything like the *Shêng*. The Indian *Poongi*, a gourd with a horn mouth-piece and two pipes with bamboo reeds [Engel p. 166], may possibly be the instrument to which the book refers.

The *Shêng* is now used in the State services, and occasionally at funerals [II. A. 2. (2)], as well as by amateurs. In the *Hung Lou Mêng* it is mentioned among other instruments commonly used in keeping up the feast in the eighth month. When played it is held with the pipes nearly horizontal and pointing to the performers right. It is said that men who play the *Shêng* die early of consumption.

2. (2) LIU SHÊNG *(LIOU CHENG)* 六笙. "There were thirty-six bands, six instruments to one band, and six sounds to one instrument. These instruments are constructed with bamboo pipes having brass reeds. The largest sized instrument is made of the trunk of a tree hollowed out. A bamboo pipe 14 feet long with reed and mouth-piece is placed in the hollowed tree trunk. No. 2 instrument has three pipes 14 feet long. No. 3 to No. 1 [? 6] have six pipes and reeds respectively, but each shorter than the other." The above is taken from a description of the seventh-moon festival of the

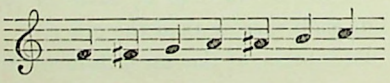
III.B.c *Hei Miao* tribe in Western China—[Journal of the C.B.R.A.S., Vol. XXXIII. No. 2—Social life of the Miao tsï by G. E. Betts].

The reed is not described, but the instrument is said to represent the *Shêng* in its most primitive condition [Engel p. 187], so that the reed is probably like that of the *Shêng*. Engel also says that the instrument has a mouth-piece at right angles to the pipes.

Garnier's *Voyage d'Exploration en Indo-Chine* [p. 345] describes the *Khen* [also called *Phan*] as an instrument peculiar to Laos; composed of from ten to sixteen bamboo pipes arranged in gradually increasing length, tied together in pairs and joined transversely by a larger bamboo. This is provided with a mouth-piece and communicates with the pipes by means of holes which can be closed with the fingers. It produces consequently as many notes as there are holes closed. They are made of all sizes from 3 to 12 feet. The *Khen* is commonly played with a fife or hautboy called *Cluï*.

c.—Single Reeds.

1. CH'UN KUAN *(TCH'OUENN KOUAN)* 舂管 or, more commonly, LA PA *(LA PA)* 喇叭, Plate IV, Fig. 6. A bamboo tube 5.625 inches long and about 0.5 inch in diameter, with six finger holes. Into the top of the tube is fitted a mouth-piece of bamboo, 1.5 inch long and 0.25 inch in diameter, closed at the end and with one side flattened. This flat side is cut so as to make a passage for the air and to form a single external reed. The scale is :—



It is used and sold by itinerant toy-sellers at Hangchow, *Shanghai*, Peking, and elsewhere; and it is perhaps worth noticing how entirely it is regarded as a child's toy, only the larger forms at Peking being ever, as far as has been observed, included in the stock of the men who sell cheap flutes and whistles in the streets. Large quantities are made in the precincts of the City Temple at Shanghai. Two pipes are sometimes joined together as for instance in Shantung, where they are called *Tui Hsiao* 對簫. Larger specimens are made at Peking, and the reed is often cut in the pipe instead of in a separate mouth-piece. Some specimens have a seventh hole covered with membrane. The length is about 10 inches, but the size is subject to much variation. The name at Peking is *Kuan tzŭ* 管子. III.B.d

A common toy is made of a pipe of reed or bamboo a few inches long, with the end cut obliquely and slightly split. Into this split is put a small piece of dry leaf to act as a vibrating reed. One or more of these is attached to a toy of some form—very often the wind coming through the pipe is made to spin little globes of brightly coloured paper; or they are fixed to sticks which carry sugar figures of various birds or animals.

2. LA PA 喇叭. At Peking the little pipe with leaf reed last described is sometimes put into the top of a *conical* clay pipe about 4 inches long.

d.—Mechanically Blown.

Reeds formed of a leaf or of thin paper vibrating on the end of a small tube are put inside clay figures of cocks, frogs, rabbits, etc. etc. which are provided with bellows made of stout paper. The reed is like that described under c. 1. and 2. above. These toys are common at Hangchow, Peking, and in Shantung, and probably elsewhere.

III. C. The Ribbon Reed, that is a piece of skin or thin leaf put between the lips and so set in vibration by the breath, is not unknown to Chinese schoolboys. Mr. Galpin writes: "I do not think it is used in the East in any really musical capacity. The American West Coast Indians have it in rather an elaborate form." *See* also under *Hu Chia* above, and Additional Note F.

Section C. Cup-mouth-pieces.

1. HAI LO *(HAI LOUO)* 海螺. A Conch. The small end of the shell is broken off to form a mouth-piece. The shell is left just as it comes from the sea and of course varies in size, the average length being perhaps 12 or 14 inches. In the north shells of more various shape and colour are used instead of the plain white shells which are usually seen about Shanghai. The conch is commonly used by boatmen in Chekiang and in the neighbourhood of Shanghai; and it is said to be used by the priests of the Buddhist sect called *Ying Fo*, and by Lamas. *See* under *Kang T'ou* below, and Additional Note F.

2. (1) HAO T'UNG *(HAO T'OUNG)* 號筒. A brass, or copper [Van Aalst], instrument with one sliding tube. It is used at funerals and also, according to Van Aalst, for military purposes. The ordinary length is about 36 inches. The mouth-piece is a flat disc or cup. The following is the description of a brass *Hao T'ung* from Peking:—A straight-sided 'bell' 12 inches long and 4.625 to 3.5 inches in diameter: to the flat top of this is fitted a conical pipe, 5.75 inches long and 1.75 to 0.875 inch in diameter, with a bulb 0.5 inch from the top, 2.25 inches in diameter: into this fits a sliding conical tube 17.5 inches long and 0.875 to 0.375 inch in diameter. The mouth-piece

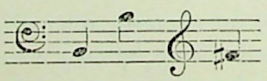
is hemispherical with a flat rim, 1.875 inch in diameter. The total length is 34.375 inches. [*see* Plate IX.] III. C.

This is the only form of *Hao T'ung* known about Hangchow and Shanghai, though larger specimens about 4 feet long may be seen at Hangchow. But the commoner instrument at Peking is a far larger thing and slightly different in shape. The 'bell' is larger in proportion than in the specimen described above, and has a rounded top. From inquiries made at Peking it seems that the 'bell' is sometimes made of wood and sometimes of iron—in both cases with brass hoops—, but that good instruments are made entirely of brass. In any case the inside of the bell is coloured red, and the outside is gilded, or sometimes red with gilt ornament, and the sliding tube is usually red. The measurements of a larger specimen are:—bell, 30 inches long, 16 inches across the mouth; tube fixed to the top of the bell, 12 inches long—the bulb on this tube may be in the middle or at the top of the tube; sliding tube, 42 inches long. A pair of these is always used at funerals in Peking, being hired for the purpose from the undertakers. They are played stationary, with the bell resting on the ground. When the procession moves the performer slings his instrument across his back.

The curious 'bell' of this instrument seems to have the effect of diminishing the number of notes which the conical tube would naturally produce [Brussels Catalogue, 139].

2. (2) LA PA (*LA PA*) 喇叭. A brass horn with one or two sliding tubes. It is properly a military instrument and may constantly be seen in pairs in front of a body of soldiers, or at city gates, or wherever soldiers are posted. At Hangchow the fire brigades blow the *La Pa* as they come back through the streets after putting out a fire. In the

III. C. theatre the end of each piece is marked by a few notes on the *La Pa*, and the practice has given rise to the metaphorical expression in Peking *ch'ui t'ai* 吹台 '[the *La Pa*] is blown'—meaning 'it is all over,' 'there's an end of that'. At Peking itinerant knife-grinders use a small *La Pa* about 30 inches long, round the thin end of which they wind string till it is about an inch thick. It is said that their instruments as well as those used on the stage or at funerals are commonly called *chien tzŭ* 尖子, while the military instrument may be called *Hao* 號. There are several different sizes of *La Pa*. One with two slides is 44 inches long and 5.5 inches across the bell [Engel p. 185]. Larger specimens commonly used by soldiers, with only one slide, are about 5 feet long and 12 inches across the bell. An incomplete instrument has been seen at Hangchow which would not have been more than about 15 inches long when perfect. The bell of the *La Pa* is more like that of an European instrument. The *La Pa* has usually, in common with the *Hao T'ung* and *Cha chiao*, a bulb near the top of the lower joint, designed apparently to help to keep the mouth-piece pressed against the lips. Of these bulbs M. Mahillon writes: Depuis le commencement du XVe siècle, [voir le tableau représentant *le Couronnement de la Vierge* de Fra Angelico, au Musée du Louvre à Paris], nos anciennes trompettes sont toutes munies d'une boule semblable; il serait intéressant de savoir si l'idée appartient à l'Asie ou à l'Europe [Brussels Cat. 743]. The sliding tubes of these instruments are not meant to change their notes, but to reduce their length when they are not in use. The notes are in the relation of—

 (Van Aalst)

III. C.

Shops entirely devoted to the making of these horns are found at Soochow, a place noted for the manufacture of brass instruments. [*see* Plate IX.]

La Pa represents the Mongolian word *Rapal* [Giles, s.v. 喇].

2. (3) CHA CHIAO (*TCHA KIO*) 札角 [*see* Plate IX]. A horn like the *La Pa*, except that the lower tube is curved so that the bell faces the performer. Van Aalst, who is my sole authority for the above name, writes: "It is of various sizes, and is used at wedding processions." At Shanghai it is also used at funerals, the performers being sometimes mounted on horse-back. At Hangchow, Shanghai, and Peking it is commonly called *La Pa*; at Hangchow it is also called *Wan Hao T'ou* 彎號頭; and in Shantung *Hao* 號. At Peking it is said to be used at funerals and weddings; it is generally gilded and sometimes bound round with red cloth; larger specimens are about 6 feet long measured straight. At T'ai An specimens about 3 feet long are made with two bells, the curved part of the tube being gradually flattened and then divided into two tubes, each division ending in a small bell.

The above three horns are all plainly depicted in the frescoes of the great temple (*Tai Miao* 岱廟) at T'ai An, which date, according to the priests, from the sixteenth, seventeenth, or eighteenth century.

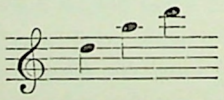
2. (4) KANG T'OU or TA WANG. A conical bronze [or brass] horn with one slide. The total length is about 10 feet. The lower half is more or less ornamented. A pair of these instruments were seen in the band of the great Lama Temple [*Yung Ho Kung*] of Peking in March 1900. They were used in a funeral procession, the lower end being carried in a sling by an attendant. The note produced was very deep and gruff. The names are uncertain.

III. C.

An account of the Embassy to the Court of the Teshoo Lama in Tibet [London, 1800] says :—"First were ten persons with huge trumpets, which they sounded resting one end upon the ground; next followed twenty men with large tabors, a sort of drum about 3 feet in diameter, fixed by the side upon a pedestal and beaten by a long elastic curved iron; then came twenty men with cymbals, and two with the sea-shell." [Engel p. 134].

The instruments used by the Peking Lamas on the occasion referred to were—besides these horns—drums, cymbals, smaller [?] curved horns, flutes, and organs.

3. HAO (*HAO*) 號. A horn distinguished from the *La Pa* only by the curious flattened mouth-piece. It is fairly common at T'ai An in Shantung, where it is distinguished from the *La Pa* neither by its name [*Hao*] or uses, but I have not seen it elsewhere, though it is very unlikely that the specimens mentioned below came from T'ai An. The following is the Rev. F. W. Galpin's description of a specimen in his possession :—"Length of tube including bell, 3 feet 5 inches. One slide and ball-knob half way along the tube. The mouth-piece, which is the most interesting part, is narrowly oval being $\frac{5}{8}$ inch in width and only $\frac{1}{4}$ inch at its greatest breadth. The cavity is $\frac{1}{2}$ inch. The tube is $\frac{1}{8}$ inch in diameter at the mouth-piece and is very slightly conical for more than half its length : at the widening of the bell it is $1\frac{3}{4}$ inch : the bell is $5\frac{1}{2}$ inches across. I have obtained the following series of notes :—



The form of mouth-piece shows a close affinity to the Double Reed principle." Mr. Galpin's specimen is called

Ah tu, a name which stands perhaps, in a southern dialect, for *Hao t'ou*. A similar instrument exists at Brussels [Catalogue, 741]. In the T'ai An instruments the upper edge of the mouth-piece seen in profile has a considerable curve, low in the middle and higher at the two ends. [*see* Plate IX]. III. C.

4. KANG TUNG (*KANG TOUNG*) 干動. A curved horn of copper with brass rim and ornament, made to resemble a dragon with open mouth. The length is 16 inches measured straight; the apparent diameter 3 inches to 1 inch. There is a short internal tube of small diameter hidden inside the upper part adjoining the mouth-piece. The outer tube is made in two pieces, and the joint is covered by the brass dragon's head. Mr. Galpin writes:—"It is not capable of producing the natural series of harmonics, but any notes formed in the inner tube by the pressure of the lips are intensified by the bell-like extension of the outer tube. This curious principle, which enables the performer to produce every note in the octave, is found in some of the mediæval European horns. *See* Brussels Catalogue, 1164."

It is said to be used in Peking in processions and by the Lamas, and it may perhaps be a Mongolian instrument. A specimen made of silver is said to have been seen in a temple in Mongolia. The characters given at Peking for the name do not seem to represent the sound correctly. [*see* Plate XII.]

5. In the glass-blowing district of Shantung numbers of *glass horns* are sold as toys and for keeping up the New Year. Two specimens measured at T'ai An were 45 inches long, 0.25 to 0.625 inch in diameter, 1.875 inch across the bell; and 30 inches long, 0.25 to 0.5 inch in diameter, and 1.75 inch across the bell respectively. The longer specimen had the mouth-piece broken off, the shorter had a cup shaped mouth-piece. This difference was evidently intentional, as all the longer

III. C. instruments ended in a rough broken edge and were bought and sold without any notion that they were defective; whereas a short horn *minus* mouth-piece was discarded at once. The tube which is slightly conical, in most cases diminishes again in diameter near the bell, owing probably to the drawing of the glass. In some specimens the bell is replaced by a bulb with quite a small opening. The longer forms give a great number of harmonics. They were found to produce clearer notes when sounded by suction, but the common native method of playing them is by blowing. [*see* Plate IX.]

KU [KU] TANG (*KOU* [*KOU*] *TANG*) 鼓嗵. A very popular toy made in the glass-blowing district of Shantung. It is a flat glass bulb, from 2 to 6 inches in diameter, with a thin tube from the middle of one side for mouth-piece, the whole thing being rather like a wine decanter. The tube is put into the performer's mouth, and the bottom, which is *extremely* thin, is made to vibrate with a loud crackling noise by drawing the breath quickly in an out.

CLASS IV. Stringed Instruments.

Section A. Air-vibrated.

1. (1) FÊNG CHÊNG (*FOUNG TCHENG*) 風箏. *Wind Harp.* This is a bow made entirely of bamboo. The string is a very thin slip of bamboo about ½ inch wide with a small piece left thick at each end to catch in notches which are cut in the end of the bow; and this is a piece of whole bamboo 2 or 3 feet long. It is tied to the frame of a paper kite so that the string will catch the wind just above the head of the kite. These bows are made at Hangchow. They are also called *Fêng Ch'in* 風琴. The name *Fêng Chêng* was formerly applied to the bells which hang from the eaves of Temples [*Ch'i Hsiu* Sect. 22]. *K'ang Hsi* [s.v. *Chêng*] quotes a rather obscure sentence which may refer to this instrument, and if so takes it back at least to the *T'ang* dynasty.

1. (2) YAO P'IEN (*IAO P'IEN*) 鷂片. A bow used like the last. It is strung with narrow ribbon and has a sort of cylindrical bridge below the notch at either end of the bow, which is a very rough piece of bamboo about 5 feet long. It is made at Shanghai and commonly used there in the Spring.

2. YAO CH'IN (*IAO K'IN*) 鷂琴. A Kite Harp made in Shanghai. It consists of a frame of light bamboo bent into the shape of a bottle gourd, with seven straight bamboos fastened across it. On each of these cross-pieces is stretched a narrow ribbon fastened at either end to a rough tuning peg. The thing is hung to the string of a large paper kite, and the seven ribbon 'strings' make a loud humming sound which may be heard at a great distance. [Plate X.]

IV.B.a § There are said to be many other varieties of kite bows and harps at Peking and Nanking, where kite-flying is carried on every Spring with the utmost enthusiasm.

The only air-vibrated instrument known in Europe is the Æolian Harp.

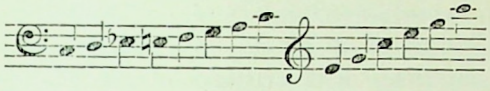
Section B. Hand-controlled.

a.—Plucked strings.

§.—Without a neck.

1. CH'IN (*K'IN*) 琴. A horizontal psaltery consisting of a sound board of curved section with a raised ridge near the tail or broader end, and closed below with a flat board in which are usually two round or oblong openings. The curved board is about $\frac{3}{4}$ inch thick down the middle, but considerably thinner on either side; the flat board is about $\frac{3}{8}$ inch thick. The wood should be *wu t'ung* lacquered black or brown, but for modern instruments *Shan* (*cunninghamia sinensis*) is commonly used. The head and the ridge are made of some hard wood. There are seven silk strings tied to two jade or wooden pegs which are fixed to the under surface near the upper end. From these pegs the strings are brought up over the head and stretched along the sound board, each ending in a bow knot above the raised ridge. Over the knots are passed loops of silk which come up through seven holes in the tail of the instrument and are fixed into loose pegs or knobs of jade or hardwood. When these pegs are turned, the silk loops being twisted grow shorter and so tighten the strings. This method of tuning appears to be unique; although an analogous principle has been applied to the piano by Brinsmead. Along one side of the sound board are inlaid thirteen studs [*Hui* 徽] of different sizes marking the places where the strings may be stopped. They should be nails of gold from *Li Shui* [麗水]

in Chekiang, but are commonly circles of mother o' pearl. IV.B.a. § M. V. C. Mahillon has found that by stopping a string at these thirteen points in succession the following notes are got :—



And he shows that the exact intervals differ perceptibly from those of the theoretic Chinese scale. [Brussels Cat. 759] A comparison of these notes with those given by *Tsai Yü* shows that the *Ch'in* has not been materially changed since the sixteenth century. It is curious that the only note marked outside the diatonic scale is the minor third, and that in the two upper octaves the notes are those of the common chord.

The *Ch'in* is probably of immense antiquity, and is justly regarded with considerable respect. Traditionally it had at first only five strings, but *Tsai Yü* says that the 'five stringed *Ch'in*' was merely the seven stringed instrument tuned to the five-note scale, and that the strings known as *Wên* and *Wu* were so named from their tones, soft and brilliant respectively, and not because they were added by King *Wên* and King *Wu* [Amiot]. For information about the tuning and playing of the *Ch'in* and the peculiar notation employed see Vol. XXXIII, p. 149 of this *Journal*, and the books of Amiot, Van Aalst, and others. Mr. G. T. Lay wrote in the *Chinese Repository* [Vol. VIII, p. 41]: "Dr. Young, who subjected a vibrating string to a microscope for the purpose of getting some practical hints as to the nature of the harmonic chord, observed that it was a sort of spiral or trochoidal movement; and its form, and of course the quality of its sound, depended upon the manner in which the force was applied to it. The Chinese were in possession of this fact ages ago, inasmuch as they directed the right hand to be

IV.B.a § thrown into almost as many positions as it is capable of receiving. The value of these rules may be easily illustrated by experiment."

The *Ch'in* is used at the State services, and is said to have been so used since the days of *Fu Hsi*, the founder of Chinese civilization. It has also been, and perhaps still is, a popular instrument with amateurs of the educated class. Most instrument makers keep one or two *Ch'in* in stock, and old specimens are comparatively common. The instruments generally seen correspond very nearly with *Tsai Yü's* middle-sized *Ch'in*. Plate V. shows a specimen which is dated 1790 and was made at Soochow. The names of the parts are taken from *K'ang Hsi*: a, 'head,' *shou* 首; b, 'tail,' *wei* 尾; c, 'dragon lips,' *lung ch'un* 龍脣; d, 'phœnix feet,' *fêng tsu* 鳳足; e, 'waist,' *yao* 腰, called the 'fair woman,' *mei nü* 美女; f, 'shoulder,' *chien* 肩; g, 'sound holes,' *yüeh* 越, the longer called *lung ch'ih* 龍池, the shorter *fêng chao* 鳳沼; h, 'narrow ridge,' *lin yüeh* 臨岳; i, 'higher ridge,' *yüeh shan* 岳山; k, 'city road,' *ch'êng lu* 城路, *i.e.* a slightly raised strip outside the *yüeh shan*; l, 'wild goose feet,' *yen tsu* 鴈足. The upper side is called the 'belly,' *fu* 腹, the under side the 'back,' *pei* 背, or the 'fairy,' *hsien jên* 仙人, and the tuning pegs are called *chên* 軫. *Tsai Yü*, more naturally, calls the broader end the *head* and the narrower the *tail*.

2. SHÊ *(CHE)* 瑟. A horizontal psaltery, curved above and flat below. The upper part is a frame of camphor wood with three divisions, into which are fitted three panels of *wu t'ung* wood forming the head, body, and tail of the instrument. The head and body should be in the same straight line, the tail [as now the head also is[1]] being bent

[1] Two old *Shê* are preserved in the Confucian temple of P'ing-yin in Shantung, which have the head correctly in a straight line with the body. Their measurements are:—length, of head, 9 inches; body, 69 inches; tail, 16 inches: width of head, 21 inches. Their colour was apparently scarlet.

IV.B.a § downwards. At either end of the body is a raised ridge about 1 inch high and a row of twenty-five small holes. There are twenty-five silk strings all of the same thickness and sometimes coloured red. Each string is put through one of the holes by the ridge at the head and secured inside with a knot; it is then stretched along the body and tail[1] and returned round the end, and entering the sound box through a large hole in the underside of the tail is brought up again through one of the small holes near the lower ridge. Here it is tied round the part of the string which has already passed over the hole, bringing it close down to the board, and the end is finished off in an elaborate knot on top of the ridge. Each string should have also a moveable bridge, but now the *Shê* is tuned to the five note scale and only the first ten strings are used or provided with bridges. Until perhaps the present dynasty it was tuned to the chromatic scale, the lowest note being the note of the first string of the *Ch'in* stopped at the tenth point [*Tsai Yü*]. *Lü Lü Chêng I* gives what seems to be the source of the modern system: The first twelve strings and the last twelve are tuned alike—*chih*, *yü*, *Kung*, *shang*, *chiao*, *chih*, *yü*, *Kung shang*, *chiao*, *chih*, *yü*,—while the middle string is marked *Huang Chung*. The *Shê* is peculiar in having no mechanical means for tightening the strings. The four specimens at the Confucian Temple at Hangchow are lacquered black with dull gilt ornament. Each lies on a pair of ornamental trestles. The total length is about 80 inches, the breadth 18½ inches, the length of the head 8 inches, of the tail 17⅜ inches; the thickness of the sound box in the middle is not quite 3 inches.

[1] I have been unable to make sure whether the strings are stretched in this way, or whether after traversing the body they are taken *down* through the second set of holes and carried round the tail in the reverse direction to that described above.

IV.B.a § The *Shê* is now used only at State services, and the art of playing it is in many places practically lost. Confucius is recorded to have played the *Shê*, singing to its accompaniment. The Chinese prefer it to the *Ch'in*, and Amiot wrote of it in 1776. "*Nous n'avons en Europe aucun instrument de Musique qui merite de lui être préféré. Je n'en excepte pas même notre Clavecin, parce que les sons aigres de cordes de métal, et le bruit que font quelquefois les touches fauteraux, affectent désagréablement une oreille un peu délicate.*"

The *Shê* is the only survivor of the few instruments which had a compass of two chromatic octaves. The ordinary number of *sixteen* notes in instruments giving a fixed chromatic scale is due possibly to the requirements of the ancient tunes. In the *Sung* dynasty it was pointed out that there were only twelve divisions of the octave and that, consequently, chromatic instruments should not have more than twelve notes.

The *Shê* is said to be a descendent of the ancient *K'ung Hou* 箜篌, an instrument of twenty-five strings [*K'ang Hsi*].

The Music Book at Ch'ü Fu in Shantung, called *Shêng Mên Yo Chih* 聖門樂誌, printed in 1716 and reprinted in 1887, tunes the *Shê* as follows: the first twelve strings to the notes of the middle octave, D—C sharp, and the upper twelve strings to the notes of the upper octave, while the thirteenth string has the note "the middle string is the highest and is not played."

The Confucian orchestra, as given in the same book, is:—*Chu* 柷, *Yü* 敔, *Po Chung* 鎛鐘, *Po Ch'ing* 鎛磬, *Hsüan Ku* 懸鼓, *Pien Chung* 編鐘, *Pien Ch'ing* 編磬, *Ying Ku* 楹鼓 *T'su Ku* 足鼓, *T'ao Ku* 鞉鼓, *Têng Ko Chung* 登歌鐘, *Têng Ko Ch'ing* 登歌磬, *Po Fu* 搏拊 [in the Hall], *T'ien Ku* 田鼓 [outside the Hall], *Ch'in* 琴, *Shê* 瑟, *Shêng* 笙 [with 17 reeds], *Hsüan* 壎 [five holes],

Ch'ih 篪, *Fêng Hsiao* 鳳簫, *Shuang Kuan* 雙管 [five holes near the top of each pipe], *Tung Hsiao* 洞簫 [seven holes], *Lung Ti* 龍笛. IV.B.a §

3. CHÊNG[1] *(TCHENG)* 箏. A smaller kind of *Shê*. Engel [p. 182] has: "Tche. Wood mounted with bone. Sixteen thin brass wires. L. 3 ft., 2½ in. W. 8½ in." The Rev. F. W. Galpin has a specimen, purchased perhaps at Hongkong, with fourteen brass wires.[2] The instrument shops at *Hangchow*, however, say that it has properly fifteen *silk* strings. At Peking a pair of *Chêng* has been seen, each 5 or 6 feet long and with fourteen silk strings.

The *Chêng* seems to differ from the *Shê* chiefly in the depth of the body, which is 4 or 5 inches for an instrument about 4 feet long. Van Aalst says: "It is used in preference to the *sê* at imperial receptions and on joyful occasions." The *Shuo Wên* describes it as a stringed instrument with a *bamboo* body. A note in the music section of the *Shih Chi* also mentions bamboo, but with reference probably to quite a different *Chêng*. Another old book says: 'A sort of *Shê*, originally with twelve strings, but now with thirteen'.—*K'ang Hsi*. [*see* Plates X. and XI.]

A rather different instrument, called *Fu Ch'in* 拊琴, with allusion to the story of *Chu Ko Liang*, is made at

[1] This must not be confused with *Cheng*, the French spelling of *Shêng*, [III. B. b. 2.]. *Chêng* often appears as *Tseng* in European books.

[2] Compare also Brussels Catalogue, 150. The instrument there described and figured has fourteen *brass* strings; and also a vibrating wire inside it. The small size of this specimen, less than 39 inches long, and the shape, which is more like the *Ch'in* than the *Shê*, suggest that the wire-strung *Chêng* is a southern instrument distinct from that found at Hangchow or Peking. A similar instrument in the same collection [No. 761] is from Tonkin; and five of such instruments [played by women] appear in a photograph of an Annamese band. *Tsai Yü* evidently intended to indicate the northern silk-strung instrument by the name *Chêng*.

IV.B.a §§ Hsü chou in Kiangsu. It differs from the ordinary *Chêng* in having the tail reduced to about 1 inch in length, and in having tuning pegs. These last stand upright in three rows of five across the head of the instrument. The strings pass down through holes in the head, as in the *Shê* and *Chêng*, and are fastened to the lower ends of the tuning pegs. The specimen examined was about 4 feet long; the bridges were elaborately carved, and the whole instrument covered with designs in various colours.

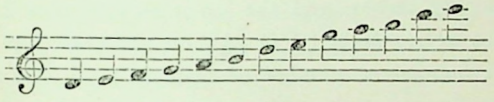
§§.—With a neck.

1. YÜEH CH'IN *(IUE K'IN)* 月琴. The body is circular, made of two discs of *wu t'ung* wood, between which is fitted a ring of boxwood. The diameter is 14 inches, the height about $1\frac{3}{4}$ inch. The neck is of redwood and 10 inches long; from the body to the nearest tuning peg is $4\frac{3}{8}$ inches. The scroll is bent sharply back, curving up again the end. There are four silk strings, which are tuned, according to Van Aalst, in pairs at the interval of a fifth. Van Aalst's description and picture do not quite agree with the instruments seen at *Shanghai*, showing among other things openings in the sound board which are not found in any of the instruments of this kind either at Shanghai or, according to a Cantonese gentleman, in the South. The strings of all these instruments except the *Hsien tzŭ* are attached to a piece of wood [*Fu hsien* 縛絃] fixed to the sound board as in the European guitar. A better made specimen, only $1\frac{1}{2}$ inch high, had the top and bottom boards fitted into the circumference, which was made of redwood. It had also three frets on the neck and seven on the sound-board, while the commoner instruments have two on the neck and eight on the sound-board. The Pekingese *Yüeh Ch'in* have the latter arrangement,

IV.B.a §§

but each of the eight frets on the sound-board is divided, the further half being placed to give a slightly sharper note than the nearer half. The instruments at Peking and Hangchow have not the sharp bend in the neck. There is a variety with the body octagonal, and another with a segment cut out of each side of the circular body. [*see* Plate X, fig. 3.]

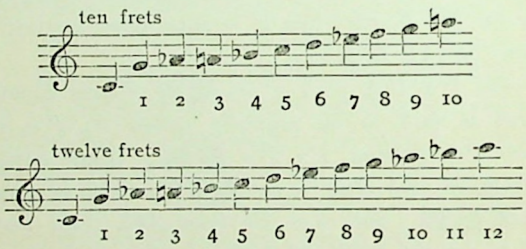
2. SHUANG CH'IN [*CHOUANG K'IN*] 雙琴. As made at Shanghai this consists of an octagonal body with curved sides, of which the greater diameter is 9.5 inches, the lesser 8.5 inches, and the height 1.375 inch. The sides are of redwood 0.5 inch thick, the top and bottom are *wu t'ung* boards. The redwood neck is 31 inches long, 1.25 inch wide, and has thirteen ivory frets. There are four strings tuned like those of the *Yüeh Ch'in*. The frets give the following notes [Brussels Catalogue, 779] :—



An inferior variety has a rather larger body with straight sides. The *Shuang Ch'in* is the least common of the guitars—specially in the North—but it is sometimes used in large processions [*see* II. A. 2. (2)]

3. (1) P'I P'A *(P'I P'A)* 琵琶, Plates X and XI. The name is said to be properly called *Pi P'a*, and is sometimes also written *P'i P'o* 薜婆. Other names are *Hu Ch'in* 胡琴, and *Hun pu ssŭ* 渾不似, which is commonly written 渾撥四 [*Shih Lei Fu* Sect. 44]. *P'i* and *P'a* are said to be the technical terms for two different actions in lute playing [*K'ang Hsi* s.v. *P'i*]. A lute with a pear-shaped body [*Fu* 腹] of curved section covered with a flat sound-board of *wu t'ung*. On the neck [*Ching* 頸] are four large rounded ridges [*Hsiang* 相] of ivory, horn, or

IV.B.a §§ wood, which are used as frets on certain occasions, and above and below these on good instruments are small plates of ivory with inscriptions engraved on them. The scroll [*Fêng-wei t'ou* 鳳尾頭] is of redwood and bends back from the neck nearly at right angles, but is curved upwards again at the end. The upper angle formed by the bend is called *Shan K'ou* 山口, the angle below is *Fêng Huang T'ai* 鳳凰臺. There are four or six silk strings. The four strings are normally tuned to *Ho*, *Shang*, *Ch'ê*, *Liu*—say D, G, A, D. When there are six strings the second and fourth are tuned with the first and third respectively. An old six-stringed instrument at *Shanghai* had the first and second and the third and fourth strings very close together. The total length of this instrument was nearly 42 inches, of which 8½ were occupied by the curved scroll. The greatest width was 12⅛ inches, and the greatest thickness 2 inches. There were twelve frets [*P'in* 品] on the neck and sound-board. A commoner number of frets is ten.[1] Of the four *Hsiang* the first raises the note one tone, the other three one semitone each. The *P'in* give the following intervals :—



[1] At Brussels there is a specimen with *eleven* frets, of which the second is used only for the second string, and the tenth is divided, the part under the first string being arranged to lower the note of that string by a semitone. The same instrument has a vibrating wire inside it. [Brussels Cat. 158].

IV.B.a §§

The *Shuo Wén* says that the *P'i P'a* was played on horse-back; and the *Fêng Su T'ung*, of the second century, says that it was 15 inches long and had four strings, referring to the ancient instrument; the *T'ang History* says that the origin of the then modern instrument was unknown; the *Ku Chin Yo Lu* conjectures that it was invented at the end of the reign of *Ch'in Shih Huang* after the suppression of the ancient music in the third century B.C. [*K'ang Hsi* s.v.]. The Japanese *Biwa* seems in most respects identical with the *P'i P'a*, but it has only the four divisions of the neck and no frets [*P'in*] on the sound-board [Brussels Cat. 783]. This may show that the *P'in* are a comparatively modern addition to the Chinese instrument. The *Biwa* has also the sound holes which are now rare in the *P'i P'a* [Engel, p. 195].

The *P'i P'a* is not very commonly seen in any religious service, but it is said to be used by Taoist and by certain Buddhist priests, and may be seen in religious processions. On the stage it is said to be used at Soochow for the music called *T'an Huang* 灘簧, when the leader plays the *Hsien tzŭ*; and at Ningpo for *Wén Shu* plays. Van Aalst says that in the North it is played chiefly by men, and in the South by women. It appears to be properly a solo instrument, used for playing descriptive music such as may be found for example in the *P'i P'a P'u*, a book in three small volumes published in 1818. This book gives the names of the parts of the instrument[1], directions for playing, the special notation used [constructed in the same general manner as that for the *Ch'in*], diagrams showing the notes of

[1] In addition to the parts named above, the book gives *Fêng Mei* 鳳眉, a mark [? joint] on the underside of the instrument, *Fêng Yen* 鳳眼, two crescent shaped holes in the sound-board, and *Chên* 軫, tuning pegs.

IV.B.a §§ the open strings and of the various frets in the different methods of tuning, and finally large numbers of pieces from the collections of *Wang Chün-Hsi* of Chihli and *Ch'ên Mu-Fu* of Chekiang. The music is written in the *Kung Ch'ê* notation, with the special symbols written against certain notes which require special fingering—as when two strings are to be played in unison. Where no special direction is given, either of the actions called *t'an* and *t'iao* may be used. The strings are stopped with the first, second, or third finger of the left hand, the change of position from the *Hsiang* to the *P'in* being clearly marked in the music. The melody is played with the thumb and first finger of the right hand, and the other fingers are only used for the different ornamental devices called *lun*.

3. (2) CHIN KANG T'UI *(KIN KANG T'OUEI)* 金剛腿. A small three-stringed variety of *P'i P'a*, which is also called, at *Shanghai*, *Ssŭ pu hsiang* 四不相. The length is 26 inches, the width $7\frac{1}{4}$ inches. The neck is made in one piece and is only slightly curved. There are ten frets.

The four Kings of Heaven in Buddhist Temples are said to represent the four brothers *Chin Kang* of ancient Chinese history, and are at least sometimes called by that name, so that the name "thigh of *Chin Kang*" has perhaps some connexion with the fact that one of the four Kings holds a *P'i P'a* in his hands.

4. HSIEN TZŬ *(HIEN TZEU)* 絃子. *The Strings;* also called *San Hsien* 三絃 or *Three Strings*. The body is a heavy oval frame of redwood measuring $6\frac{3}{4}$ inches by 6 inches, and $2\frac{5}{8}$ inches thick, covered on both sides with snakeskin, which is sometimes fixed with a little rim of brass. The neck is made of redwood $30\frac{3}{4}$ inches long and $1\frac{1}{4}$ inch wide at the base, tapering slightly, and curved back at the end. There are no frets. The three strings are

tuned to *Ho*, *Shang*, *Liu*, or more frequently to *Ho*, *Ssū*, *Kung*, and are generally played with a plectrum[1] [Van Aalst]. The plectrum is a small oblong piece of jade. The neck passes right through the body, and the strings are attached to the projecting end which is covered with a cap [sometimes of ivory] like that of the *Hu Ch'in*. In a Cantonese specimen the strings were tied to a piece of wire. This was bent in five places making three angles for the three strings in one direction and two in the other for the string by which it was tied to the *ling* [ ]. After crossing a broad and low bridge on the sound-board the strings pass through and under a small slab of ivory, which is tied flat to the neck and can be moved up and down. The *Hsien tzŭ* is played often at *Shanghai* by blind men, and is also used in processions and by strolling bands and in the theatre. IV.B.a §§

A larger variety is made at Shanghai, of which the body measures about 8 inches by $7\frac{1}{2}$ by $3\frac{1}{4}$. A specimen of this size—said to be Cantonese, but possibly a *Siamisen* from Japan—had the body oblong with slightly convex sides, the neck not quite 30 inches long and 1 inch wide, and the scroll made separate and moveable. An undoubted Cantonese instrument was like the smaller variety given above.

The large *Hsien tzŭ* seems to be one of the commonest instruments at Peking: it is generally made there of *Ch'ai* wood with a redwood finger-board glued to the neck. [*see* Plate X and XI.]

5. HU PO *(HOU POUO)* 胡撥. A four-stringed instrument with small pear-shaped body, covered with snakeskin, and a long neck. The strings are attached to a

[1] Most, if not all, of the Chinese guitars or lutes are played with a plectrum I am told. Playing without a plectrum was introduced in the seventh century, but perhaps again given up [*Wén hsien t'ung k'ao* § 137].

IV.B.b projection at the end of the body. The scroll has a sliding cover, perhaps to protect the strings from dust. The illustration [Plate VI, Fig. 1.] is taken from an old specimen seen at Peking. The neck and body were made of *tzŭ t'an* wood, with inlaid bone ornament. The instrument is said to be used in the Palace. The characters given above are the name of an old lute or guitar, and represent very nearly the name of this instrument; the man in whose shop it was found wrote 琥珀, which does not seem to give the sound correctly.

b.—Struck strings.

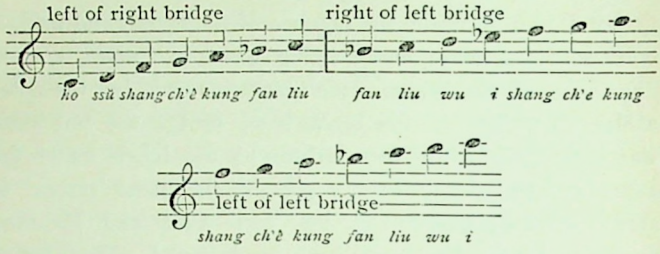
1. YANG CH'IN (*IANG K'IN*) 洋琴, '*The Foreign* Ch'in?' This is a dulcimer very much like the Persian *Santir*, a fact which, added to the name, makes it probable that it was introduced from Persia. It seems also to be peculiarly a southern instrument, though not uncommon about Shanghai and in the North. It consists of a shallow trapezium-shaped box with a cover, and is strung with thin brass wire. A Cantonese specimen, which was seen at Shanghai, was made of *wu t'ung*, the sound-board not coloured and the sides and cover lacquered black. The strings were arranged in fourteen sets of three, those for the two lowest sets made of two wires twisted together, and either end of each wire was fastened to a tall brass tuning peg with a square head. At either end of the sound-board was a fixed ridge of redwood with a brass edge, and nearer the middle were two bridges. Along the top of each bridge square notches about 1 inch wide were cut leaving seven raised pieces to carry half of the string, and the two bridges were so placed that the raised parts of one came opposite to the notches in the other and *vice versa*, so that seven sets of

IV.B.b

strings passed over the right hand bridge and through the notches of the left hand bridge, and the other seven over the left hand and through the notches of the right hand bridge. By this arrangement every string gives two notes, one on either side of the bridge which it passes over, but the notes on the right side of the right hand bridge are not used. The names of the notes were written on red labels under the proper strings, and if they represent the same system of tuning as that transcribed by Van Aalst and Mahillon the notes *I* and *Fan* must both be flattened. There were two openings in the sound-board, one in the middle and the other near the left hand end, and each was covered with an elaborately carved and perforated ivory cap. In the middle of the long side was a narrow drawer containing the massive brass tuning key, the top of which was fashioned into a hammer to tighten the pegs with. The instrument is placed with the longer strings near the performer. The strings are struck with two delicate and springy bamboo hammers called *Ch'in Chu* 琴竹.

No Chinese instrument probably is more varied in form, size, and arrangement than the *Yang Ch'in*. Those seen about Shanghai are more roughly made than that which has been described, and the strings are generally fastened to plain iron pins looking like those of a piano. The number of sets of strings is said to be commonly fourteen or sixteen, and the number of strings in a set to vary from two to four. No. 792 in the Brussels Catalogue appears to have only one string to each note or pair of notes, while a large instrument made at Shanghai with nineteen sets of strings had two for the longest set and five for each of the remaining eighteen. The *Yang Ch'in* is played as a solo instrument by amateurs, and Van Aalst says :—"It may sometimes be heard together with the violin and the guitar, accompanying songs and ballads."

IV.B.c § The scale is somewhat as follows:—



A different scale is given, partly based on and partly in defiance of the Chinese labels placed under the strings, by M. Mahillon [Brussels Catalogue 165].

In playing the *Yang Ch'in* the performer constantly strikes two sets of strings together or in rapid alternation, often ending a long note or a phrase in a *tremolo* made by holding the hammers quivering against the strings. [*see* Plate X.]

c.—Bowed strings.

§.—Without a neck.

1. LA CH'IN (*LA K'IN*) 拉琴, Plate VI, Fig. 2. A bowed psaltery. This instrument has a curved sound-board and flat back like the *Shê* or *Chêng*, and is played with a bow like that of the *Hu Ch'in* [see below]. There are ten pairs of strings, each pair passing through two holes at the top of a two-legged bridge 1.875 inch high. The strings pass through holes in the sound-board near the wider end, and are fastened at the other end to iron tuning pegs. They are tuned as D, E, G, A, B, D, E, G, A, B, beginning from the nearer side if the instrument is placed with the wider end to the left. An iron tuning-key and

hammer is used. The length is about 26 inches. The instrument is held with the thumb and finger by the two holes on the underside. The body is sometimes left plain, sometimes coloured red and painted with flowers. IV.B.c §§

The *La Ch'in* is fairly common at *Peking*, where it is said to be used to accompany songs; but it is not known in the neighbourhood of Shanghai.

§§.—With a neck.

HU CH'IN (*HOU K'IN*) 胡琴. This is the general name of the principal instruments of this division. The characteristics of the *Hu Ch'in* are a small cylindrical or cup-shaped body open below and covered at the top, called *T'ung* 筒; a more or less long neck, *Kan* 桿, which passes right through the body; prominent tuning pegs, *Chou* 軸; and a bow, *Kung* 弓, strung with horse hair and inseparable from the instrument. The *Hu Ch'in* may be broadly divided into two groups, of which the first has the following common features:—

a. The body circular or polygonal, with straight or concave sides.

b. The sound-board formed of snakeskin.

c. The tuning pegs parallel to the axis of the body.

d. A moveable nut consisting of a band of string or other device for bending the strings towards the neck.

This group includes:—

1. (1) TAN CH'IN (*TAN K'IN*) 膽琴. The following is an account of a good instrument. The neck, 16 inches long[1] and 11½ inches to the nearer tuning peg, was

[1] The lengths of the necks given are in every case exclusive of the part that traverses the body.

IV.B.c §§ of *old Lo-han* bamboo, with an ivory top. Seven oblique knots *very close together* at the upper end gave a firm hold for the tuning pegs, which were of some dark coloured wood and fluted. Immediately below the tuning pegs came a *smooth space* of about 5 inches without a knot. This enables a brass hook, which is tied to the neck and confines the strings —acting as a *capotasto*, to be easily moved up and down. There was an oblong hole cut right through the part of the neck inside the body, and the end of the bamboo was filled with a wooden plug. A piece of thin iron wire, about 6 inches long, is generally put inside the neck and one end of it is stuck into the wooden plug leaving the upper end free to vibrate against the sides of the neck. This is called *Tan* and gives its name to the instrument. In this case the wire was missing. The body was of *old dry* bamboo about $\frac{3}{16}$ inch thick, $4\frac{1}{2}$ inches high, and $2\frac{1}{8}$ inches in diameter. It was covered with a piece of snake-skin, stretched *not too tight* to ensure a 'broad' tone, and fixed with a band of blue cloth glued round the top of the body. The skin commonly used is that of the *Mang* 蟒, with handsome markings. On this instrument it was *Shé* 蛇 skin, which is thought far better. It was plain dull brown with large regular scales. The difference between the two seems to be that the scales of the *Mang* overlap one another, while those of the *Shé* are slightly separated and so expose a certain amount of the very thin skin, which is said to be specially resonant. A very small moveable bridge stood in the middle of the sound-board. There were two silken strings, the thicker called the 'inner string,' and the thinner called the 'outer string.' Each string ended in a loop which was hitched over the projecting lower end of the neck. The strings were tuned to the interval of a fifth. The ordinary key is called *Chêng Kung Tiao*, the notes of the two strings

IV.B.c §§

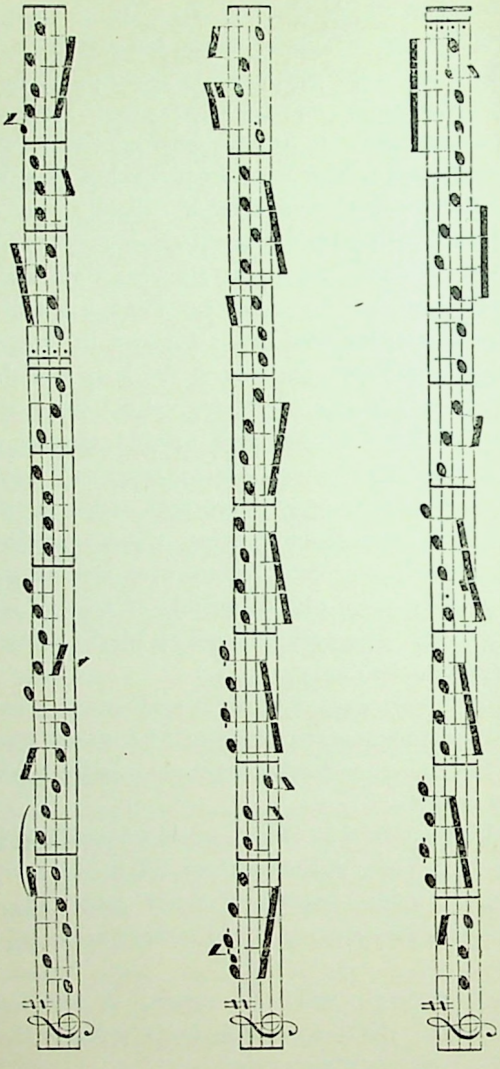
being called respectively *Ch'ê* and *Ho*. This is transposed to *Fan Kung Tiao* by calling the notes *Liu* and *Shang*, or by sliding the hook on the neck so as to change the pitch while the strings remain *Ch'ê* and *Ho*, or sometimes *Kung* and *Ssŭ*. These two keys seem to be the most commonly used [*see* Additional Notes]. The bow, from Peking, was of cane, long [over 26 inches] and straight, slightly bent over at either end and with a shorter handle-piece than the Shanghai bows have. The hair was *white*, stretched tight and *evenly*, and fixed at either end by being put through a hole in the cane. The hair of the bow passes between the two strings. Rosin was smeared over the side of the body near the neck. The performer, a native of Peking, rested the instrument against his left knee with the neck nearly horizontal, moving the bow parallel to the axis of the body and pressing it against the rosin constantly. The neck rested in the palm of his left hand, the thumb holding it just below the hook. The first, second, and third fingers were used to stop the strings, touching them with the middle of the top joint and not with the tip. The neck was said to be the shortest that would be used at Peking.

The above will apply with slight modification to any *Tan Ch'in*, and the account of the tuning to the *Hu Ch'in* generally. The words in italics mark what were said to be the good points of the instrument.

At Shanghai the *Tan Ch'in* is called *Ching Hu* 京胡, and is said to have been unknown there till it was introduced by Pekingese actors twenty or thirty years ago. The measurements are:—body, $4\frac{1}{4}$ by $2\frac{1}{4}$ inches; neck, $14\frac{1}{2}$ inches long.

A cheap variety is sold in the streets. A man from the north of Kiangsu sells these at *Shanghai*, advertising his wares with this tune incessantly repeated:—

IV.B.c
§§



They vary in size from toys 6 or 7 inches long to full-sized instruments. The measurements of a larger specimen are:—body, $3\frac{1}{3}$ by $1\frac{7}{8}$ inch; neck, $14\frac{5}{8}$ inches long, $\frac{3}{4}$ inch thick; tuning pegs of deal, 5 inches long; the bridge made of a small section of bamboo $\frac{1}{4}$ inch long and $\frac{1}{7}$ inch thick. The strings are confined by a string loop instead of the brass hook. The bow is $24\frac{1}{2}$ inches long.

The *Tan Ch'in* is the instrument commonly used in the theatre to accompany the singing. The sound is sometimes increased by the performer laying a cymbal on his knee for the instrument to rest upon. [*see* Plate XI, fig. 4].

1. (2) HUI HU (*HOUEI HOU*) 徽胡. A variety common at Hangchow, and said to be used in the theatre to accompany the *Hui Tiao*, both music and instrument having been introduced by actors from Anhui Province. It is distinguished from the *Ching Hu* only by the small diameter of the body—about 1 inch—and neck. The neck is as long as that of the *Ching Hu*, but is only $\frac{1}{2}$ inch thick.

The bodies of these two *Hu Ch'in* are made of bamboo cut thin, and not coloured or dressed in any way. The necks are usually of bamboo, though at Shanghai redwood is sometimes used, the wooden necks being rather longer than the bamboo. The fixing of the skin with a band of cloth seems to be peculiar to these two instruments.

1. (3) ÊRH HU (*EUL HOU*) 二胡. This differs from the *Ssŭ Hu* [see below] only in having one pair of strings instead of two. The neck is about 23 inches long, —16 inches to the nearer tuning peg. At Peking, where it is not common, it is called *Êrh Ku tzŭ* 二鼓子, or *Liang kên hsien êrh* 兩根絃兒. *Two strings.* [*see* Plate XI.]

1. (4) PAN HU (*PAN HOU*) 板胡. A variety said to be preferred by Ningpo men, and common also at Hangchow where it is made with a very thick body. It is like

IV.B.c §§ the *Êrh Hu* in all respects except that the sound-board is made of *wu t'ung* wood instead of snakeskin. In Shantung it is sometimes called *Ch'i Ch'in*. At Peking, where it seems to be rare, it is said to be used with the *Pang tzŭ*.

Here may be mentioned two fiddles from Hainan ; one with a mahogany body $3\frac{1}{4}$ inches deep and $3\frac{5}{8}$ inches in diameter, and a round neck of the same wood $16\frac{1}{2}$ inches long and tapering towards the body ; the other more roughly made, the neck thicker and one inch longer, and the body formed of a cocoanut shell about $5\frac{1}{4}$ inches in diameter. The sound-board in each case is made of deal, less than $\frac{1}{16}$ inch thick. The tuning pegs are parallel to the axis of the body. The bows are bamboo, unusually long and with less hair than the northern bows, but more tightly and evenly strung. Both instruments are locally called *T'i* 啼 *Ch'in*. They are apparently rough examples of the ordinary Cantonese shapes. Three instruments from Canton were marked generally by their fine workmanship, the great thickness of the strings[1] used, the shape of the tuning pegs—ending in a pearshaped knob instead of being conical, and by having the strings tied down near to the neck by a simple loop of string. In other respects, one was almost identical with the *Êrh Hu* ; the second was like the *Ching Hu*, but with a redwood neck and with the top edges of the body rounded off so as to give it a dome-like

[1]The strings used for musical instruments are generally made of silk. Those for the *Ch'in* and *Shê* are supposed to be of special make : and for other instruments, at least in the eastern part of Mid- and North-China, five kinds or sizes are distinguished, namely *Ch'an* 纏, *Lao* 老, Êrh 二 or *Chung* 中, *Tzŭ* 子, and *P'i* 披. Of these the first is said to be twisted and also wound round with silk, the next three are only twisted, and the fifth is a simple untwisted strand of silk. The *Lao* and Êrh are said to be used for the *Hu Ch'in*. The *P'i P'a* has the first four, but the *Tzŭ* string is said to be sometimes changed for the *P'i*. The *Yang Ch'in* appears to be the only instrument that regularly has wire strings.

appearance ; and the third had a barrel-shaped bamboo body with a very thin sound-board of *wu t'ung* wood, and a redwood neck. The bow of the first was a thin and much curved reed ; the other two were bamboo, long and thick. [*see* Plate X, Figs. 8, 9, 10.] IV.B.c §§

It will be noticed that the *Pan Hu* and the southern *Hu Ch'in* with wooden sound-boards, do not come strictly within the two groups into which the more northern instruments seem to be divided. The general look of the *Pan Hu* would put it in the first group, while the other is more like the *Hu Hu*, but both have wooden sound-boards, while the tuning pegs are parallel to the axis of the body.

1. (5) SSŬ HU (*SEU HOU*) 四胡. This is called *Ssŭ kên Hsien êrh* or *Four Strings* at Peking. The body is of redwood, hexagonal, $4\frac{7}{8}$ inches high, tapering slightly towards the bottom, and with slightly concave sides. The greatest diameter is $4\frac{1}{2}$ inches. The bottom is formed of fret-work in boxwood. The neck is of redwood, of square section, with the lower angles rounded off, $\frac{5}{8}$ inch wide and 25 inches long,—to the nearest tuning peg, $14\frac{1}{2}$ inches. The upper end of the neck is curved back and finished with a cap of boxwood ; the lower end passes through the body and projects slightly on the other side. This projection is covered with a carved cap of boxwood called *ling* 領, measuring $1\frac{1}{4}$ inch by $\frac{5}{8}$ inch. There are two double strings. Each double string is put from above through a hole bored through the *ling* and the end of the neck inside it, and the loop of the string is brought up and passed over the *ling* and pulled tight. The two parts of the thicker string are placed respectively first and third and tuned in unison, and the thinner strings are placed second and fourth, and are tuned a fifth above the others. The strings are separated from each other by spaces of not quite $\frac{1}{8}$ inch as they pass over the

IV.B.c §§ bamboo bridge or *horse* [*Ma* 馬], which is $\frac{3}{8}$ inch high and $\frac{3}{8}$ inch wide; and instead of being confined by a brass hook like those of the *Tan Ch'in*, they are put through four holes in a small semicircle of tortoise-shell which is tied to the neck. The tuning pegs are of boxwood, fluted, $5\frac{1}{2}$ inches long. The bow is of reed with the upper end curved back, and is double strung—one set of hair passing between each pair of strings. The length is $27\frac{1}{2}$ inches, and 4 inches from the upper end is a bamboo peg over which the hair is hitched. At Peking the neck of this fiddle is commonly 30 inches or more in length.

A cheaper kind of *Ssŭ Hu* has a bamboo body, cylindrical, with concave sides, 4 inches high and 3 inches in diameter. The neck is of redwood, $26\frac{3}{8}$ inches long,—16 inches to the nearest tuning peg.

Bamboo, often stained red, is generally used for the body of the *Ssŭ Hu* and *Êrh Hu* whether round or polygonal. Redwood is used for more expensive instruments. At Peking the body is sometimes made of brass, cylindrical, about 3 inches in diameter and 7 inches high; but it is generally of hardwood and octagonal. The neck seems generally to be of redwood, but in the North other hard wood is used, and in Shantung the *Ssŭ Hu* may be seen with a long bamboo neck. The name *Êrh Hsien*, which is given to the *Êrh Hu* in many European works, seems to be quite unfamiliar at Shanghai or at Peking.

The second group has the following common features:—

a. The body circular; barrel-shaped or hemispherical.

b. The sound-board made of wood.

c. The tuning pegs at right angles to the axis of the body.

d. A 'nut' on the neck.

IV.B.c §§

e. The neck made of wood.

f. A 'scroll' like that of the European violin in arrangement.

2. (1) HU HU (*HOU HOU*) 呼 呼 [pronounced 虎 胡 at Hangchow] : also called *Pang tzŭ Hu Ch'in* because it is played with the *Pang tzŭ*, and *Wan Hu* 碗胡 or *Wan Ch'in* *Cup fiddle*, from the shape of the body. It is described as a barbarous instrument from Shansi and Shensi, and is used both in theatres and in private houses to accompany the *Pang tzŭ Tiao*, a tune said to come from Shensi. The body, of cocoanut shell with five holes below, is $4\frac{1}{2}$ inches in diameter and 3 inches deep. The sound-board is fixed on top of the edge of the body. The shop in Shanghai, where the specimen described was made, seems to be rather peculiar in using cocoanut shell, although it is used in the North; and other shops in Shanghai, while using bamboo, make the body barrel-shaped and stain it dark brown. The redwood neck is $33\frac{3}{8}$ inches long and is round below the scroll, which occupies nearly 8 inches. There is a nut of boxwood, wedge-shaped and cut out below to fit the round neck, to which it is tied about 4 inches below the tuning pegs. The two strings are fixed to a boxwood cap [*ling*] like that of the *Ssŭ Hu*. The *Hu Hu* and *T'i Ch'in* both have the small bridge [*ma*] on the sound-board. [*see* Plate X and XI.]

2. (2) T'I CH'IN (*T'I K'IN*) 啼 or 提琴. The body is a cocoanut shell 5 inches in diameter and $3\frac{1}{4}$ inches deep, with a hole below about $2\frac{1}{2}$ inches in diameter. The sound-board is fitted into the top of the body. The neck of redwood, flat above and rounded beneath up to the scroll, is 28 inches long. A nut of boxwood, called *Shan K'ou* 山口, is glued to the neck where it begins to grow wider—$20\frac{1}{2}$ inches from the body. This nut is straight on the side towards the body, curved on the other side, and is $\frac{1}{2}$ inch high. The tail

IV.B.c §§ [*wei pa* 尾巴], corresponding to the *ling* of the *Hu Hu* etc., is made of box tipped with redwood, 4 inches long and tapering toward the lower end. Other makers taper it towards the body, or not at all. The length too varies considerably. The two strings are treated as described above, but the key cannot be altered in the same way since the 'nut' on the neck is fixed.

The *T'i Ch'in* is common at Shanghai, but seems to be little known in the North. It is rather like the Persian *Kemangeh*. The latter has the globular body—sometimes a cocoanut shell—and the same bow, and arrangement of the neck and tuning pegs. But the body of the Kemangeh is covered with snakeskin, and there are three strings [Engel p. 158.].

All the above instruments—or at least those at the first group—are commonly called *Hu Ch'in*. The *Érh Hu* and *Ching Hu* especially are very popular, being perhaps the most commonly used of all instruments except the *Ti tzŭ*. But they are not often seen in any religious ceremony [II. A. 2. (2)]. It should be noticed that the size and proportions of the *Hu Ch'in* vary considerably even in different shops in the same town. The specimens described were all made in Shanghai, except where the contrary is stated.

Of the history and origin of the *Hu Ch'in* little seems to be known beyond what is contained in the name. *Hu* seems to have been one of the semi-barbarous regions of ancient China, and is described as bordering on *Ch'u—K'ang Hsi* s.v. 胡. But in the present connexion the word means perhaps little more than *foreign*[1]. The use of cocoanut shells may suggest a

[1] M. Mahillon says that the *Érh Hu* is derived, according to Fétis, from the *ravanastron*, a violin named after Ravana, King of Ceylon. The *Ravana* is almost identical with the *Pun Hu* [Brussels Catalogue 145, 144].

In Watters' *Essays on the Chinese Language*, p. 384, we read "this term [胡] had a vague and wide application among Chinese writers up to the period of the T'ang dynasty. It then became restricted properly to tribes

southern origin for the *T'i Ch'in*. See also *Introduction* and Additional Note F. IV.B.c §§

2. (3) TA HU CH'IN (*TA HOU K'IN*) 大胡琴. Of this and the following instrument only unfinished specimens have been seen in the workshop of a well-known maker of stringed instruments[1] in the *Liu li Ch'ang* at Peking. Very little information as to their use or origin was obtained beyond the statement that they were used in the Palace[2]. The *Ta Hu Ch'in* is made of *ch'ai* wood with a sound-board of *t'ung* wood. The body is oval with a curved back; 14 inches long, 9 inches wide, and 3 inches thick. It has a thick wooden neck, probably without frets, and a scroll carved into a dragon's head, 5½ inches long. The total length is about 36 inches. There are two strings, fixed to the tuning pegs in a cavity in the scroll. The bow is like that of the *Hu Ch'in*. [*see* Plate VI, Fig. 3.]

2. (4) ÈRH HSIEN (*EUL HIEN*) 二絃. See under *Ta Hu Ch'in* above and Plate VI, Fig. 4. The sound-board and back are of *t'ung* wood, the rest of *ch'ai* wood.

. . . East of the Tsung ling range, while Fan became the name to be given to the nations West of that range . . . This distinction . . . has been . . . neglected by Confucianist writers, who have continued to give the name Hu often to natives of India and to others who are not Mongolians."

[1] At Peking the makers of stringed instruments sell practically nothing else. Gongs, bells, etc. and all wind instruments are sold at a brazier's shop outside the great south gate of the Tartar city; certain drums and other pedlar's instruments are sold in lanes in the same neighbourhood; and pigeon whistles and other musical toys are found at the almost daily Temple Fairs. In large cities like Hangchow, Soochow, and Shanghai almost all instruments can be had of one dealer, though at Soochow there are shops devoted to the sale of brass instruments. In smaller towns musical instruments are kept at the miscellaneous goods shops; and gongs and horns may also be bought at the brazier's.

[2] No account of the instruments or music used at Imperial ceremonies has been attempted in the present list.

IV.B.c §§ The bow is like that of the *Hu Ch'in*. The *Êrh Hsien* must be carefully distinguished from the *Êrh Hu* [IV. B. c. §§ 1. (3)].

These two instruments, 2. (3) and (4), are not included in the two groups into which the *Hu Ch'in* proper are divided. The numbers attached to the various *Hu Ch'in* indicate their places in the general classification and have no reference to the said two groups.

ADDITIONAL NOTES

A

A TABLE showing the approximate relation of the Chinese Scales to each other, and to the European Scale.

LÜ LÜ 律呂	WU YIN 五音	KUNG CH'Ê TZŬ 工尺字	ENGLISH EQUIVALENTS
ch'ing Chung Lü 清仲呂		Shang 仩	G
ch'ing Ku Hsi 清姑洗		I 乙	F sharp
ch'ing T'ai Ts'u 清太簇	shao Shang 少商	Wu 五	E
ch'ing Huang Chung 清黃鍾	shao Kung 少宮	Liu 六	D
Ying Chung 應鍾	Pien Kung *or* Ho 變宮 和	ch'ing Fan 清凡	C sharp
Wu I 無射		ya Fan 亞凡	C
Nan Lü 南呂	Yü 羽	ch'ing Kung 清工	B

Addit. Notes				
	I Tsê 夷則		ya Kung 亞工	A sharp
	Lin Chung 林鍾	Chih 徵	ch'ing Ch'ê 清尺	A
	Jui Pin 蕤賓	Pien Chih 變徵	Kou 勾	G sharp
	Chung Lü 仲呂	[Chung 中]	Shang 上	G
	Ku Hsi 姑洗	Chiao 角	Chêng I 正乙 [一]	F sharp
	Chia Chung 夾鍾		ya I 亞乙	F
	T'ai Ts'u 太簇	Shang 商	chêng Ssŭ 正四	E
	Ta Lü 大呂		ya Ssŭ 亞四	D sharp
	HUANG CHUNG 黃鍾	KUNG 宮	HO 合	D

The above Table gives :—

1.—The names of the twelve degrees into which the octave was anciently divided. These are notes of fixed pitch determined by the exact measurements of the pipes which produce them. The notes of the upper octave may also be called *Pan Huang Chung*, etc., and the notes of the octave below that given are called *Pei*. Both these name ['*half*' and '*double*'] have reference to the length of the pipes required.

2.—The *Five Sounds* or degrees of the scale—increased to seven by the addition [traditionally in the twelfth century B.C.] of *Pien Chih* and *Pien Kung*. These, like our Tonic, Super-tonic, etc., are of moveable pitch, and are placed in the Table to show their relative positions only.

Addit. Notes.

3.—The *Kung Ch'ê Notes*, said to have been introduced by the Mongols about the twelfth century of the Christian era. In popular music these are now moveable degrees of a scale [nearly the same as the western scale], and the addition of the note *Kou* to correspond with the ancient *Pien Chih* suggests that this was the case originally. In modern ritual music however and throughout *Lü Lü Ching I* and *Wên Miao Yo Shu* of the Ming dynasty, they seem to be treated as fixed equivalents for the *Lü Lü* as shown in the Table. In the latter book the music is written with *Chung Lü* or *Shang* for the Tonic, and in this way the *Kung Ch'ê* and *Wu Yin* intervals correspond without the use of *Kou* which never seems to have been popular and is now quite forgotten. The older book occasionally uses *Kou* for *Pien Chih*.

4.—The approximate European equivalents for the *Lü Lü*.

The meaning of the names of the notes seems very uncertain. The *Kung Ch'ê* names appear to be mere transliterations of foreign words; and with the two native scales, whose origin is lost in antiquity, it is at least conceivable that when the notes were first written down the meanings of their names were already forgotten, and the characters used may have been chosen simply to represent the traditional sounds.

Tables like the above may be found in most of the foreign works on Chinese music, and this is only printed for convenience of reference. D is given, on the authority of M. Mahillon [Brussels Cat. Tome II. p. 107], as the actual note of *Huang Chung* as defined by *Tsai Yü*. The European equivalents of the other notes are only approximate. The more exact relation of the Chinese and European notes is given in Van Aalst's *Chinese Music*, where, however, there

Addit. Notes

seems to be no sign of a scientific definition of the *Kung Ch'ê* notes independently of the *Lü Lü*. The names of the *Kung Ch'ê* notes in the Table are taken from *Wên Miao Yo Shu*. The division of the octave at *Shang*, instead of at *Ho*, is marked by the use of *Chêng* [*normal* octave] with the diatonic notes below *Shang*, and of *Ch'ing* [*upper* octave] with those above *Shang*. *Shang* is apparently still used as the Tonic sometimes, but *Fan* is then flattened so that the scale still corresponds with the European scale.

B

The Ancient Scale in Modern Books.

The relation between the modern scale and the ancient is now very little understood, and the *Wu Yin* or *Lü Lü* notations are rarely if ever used except in the manuals for the State ritual. The confusion which prevails in some of these manuals seems traceable to the *Lü Lü Chêng I* [*see* p. 5], which gives this comparative table of the scales on f. 28 of the second volume :—

WU YIN.	CHU TIAO (*Wu-Yin*).	LÜ LÜ.	Note on the *Hsiao* (*Kung Ch'ê*).	Note on the *Ti* (*Kung Ch'ê*).	English Note.
Kung	Kung	Huang Chung	Kung	Sŭ	E
	Ch'ing Kung	Ta Lü	Kung 8vo.	Wu	F
Shang	Shang	T'ai Ts'u	Fan	I	F sharp
	Ch'ing Shang	Chia Chung	Fan 8vo.	I 8vo.	G
Chiao	Chiao	Ku Hsi	Ho	Shang	G sharp
	Ch'ing Chiao	Chung Lü	Liu	Shang 8vo.	A
Pien Chih	Pien Chih	Jui Pin	Sŭ	Ch'ê	A sharp
	Ch'ing Pien Chih	Lin Chung	Wu	Ch'ê 8vo.	B
Chih	Chih	I Tsê	I	Kung	C
	Ch'ing Chih	Nan Lü	I 8vo.	Kung 8vo.	C sharp
Yü	Yü	Wu I	Shang	Fan	D
	Ch'ing Yü	Ying Chung	Shang 8vo.	Fan 8vo.	D sharp
Pien Kung	Pien Kung	Pan Huang Chung	Ch'ê	Ho	E
	Ch'ing Pien Kung	Pan Ta Lü	Ch'ê 8vo.	Liu	F

Addit. Notes

The approximate English equivalents for the *Lü Lü* notes have been added. In the original the notes are printed in five concentric circles, of which the outermost [our left hand column] is fixed, and the rest are on a revolving piece of paper — so as to illustrate the transposition of the *Wu Yin*. In transposing, the following curious rule is observed, as an attempt perhaps to overcome the difficulty of making a scale of fourteen notes [or seven tones] correspond with one of twelve:—To find the true *Lü Lü* equivalent of the *Wu Yin* note that stands opposite the upper *Huang Chung* or *Ta Lü*, go down one octave and two notes. Thus when the scale in the above table is printed on another page, *Pien Kung* [opposite *Pan Huang Chung* in our table] becomes *Wu I*—two notes below the lower *Huang Chung;* or if *Kung* were *Nan Lü, Chiao*, opposite *Pan Ta Lü*, would become *Ying Chung*, two notes below the lower *Ta Lü*. And the identification of the notes for the flutes *Hsiao* and *Ti*, with the *Wu Yin* is scarcely more successful, although, by good fortune, the two scales concerned have the same number of notes and so get round the circle more comfortably together. It is hard to be sure whether the notes such as *Ch'ing Kung, Wu, Fan* 8vo., are the *octaves* or the *sharps* of *Kung, Ssŭ, Fan;* but they are printed in the way usually taken to indicate octaves.

The note of the first hole of both *Hsiao* and *Ti* is [or was] called *Kung* 工, but the pitch of the *Hsiao* is a fifth below that of the *Ti*, so that when the music for the *Ti* in the Confucian music books is *written* a fourth above that for the *Hsiao*, the two instruments sound in octaves or unison. The scales of the modern ritual *Hsiao* and *Ti*, as ascertained by the Rev. F. W. Galpin, begin [with all holes closed] on D and A respectively,[1] so making *Huang Chung* in the above table

[1] Van Aalst gives the same notes for the popular *Hsiao* and *Ti*.

Addit. Notes

equivalent to E. In *Wên Miao Yo Shu* the *Hsiao* and *Ti* are of one pitch, the first hole being marked *T'AI TS'U* on each, and, on the *Ti*, *Ssŭ* as well. If, as is possible, this book follows *Tsai Yü* in making *Huang Chung* = D, this shows that the pitch of the *Hsiao* has not changed since the seventeenth century, and that *Huang Chung* has been raised from D to E in the present dynasty. In considering the names of the notes of the *Ti*, it should be observed that the *Ssŭ* hole gives probably the same note in *Wên Miao Yo Shu* as in *Lü Lü Chêng I*, viz. E, though it represents *T'ai Ts'u* in the former, and *Huang Chung* in the latter, and is the first hole of the older instrument and the fourth of the later.

When it is remembered that the *Lü Lü Chêng I* represents the *authorized* system of classical music for this dynasty, it is not surprising that the modern Chinese look on the ancient scales as a perplexing subject.

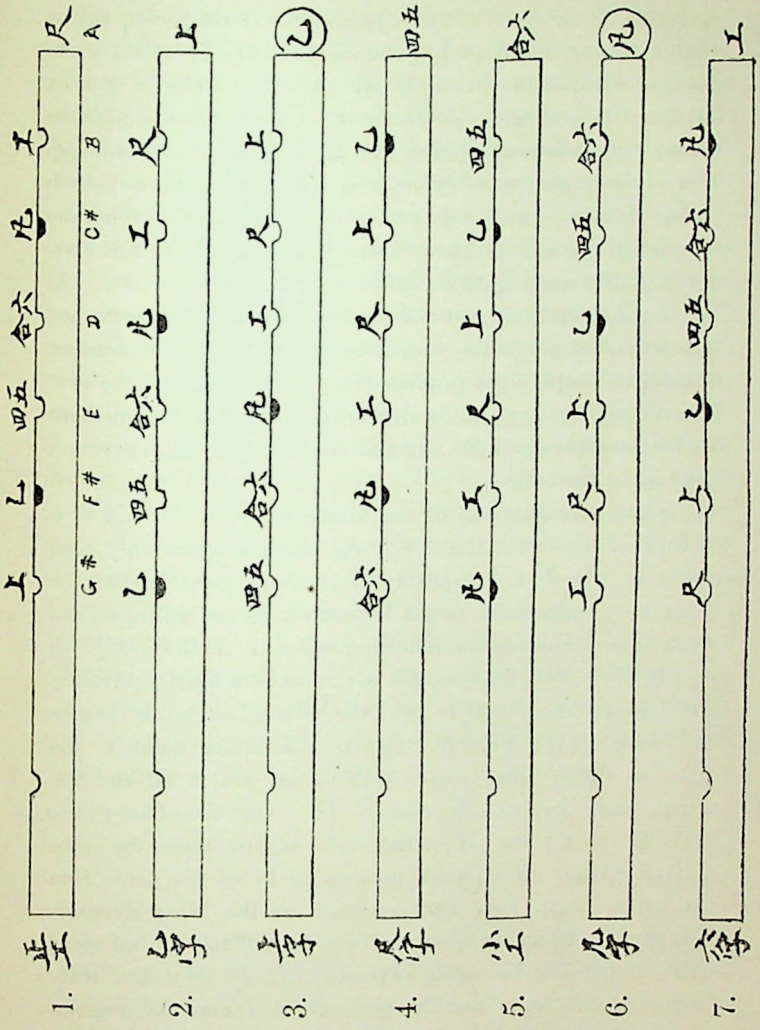
C

The Seven Tiao *or Keys of the* Ti.

笛譜七調

The following table is said to be copied from a book for the *Ti tzŭ* player in the theatre music called *K'un Ch'iang* 崑腔.

The *K'un Ch'iang* music is said to date from the eighth century of our era, and it will be noticed that the notes *I* and *Fan* are marked as not used, and that the *Wu Yin* scale begins in each key on *Shang* instead of on *Ho*. There is nothing in the original table to indicate the use of sharps or flats, but it is probable that each scale is intended to have the ordinary intervals of the *Wu Yin*, and this is confirmed by the scales for the *P'i P'a* and for the *Ch'in*. The keys given in the Chinese



This table I owe to the kindness of Mr. *Ching* of Nanking.

Addit. Notes

diagram above are: 1. *Chêng kung*; commonly called *Chêng*. *Kung* ought perhaps to be written 宮. *Ch'ê* is the note got with all the holes closed. 2. *I tzŭ*; *ch'ê* is got by opening the *first* hole. 3. *Shang tzŭ*. 4. *Ch'ê tzŭ*. 5. *Hsiao kung*; very commonly called *fan* 反 *kung* or simply *fan* 反. *Fan* or *hsiao* are probably added to distinguish this key from *Chêng kung*. *Fan kung* and *chêng kung* seem to be the commonest keys in ordinary use. 6. *Fan tzŭ*. 7. *Liu tzŭ*; *ch'ê* is got by opening all *six* holes.

I and *Liu*, the second and seventh names above, seem not to be notes, but numerals—*one*, and *six*—describing the number of holes to be opened to produce *ch'ê*. The names of the four intervening keys seem to be due to the coincidence that there are four numbers between one and six, and four notes between *i* and *liu* in the scale.

From a comparison of the above with the *P'i P'a P'u* [a book of music for the *P'i P'a*], which however only uses numbers 1, 4, 7, and probably 5, it seems *possible* that the seven keys correspond to the Western keys beginning on the seven natural notes in the following order G. A. B. C. D. E. F.

In *Wên Miao Yo Shu*, *Ho* seems to be a fixed equivalent for *Huang Chung* [D], and the *Wu Yin* scale begins on *Shang* [G]; [*see* p. 170 ff.] This is exactly the same as *Chêng Tiao* where *Ch'ê* is A, *Ho* is D, and the actual scale begins on *Shang*, G. On the *Shêng* also [III. B. b. 2.] the Western scale begins with the pipe marked *Shang*. Van Aalst says on p. 16 of his book that the notes *I* and *Fan* were omitted in the *Ming* dynasty. This would produce a scale with the groups of two and of three notes of the *Wu Yin* scale reversed, or, the *Wu Yin* scale beginning on *Shang*, and the omission of *I* may have given rise to the habit of beginning the scale whether *Wu Yin* or Western, on *Shang*. The scales for the *Ti tzŭ* seem

intended to be all on the same plan, so that the Western scale would begin in each case on *Shang*. Another explanation of this arrangement is perhaps to be found in the fact that the notes of the six holes of the *Ti tzŭ* have the same names as those of the six holes of the *Hsiao*, although the pitch of the two instruments differs by a fifth, as is shown on p. 137. Thus the note *Shang* on the *Ti tzŭ* is called *Ho* or *Liu* on the *Hsiao*, and it may be that the scales were first defined with reference to the *Hsiao*, which was the official flute of the Mongol dynasty, or some similar instrument. The use of the names *Ho*, *Ssŭ*, *I*, etc. as names of the holes of the *Ti* irrespective of the actual pitch of the notes, or, in a sense, of their position in the scale, should be noticed.

Tsai Yü [Vol. VI. f. 20, sqq.] gives a number of tunes to songs from the *Book of Odes*. The first twelve of these are in a key called *Huang Chung Chih Tiao*, and begin and end on *Lin Chung* [A], while the remainder are written in *Huang Chung Chiao Tiao*, and begin and end on *Ku Hsi* [F sharp]. The first set use the notes D, F sharp, G sharp, A, B, C sharp, and the second D, F sharp, G sharp, B, C sharp. This shows two ways of treating the ancient diatonic scale which produce to western ears something of the effect of a major key and its relative minor—though it is true that the minor third is little used in the second set of tunes.

D

Music in the Theatre.

There seems to be some uncertainty about the original nature of the *K'un-Ch'iang* [Note C. above], as play-acting is supposed to have been introduced by the Mongols in the thirteenth or fourteenth century. But *Ming-Huang* of the *T'ang* dynasty, who reigned from 713 to 756, is undoubtedly

Addit. Notes

looked upon as the patron of actors, who are still called *Li-Yüan Hang* 梨園行 from the name of the old imperial garden at *Ch'ang-An*, in which he built a school for training actors. And it was he who, in a dream, saw fairies in the moon with rainbow skirts and feather jackets, acting and singing; and when he awoke he wrote down the music which he had heard, giving it the name of *K'un Ch'iang*, and taught it to his actors. And though the music is difficult and not very popular, every actor is supposed to learn it to this day.

The music used in the theatres is perhaps the most important branch of Chinese music, and at the same time it is the most difficult to get a clear idea of. A considerable part of the majority of plays is sung, and an experienced native would have no hesitation in naming the tune which was being used on any occasion. For it seems that special music is by no means always composed for a new play, but many plays are sung to the same tune which will be one of the traditional tunes[1] known by the actors. The choice of tune is no doubt limited by the nature of the piece; it is said that *Erh Huang Fan Tiao* for example, would never be used for a comedy. Of all the tunes, *Erh Huang* is now perhaps the most popular, at least with Pekingese actors. This tune, as its name, *the two Huang*, implies, seems to have come from the neighbourhood of two places in Hupeh, whose names include the word *Huang*. There are now many varieties of *Erh Huang* distinguished in different ways, such as by their time, or tempo, or key. It is said that these are all derived from the true *Erh Huang*, but the variations are so great that only an expert can recognize their connexion with the original tune. Further than this it appears that each actor has full

[1] Of tunes accompanied on the *Hu Ch'in*, the commonest are *Erh Huang* 二黃, *Hsi P'i* 西皮, and *Pang Tzŭ* 梆子.

liberty to vary and embellish the particular tune which he is singing provided that he keep within certain limits. What these limits are is not very clear, but it seems that, for one thing, the *time* of the piece must be strictly adhered to ; while the fact that the singing is accompanied by the *Hu Ch'in* or some other instrument makes it likely that there is at least a sort of skeleton tune which runs through the whole performance. This impromptu variation of tunes [comparable perhaps to the variations introduced into *recitative* by some European singers] is one of the tests of good singing, and the great actor *Sun Chou-Hsien* is famous for his brilliant and original treatment of familiar themes. What has been said about the variations of *Érh Huang* will apply, as far as it is right, to other tunes as well.

Another point which seems to be more or less clear is that each tune has its proper key and is not as a rule transposed. A Chinese gentleman thoroughly familiar with theatre music seemed to consider the difference of pitch as one of the most important distinctions between one tune and another ; and the difference of pitch was ascribed to the difference of key—a fact which may suggest that Chinese tunes are confined within a limited number of notes for each key, as is the case with tunes in the Gregorian modes.

The *K'un Ch'iang* is said to be published in a book of about forty volumes. The more popular tunes, of which every actor, as has been seen, has his own version, are not written down. The instrumental interludes and the accompaniments are of more fixed form and can be written. A prominent feature of the instrumental parts is the constant repetition of a short phrase easily remembered and often of considerable beauty.

Addit. Notes

E

Mr. Wead in a Paper entitled *Contributions to the History of Musical Scales*, [Washington, 1902] gives the following rule:—"The primary principle in the making of musical instruments that yield a scale is the repetition of elements similar to the eye; the size, number and location of these elements being dependent on the size of the hand and the digital expertness of the performer." In establishing this rule Mr. Wead discusses stringed instruments with frets; flutes, including reed instruments; and especially resonators; showing that originally scales were derived from instruments, and instruments not designed to give certain known scales:—the positions of frets and finger-holes, and the lengths of strings and pipes being fixed first with a view to their artistic appearance. The following arrangements of the above elements are given:—1. Frets evenly spaced along the finger-board; 2. Frets divided into groups and evenly spaced within the limits of a group; 3. Finger-hole on flutes evenly spaced; 4. Finger-holes divided into two groups, each of three evenly spaced holes; 5. Finger-holes on resonators symmetrically arranged, in squares, triangles, etc.

The Chinese seem to have had a theoretic scale from an early date and to have made their instruments to conform to it. Mr. Wead dismisses this scale with "the Chinese cycle of fifths must be explained and determined on entirely different physical principles." Nevertheless it may not be uninteresting to examine Chinese instruments in the light of Mr. Wead's remarks. First one may notice that ornament is now rarely applied to any extent to instruments in China. The lacquer and gilt of the ritual instruments is applied to them in common with the stands, tables, etc., which are used in the State services and is not an original or essential feature. Of

the five arrangements of frets and holes given above, 2. is found on the P'i P'a, 3. on the *Ti tzŭ*, etc., 4. perhaps on the ancient *Ch'ih*, and 5. on the *Hsüan* before the seventeenth century. Symmetrical arrangement of parts may be seen in the pipes of the *P'ai Hsiao* and *Shêng*, the strings of the *Yang Ch'in*, and the 'frets' of the *Ch'in*. These last, as M. Mahillon shows, do not give the theoretic Chinese scale and their arrangement is curious. The middle point bisects the strings, and the other twelve points are arranged symmetrically with a group of two and a group of four points on either side of the middle. There is no even spacing either in the whole series or in the groups. Amiot says the groups are designed to give the series 1, 2, 4. The middle point and the third and sixth from it in either direction may be got by bisection. *See* Plate V.

The modern *Ch'ih* [Plate III, Fig. 5], is remarkable for the spacing of the finger-holes roughly conforming to the principle that the holes for the lower notes should be further apart than those for the higher notes. As made from the *Sung* dynasty till the seventeenth century it had the further peculiarity of having one finger-hole smaller than the others. In flutes like the *Ti tzŭ* the enlargement of the intervals as the scale rises, which would seem to be the natural result of the evenly spaced holes, is probably corrected by the proportionately increased length of pipe *below* the successive holes.

F

On the List of Instruments contained in the Wên Hsien T'ung K'ao 文獻通考, *an Encyclopædia compiled by Ma Tuan lin* 馬端臨 *c. A.D. MCCC.*

This list of ancient and mediæval instruments contains more than four hundred names, but of this number a few are

Addit. Notes

names of frames or stands or of methods of playing, while many more are names of famous individual specimens known in legend or history, so that the number of different kinds of instrument described is not so great as at first appears. The instruments are classified under the *Eight Sounds*, with an extra *Miscellaneous* class, and each *Sound* is divided into *Classical* [*Ya* 雅], *Foreign* [*Hu* 胡], and *Popular* [*Su* 俗]. The defects of the list are the absence of pictures, the vagueness of the descriptions—very often no description is given at all—and the difficulty in finding out if an instrument was still in use when the book was written. The list is nevertheless of considerable interest and the following extracts from notes made in looking rapidly through it may help to illustrate some points connected with instruments of the present day, and also to give some idea of the state of Chinese music in the fourteenth century. I have used 'modern' below always with reference to the *fourteenth* century, not to the *twentieth*.

METAL 金.

Classical.

Nothing specially noteworthy.

Foreign.

The *Fang Hsiang* 方響 apparently still existed. It consisted of sixteen pieces of iron hung in a frame. Each piece was '8 inches long by 2 inches wide, round above, square below.' Cymbals [*Chêng T'ung Po* 正銅鈸] are mentioned as from *Nan Chi*, *Hsi Jung* and other foreign countries. The *brass horn* [銅角] of *Kao Ch'ang* was like a cow's horn; next to it is the *dragon's head horn*, cp. III. C. 4.

Popular.

Addit. Notes

Here among many interesting instruments [some of fantastic shape or prodigious size] we may notice *Féng To* 風鐸, bell hung from the eaves of pagodas; *T'ung Po*[1] 銅鉢, apparently the Buddhist bowl [I. B. 3. (1)]; two instruments called *Chêng* 鉦 not described; an iron flute [*T'ieh Ti* 鐵笛], a common instrument, the date of whose origin was unknown; and an *iron reed* [*T'ieh Huang* 鐵簧], 'a reed of thin iron fixed with wax.'

Bell chimes [*Pien Chung*] appear under both *Foreign* and *Popular* instruments. It is noticeable that no bell ancient or modern is called *Ling* 鈴, though one is described as 'like a *Ling*.'

STONE 石.

Classical: Foreign: Popular.

Here besides stone gongs [*Ch'ing* I. B. 2.] we find stone drum, *Ch'in*, flutes, organ, panpipes, and *Fang Hsiang*.

CLAY 土.

Classical: Foreign: Popular.

Under *Seven hole Hsüan* [七孔塤] we read that the ancient *Hsüan* had six *square* holes, produced the six *lü* 律 [diatonic scale] and had a 'middle sound.' 'The old *Hsüan*

[1] A contemporary allusion to this instrument is perhaps to be found in Marco Polo's statement that "each guard [in Hangchow] is provided with a hollow instrument of wood [see under *Yü Pang*] and with a *metal basin*, and with a time-keeper to enable them to know the hour of the day or night. And so when one hour of the night is past the sentry strikes one on the wooden instrument and on the basin, so that the whole quarter of the city is made aware that one hour of the night is gone."—*The book of Ser Marco Polo* [1903] vol. II. p. 187. The watchman of the present day has a hollow bamboo instrument and a gong.

Addit. Notes

now kept by the *T'ai Yüeh* has seven holes, upper and lower all *round*.' The *Hsüan* should be lacquered earth colour, i.e. reddish yellow. The *Shui Chan* 水盞 is described as a modern instrument consisting of nine cups [probably containing different quantities of water], struck with a stick. The *Chi Jang* 擊壤 was made of wood [!], like an inverted jar, about 1 foot high. It was then a toy, but in the days of *Yao* and *Shun* had been a classical instrument.

SKIN 革

Classical : Foreign.

The chief thing to notice is that a few drums are described as tuned to certain notes. Thus the *Chieh Ku* 羯鼓 [?'deer skin drum'] of *Kao Ch'ang* and India was tuned to *t'ai ts'u*. The *Chang Ku* 杖鼓 [called also *Wei* 魏, *Hsiang* 相, *Hsi Yao* 細腰 'thin-waisted,' *Chêng* 正, or *Ho* 和] seems to be the *Chang Ku* [II. B. 1.] of the present day. It is not stated to have been tuned, but the *Fang Ku* 方鼓 [a *popular* drum], tuned *huang chung*, is described as like the *Chang ku*. The body of the *Chang ku*, if large, was made of clay, if small, of wood.

Popular.

The *Fang Ku* has been already noticed. The *Huang Chung Ku* 黃鍾鼓, for the winter solstice, may also have been tuned, though the fact is not stated. The *T'ang Ku* 唐鼓 has the note :—'Originally inside the Hall was the *Po Fu* [II. A. 6. (3)], but no *Ku*; in later times this drum has been used inside the Hall.' This may explain the common writing of the name [堂 'Hall drum'] at the present day. At the end of this section comes a *horn* [角] green, red, or black,

described as a conical tube 5 feet long made of wood, bamboo, or leather, and used in the Emperor's train.

Addit. Notes

SILK 絲

Classical.

Nothing but varieties of *ch'in* and *shê*. The seven stringed *ch'in* is declared to be the true ancient instrument.

Foreign.

Under *Hu Ch'in* is the obscure note: 'The *ch'in* is one, the distinction is that of Chinese and foreign.' No bow is mentioned. Next comes *Hsi Ch'in* 奚琴 with two strings, between which a slip of bamboo is put as a bow. 'It is also used by the [Chinese] people.' This looks like the embryo of the *Hu Ch'in* [IV. B. c. §§.] of our own times. The *Gourd Ch'in* 匏琴 from *Fu Nan* and India may be the original of the *Hu Hu* or *T'i Ch'in* [IV. B. c. §§. 2.], but again no bow is mentioned. The lutes or guitars are very hard to identify with the instruments we now know. The *Tsou P'i P'a* 搊琵琶 was used on horse-back. It had a round body, a straight neck, four strings and twelve frets. *Round* applied to the body may describe the curved belly of the *P'i P'a* of the present day, and does not necessarily mean circular. The common *Ch'in Han P'i P'a* 秦漢琵琶 had four strings and four frets [*kê* 隔]; 'the four open notes and twelve [*sic*] stopped notes make altogether twenty.' Under the same heading we learn that the *Hsien T'ao* had a round body, a long neck like the *P'i P'a* but smaller, and twelve frets [柱], but differed in having no 'sound-hole' [*eye* 目]. There seems to be no reason except the 'long neck' why these two instruments should not be respectively the Japanese *Biwa* and the *P'i P'a* [IV. B. a. §§. 3. (1)] as we now know it. The *snakeskin*

Addit. Notes

P'i P'a 蛇皮琵琶 may be the *Hsien tzŭ* [IV. B. a. §§. 4]. The *P'i P'a* are divided into straight-necked and curved-necked. Three *Chêng* 箏 from Corea are described. They had twelve frets, and are perhaps the thing like a *Ch'in* with frets, which is still used in that country.

The sculptures of the Chu Yung Kuan [a gateway in the Great Wall, A.D. 1345] show a six-stringed *P'i P'a* with sound-holes and apparently without frets, but otherwise of the modern shape. See *Chinese Art* by S. W. Bushell, vol. I, fig. 24. A fifteenth century painting in the British Museum shows a four-stringed P'i P'a with sound-holes and frets: ib. vol II, fig. 131.

Popular.

The *Yüeh Ch'in* 月琴 was 'like the *P'i P'a*,' with round body, *long neck*, four [or later, five] strings, and thirteen frets. A monochord of the *Wei* dynasty is mentioned. There is nothing like the *Yang Ch'in*; but there are two or three instruments played with hammers. The *Chi Ch'in* 擊琴 had five strings stretched on a bamboo pipe and struck with a bamboo hammer. The *Chi Chu* 擊筑 was 'rather like the *Chêng*' and had a chromatic scale like the *Chêng*, but that was played with the fingers and this struck with a hammer [筋]. The body was curved and 42 inches long; the neck thin and 4½ inches long; the head 7½ inches long, 6½ inches wide. There were thirteen strings. The left hand managed the frets, the right hand held a bamboo foot-rule [竹尺] to strike the strings with.

GOURD 匏

Classical.

Modern organs are described as having nineteen pipes. The scale given is hard to understand, but it is elsewhere said to have been chromatic. In the *Sung* dynasty an ancient

organ [*Yü* 竽] was found 'with pipes but without reeds, the series of pipes irregular, and also a curved neck, and all with phœnix ornament.' *Huang* 簧 was an instrument originally with bamboo reeds, but now 'the people use reeds of iron leaf.'

Addit. Notes

Foreign.

The *Lieh Yü* 埒竽 was shaped like a small bell and rubbed by the hands. It was 'like the *Huang*, but without a mouth-piece.' Perhaps the *Jews harp*?

Popular.

The *I Kuan Shêng* 義管笙 had two pipes and seventeen reeds. 'The surviving *Sung* dynasty *Shêng* all have seventeen reeds.' *Ch'iu* 篍 was a pipe giving the sound *ch'iu ch'iu*, used by hawkers: 'the same effect can be produced with the fingers.' *Chi Chu* 擊竹 were two slips of bamboo several inches long, clapped together in the hand to beat time. It seems as if this last must be wrongly classified.

BAMBOO 竹

Classical.

Under *Ti* 遂 we gather that the *Kuan* and *Ti* were much alike [*see* under III. A. b. 2.]. The *Han* dynasty *Ya Ti* had seven holes so that it gave the full scale. *Ts'ai Yung* 蔡邕 says that the *Ti* was 1 foot long, 1 inch round [? diameter], open [as opposed to the *Kuan*, which is said to have been stopped], and with finger-holes; now the *Kuan* and *Ti* have one rule. A *Han* dynasty *Ti* 笛 gave the note *Shang* 商 with the back hole; the same hole of the *Chin* dynasty instrument gave *Chiao*. The official *Ti* of the period was the *Tung Hsiao* [III. A. a. 2. (3)] of the present time. The method of producing the chromatic scale is given. The 'leading note' is got by opening holes 3 and 6, the octave by opening 6. 'By having a second pipe tuned to *Ying Chung* the whole scale

Addit. Notes

is got on two pipes, but the modern plan of using half notes [half opened holes] gets it all on one.' Under *Ch'ih* we find that *Ch'ên Shih* calls it a 'stopped *Ti*.' There was no fixed size. The first hole was at the end, the next four in front, the sixth at the back. 'The blow-hole of the *Ch'ih* is like a sour jujube.' The scale is: 1st hole open, *t'ai ts'u*, half open, *ta lü* ; 2nd open, *ku hsi*, half open, *chia chung* ; 3rd open, *jui pin*, half open, *chung lü* ; 4th open, *lin chung* ; 5th open, *nan lü*, half open, *i tsê* ; all holes open *ying chung*, half open, *wu i*. *Huang chung*, *ta lü*, *t'ai ts'u*, and *chia chung* will all give their octaves if blown 'whistlingly.'

Foreign.

The *Pieh Li* [III. B. a. 1. (2)] was evidently common. [At an earlier date it had been freely used in State services.] It gave '*wu*, *fan*, *kung*, *ch'ê*, *shang*, *i*, *ssü*, *liu*, *kou*, *ho*, ten notes.' 'All *Pan pipes* handed down from the *T'ang* dynasty have eighteen pipes.' Three military horns are named. The *Hu Chia* is not better described than in other books. The modern *Ch'ui Pien* 吹鞭 was a leaf rolled up, used by cowherds and children. The *Ch'iang Ti* 羌笛 or *Hu Ti* 胡笛 had four [or five] holes, and was said in recent books to be the original of the small *Ch'ih*. The *Hêng Ch'ui* 橫吹 was like the *Ti*. The *Lung T'ou* 龍頭 or *Lung Ching* 龍頸 *Ti* was a transverse flute with eight holes, used in China ; and was possibly the *Ti tzŭ* [III. A. b. 2. (1)]. The *I Tsui Ti* [*see* III. A. b. 2. (1)] came from *Hsi Liang* and was also used in Corea.

Popular.

Pan-pipes with 24, 23, 21, 17, 16, 13, and 12 pipes are mentioned. Of these the *Yen Yüeh Hsiao* 讌樂簫 with 21 pipes was a common modern instrument. Three kinds of *Ku Ch'ui Hsiao* 鼓吹簫 [*i.e.* pipes used by the bands hired for funerals, etc.] with 12 or 13 pipes

Addit. Notes

were used. Under *Sung Hsiao* 頌簫 it says that an instrument was in use with 16 stopped pipes, of which 4 were not used, 5 or 6 inches long. 'The *seven hole Yo* giving the two *pien* notes is a modern popular instrument'. Under *Ch'i Hsing Kuan* 七星管 is the note:—The *T'ang* dynasty *seven stars*[1] *pipe* is the old *Ch'ang Ti* 長笛.' The *Kung Ch'ên Kuan* 拱辰管, a six-hole flute of the *Sung* dynasty appears to have had finger-holes on either side of the blow-hole like *Tsai Yü's* ancient *Ch'ih* [*see* III. A. b. 1.]. The pipe was 9 inches long, tuned to *huang chung*, with six holes, four on the left two on the right (其竅有六…四竅左右兩竅左 [v.l. 在] 右. A good scholar confidently read 在左 for the first 左右). Under *Hsiao Kuan* 簫管 we read:—'The rules of the *Hsiao Kuan* are—six holes, at the side one hole covered with membrane [*chu mo* 竹膜], the scale begins on *huang chung*. Also called *Ch'ih Pa Kuan* 尺八管 or *Shu Ti* 竪笛 [vertical flute], or *Chung Kuan* 中管. *Ch'ih Pa* ['18 inches'] refers to the length. . . . The fashion of the *Shu Ti* is like the *Ti*. What the people now call *Hsiao Kuan* is not the ancient *Hsiao* or *Kuan* [or 'ancient *Hsiao Kuan*'].' This is the only mention of *membrane* noticed. The instrument in question was not the *Fêng Huang Hsiao* and may have been a whistle. Two or three flutes are described as only 9 or 10 inches long; one at least was as much as 42 inches. The *Shuang Fêng Kuan* 雙鳳管 was a double pipe: 'At the ends of the pipes are two reeds to form the head.' Each pipe had four holes, the left pipe giving the notes *huang chung* to *chung lü*, the right pipe giving *jui pin* to *ying chung*. Another double pipe seems to have had one pipe tuned a semitone above the other. The *T'ai P'ing Kuan* 太平管, unlike the *T'ai P'ing Hsiao* of the present day, was a reed instrument. It had nine holes and was like

[1] *Ch'i Hsing*—The seven stars: the Great Bear.

Addit. Notes

the *Po Hsi Kuan* 跛膝管 which was like the *Ti*. These reeds were no doubt *double* reeds, the single reed being probably, Mr. Galpin informs me, a much later importation.

WOOD 木

Classical.

The *Ch'ung Tu* 舂牘 was made of bamboo, 5 or 6 inches in diameter, 7 feet long. The shorter variety was 1 or 2 feet long. It was held in both hands and struck against the ground. The *Ying* 應 was 65 inches long, like a square barrel with a hammer fixed to the bottom. It was painted black inside and red outside, and was used to 'answer' the *Chu* [I. A. 1]. The *Ya* 雅 was 56 inches long, had a large mouth and was bound with thongs of sheepskin with two knots. All three instruments were used to beat time. These instruments were apparently obsolete, but there is no allusion to the clappers now called *Ch'ung Tu* [I. A. 3 (1)]. A note in the *Chou Li* under *Ch'ung Tu* confuses the matter further by speaking of *blowing* [吹, the word used of wind instruments].

Popular.

P'ai Pan [I. A. 5] of nine and of six pieces are mentioned, none of less than six. The wooden hammers for striking bells, etc. are called *Chuang Mu* 撞木 and should be carved in the shape of a whale.

MISCELLANEOUS.

Fan Chü 梵具, the conch, was used by the *Nan Man*; and for Buddhist [梵] music together with cymbals; and also by soldiers. *Ku Kuan* 骨管 was a pipe made of a sheep's bone, with no finger-holes, and used for the *Wei Hsü* ceremony. 'The modern bands have and set out the

instrument, but do not play it, using the *Pieh Li* in its place.' The *Peach-skin* 桃皮 *Kuan* or *Pieh Li* was a peach-skin rolled up and blown. It was anciently called *Kuan Mu* 管木 and came from *Kao Ch'ang* and *Nan Man*. The sound was like that of the *Kuan*, *Chia*, or *Héng Ch'ui*. 'It survives in the modern bands.' The *Hsiao Yeh* 嘯葉 was a leaf held in the mouth. Orange or pomelo leaves were used, evidently just as we use lime leaves in England. The leaf of a reed, rolled up like the *Chia*, was also used.

Addit. Notes

The list ends with the technical names for the parts of the ornamental frames on which bells, gongs, and other instruments are hung.

To I. B.—1. (5) CHIN KU *add*:—Gongs bearing a general resemblance to the above are made in the independent Shan states in Yünnan. The rim is turned over at a sharp angle and the knob is very prominent, but the rest of the surface is more flat than in the *Chin Ku*. The measurements of one of a commonly used size are:—diameter 8.5 inches; diameter of central boss 2.25 inches; depth of boss 1.75 inches; width of rim 1.5 inches. Larger specimens measure 11 inches in diameter. Unlike the *Chin Ku* these gongs are famous for their far-carrying sound, and are for that reason much used by the Chinese Mohammedan mule drivers in the mountains of Yünnan. A man with a gong goes in front of each string of mules to give warning of their approach where the road bends or is too narrow to allow two mules to pass. Very long strings of mules are followed as well as led by a gong.

To II. A.—3. YÜ KU *add*:—*Yü Ku* and *Chien Pan* are the symbols of one of the *Eight Genii* [八仙].

INDEX OF INSTRUMENTS.

[F *refers to* Additional Note F.]

Æolian harp ... ... IV. A. 2.
Ah Tu ... ... III. C. 3.
Ao Yü ... ... I. A. 6. (9).

Bells ... ... I. B. 4., 5.
Brass horn ... ... F. metal. *f.*

Castanets ... ... I. A. 5.
Cha Chiao ... ... III. C. 2. (3).
Ch'a ... ... I. A. 8. (1).
Chan Ku ... ... II. A. 6. (6).
Chang Ku ... II. B. 1., F. skin. *f.*
Ch'ang Hsiao ... ... III. A. a. 2. (3).
Ch'ang Ti III. A. a. 2. (3), F. bamboo. *p.*
Ch'ê Ling ... ... III. A. a. 2. (6).
Chêng ... IV. B. a. § 3., F. metal. *p.*
Chêng Ku ... ... F. skin. *f.*
Chêng T'ung Po ... ... F. metal. *f.*
Chi ... ... I. B. 3. (2).
Chi Ch'in ... ... F. silk. *p.*
Chi Chu ... ... F. silk. *p.*, gourd. *p.*
Chi Jang ... ... F. clay. *p.*
Chi Na ... ... III. B. a. 3. (2).
Ch'i Ch'in ... ... IV. B. c. §§ 1. (4).
Ch'i Hsing Kuan ... F. bamboo. *p.*
Chia ... ... III. B. a. 1. (3), F. misc.
Chia Kuan ... ... III. B. a. 1. (2).
Ch'iang Ti III. A. b. 2. (1), F. bamboo. *f.*
Chieh Ku ... ... F. skin. *f.*
Chien Ku ... ... II. A. 6. (2).
Chien Pan ... ... I. A. 3. (3).
Chien tzŭ ... ... III. C. 2. (2).
Ch'ih ... III. A. b. 1., F. bamboo. *c.*
Ch'ih Pa Kuan ... ... F. bamboo. *p.*
Chin Kang T'ui ... IV. B. a. §§ 3. (2).
Chin Ku ... ... I. B. 1. (5), II. A. 6. (1).
Ch'in ... IV. B. a. § 1., F. stone, silk. *c.*
Ch'in Han P'i P'a ... ... F. silk. *f.*
Ching Hu ... ... IV. B. c. §§ 1. (1).
Ch'ing ... ... I. B. 3. (1), [I. B. 2.]
Ch'iu ... ... F. gourd. *p.*
Chu ... ... I. A. 1., F. wood. *c.*
Ch'u ... ... III. A. a. 3. (1).
Ch'uan Ling ... ... I. A. 4. (5).
Ch'ui Chi êrh ... ... III. A. a. 4.
Ch'ui Pien ... ... F. bamboo. *f.*
Ch'un Kuan ... ... III. B. c. 1.
Chung ... ... I. B. 4. (1).
Chung Kuan ... ... F. bamboo. *p.*
Ch'ung Tu ... I. A. 3. (1), F. wood. *c.*
Clappers ... ... I. A. 3.
Cymbals ... ... I. A. 8.

Drums ... ... Class II., F. stone, skin
Drum (blind man's) ... ... II. A. 5. (2).
„ (cavalry) ... ... II. A. 6. (7).
„ (Lama) ... ... II. A. 5. (4).
Dulcimer ... ... IV. B. b. 1.

Êrh Hsien ... ... IV. B. c. §§ 2. (4).
Êrh Hu ... ... IV. B. c. §§ 1. (3).
Êrh Ku tzŭ ... ... IV. B. c. §§ 1. (3).

Fan Chü ... ... F. miscellaneous.
Fang Hsiang ... ... F. metal. *f.*, stone.
Fang Ku ... ... F. skin. *p.*
Fei Ling ... ... III. A. a. 2. (6).
Fei Po ... ... I. A. 8. (1).
Fên Ku ... ... II. A. 6. (1).
Fêng Chêng ... ... IV. A. 1. (1).
Fêng Ch'in ... ... IV. A. 1. (1).
Fêng Hsiao ... ... III. A. a. 2. (1).
Fêng Huang Hsiao ... III. A. a. 2. (3).
Fêng Ling ... ... I. B. 5. (4).
Fêng To ... I. B. 5. (4), F. metal. *p.*
Flutes ... III. A. a. b., F. stone, bamboo.
Fu Ku ... ... II. A. 6. (3).

Glass horn ... ... III. C. 5.
Gongs ... ... I. B. 1., 2.
Gourd Ch'in ... ... F. silk. *f.*
Guitars ... ... IV. B. a. §§

Ha Ma ... ... II. A. 7.
Hai Lo ... ... III. C. 1.
Hao ... ... III. C. 3.
Hao ... ... III. C. 2. (2), 2. (3).
Hao T'ung ... ... III. C. 2. (1).
Hêng Ch'ui III. A. b. 1., 2., F. bamboo *f.*
Hêng Ti ... ... III. A. b. 2. (1).
Ho Ku ... ... F. skin. *f.*
Horns ... ...III. C., F. metal. *f.* skin. *p.*
Hsi Ch'in ... ... F. silk. *f.*
Hsi Yao Ku ... ... F. skin. *f.*
Hsiang Ch'ih ... ... I. A. 6. (3).
Hsiang Ku ... ... F. skin. *f.*
Hsiang Pan ... ... I. B. 1. (10).
Hsiao ... ... III. A. a. 2. (3).
„ *(ancient)* III. A. a. 2. (1), [F. bamboo, stone.]
Hsiao Ku ... ... II. A. 2. (4).
Hsiao Kuan III. A. a. 2. (3), III. B. a. 1. (1), F. bamboo. *p.*
Hsiao Ti ... ... III. A. a. 3. (1).

Hsiao Yeh ... ... F. miscellaneous.
Hsien Jén Ta Ku ... ... II. A. 4. (2).
Hsien T'iao ... ... F. silk. *f.*
Hsien Tzŭ ... IV. B. a. §§ 4., [F. silk. *f.*]
Hsing Êrh ... ... I. A. 8. (2).
Hsü Pan ... ... I. A. 6. (10).
Hsüan ... ... III. A. a. 1., F. clay. *p.*
Hsüan Ku ... ... II. A. 6. (2).
Hsüan Tzŭ ... ... I. B. 1. (6).
Hu Chia III. B. a. 1. (3), F. bamboo. *f.*
Hu Ch'in ... IV. B. c. §§ [F. silk. *f.*]
Hu Ch'in IV. B. a. §§ 3. (1), F. silk. *f.*
Hu Hu ... ... IV. B. c. §§ 2. (1).
Hu Lu ... ... III. A. a. 2. (4).
Hu Po ... ... IV. B. a. §§ 5.
Hu Ti ... ... F. bamboo. *f.*
Hua Chiao ... ... III. B. a. 2.
Hua Ku ... ... II. A. 6. (4).
Hua Mei Chiao Tzŭ ... III. A. a. 3. (2).
Hua Mei Shao Êrh ... III. A. a. 3. (2).
Huan T'ou ... ... I. A. 7.
Huang ... ... F. gourd. *c.*
Huang Chung Ku ... ... F. skin. *p.*
Hui Hu ... ... IV. B. c. §§ 1. (2).
Hun Pu Ssŭ ... ... IV. B. a. §§ 3. (1).
Huo Lang (Ku Êrh) ... II. A. 4. (1).

I Kuan Shêng ... ... F. gourd. *p.*
I Tsui Ti III. A. b. 2. (1), F. bamboo. *f.*

Jews Harp ... ... I. B. 6.

K'ai Ti ... ... III. B. a. 3. (2).
Kang T'ou ... ... III. C. 2. (4).
Kang Tung ... ... III. C. 4.
Ko Ling ... ... III. A. a. 2. (4).
K'ou Ch'in ... ... I. B. 6.
Ku Ch'ui Hsiao ... ... F. bamboo. *p.*
Ku Kuai ... ... III. B. b. 1.
Ku Kuai ... ... III. A. a. 3. (3).
Ku Kuan ... ... F. miscellaneous

Ku Ku Tang ... ... III. end.
Kuan ... III. A. b. 2., F. bamboo. *c.*
Kuan Mu ... ... F. miscellaneous.
Kuan (peach-skin) ... F. miscellaneous.
Kuan (*tzŭ*) ... ... III. B. a. 1., (1).
Kuan Tzŭ ... ... III. B. c. 1.
Kung Ch'ên Kuan ... F. bamboo. *p.*
K'ung Chêng ... ... III. A. a. 2. (6).
K'ung Hou ... ... IV. B. a. §. 2.

La Ch'in ... ... IV. B. c. §. 1.
La Pa ... III. B. c. 1., 2., III. C. 2. (2).
La Pa ... ... III. C. 2. (3).
Lei Ku ... ... II. A. 6. (2).
Liang Kên Hsien Êrh IV. B. c. §§. 1. (3).
Lieh Yü ... ... F. gourd. *f.*
Lien Hua Lo ... ... I. A. 4. (3).
Ling ... I. B. 5. (1)., [F. metal, *p.*]
Ling Ku ... ... II. A. 6. (2).
Ling Tang ... ... I. B. 5. (5).
Ling Tzŭ ... ... I. B. 1. (8).
Liu Shêng ... ... III. B. b. 2. (2).
Lo ... ... I. B. 1. (3).
Lo T'o Ling Tang ... ... I. B. 5. (2).
Lu Ku ... ... II. A. 6. (2).
Lung Ching Ti ... ... F. bamboo. *f.*
Lung T'ou Ti III. A. b. 2. (1)., F. bamboo. *f.*

Ma Ling ... ... I. B. 5. (3).
Man T'ou Ku ... ... II. A. 2. (3).
Mien Hua Ch'ê Tzŭ III. A. a. 3. (4). *a.*
Mi Ta Lang ... ... II. A. 4. (2).
Monochord ... ... F. silk. *p.*
Mu Yü ... ... I. A. 6. (8).

Nao ... ... I. A. 8. (1).
Nao Chin Chieh ... ... I. A. 4. (4).

Pa Fang Ku ... ... II. A. 1.
P'ai Hsiao ... ... III. A. a. 2. (1). F. stone, bamboo. *f*, *p.*
P'ai Pan ... ... I. A. 5., F. wood, *p.*
Pan Hu ... ... IV. B. c. §§ 1. (4).
Pan Ku ... ... II. A. 2. (1).
Pan-pipes ... III. A. a. 2. (1), F. bamboo. *f. p.*
Pan T'ang Ku ... ... II. A. 2. (2).
Pang ... ... I. A. 6. (4), (5), (6).
Pang Ku ... ... II. A. 2. (1).
Pang Tzŭ ... ... I. A. 6. (1).
Pang Tzŭ Hu Ch'in IV. B. c. §§. 2. (1).
Pang Tzŭ Ti ... ... III. A. B. 2. (2).
Pao Chün Chih ... ... I. B. 1. (6).
Pao Ku ... ... II. A. 2. (2).
Pei Li ... ... III. B. a. 1. (2).
Pêng Ku ... ... II. A. 2. (1).
Pi (*or* Pieh) Li ... ... III. B. a. 1. (2)., F. bamboo. *f.* misc.
„ „ (peach-skin) F. miscellaneous.
Pi P'a ... ... IV. B. a. §§. 3. (1).
P'i P'a (or *P'o*) ... IV. B. a. §§. 3. (1).
Pien Ch'ing ... ... I. B. 2. (2).
Pien Chung ... ... I. B. 4. (3).
Po ... ... I. A. 8. (1).
Po Chung ... ... I. B. 4. (2).
Po Fu ... ... II. A. 6. (3).
Po Hsi Kuan ... ... F. bamboo. *p.*
Psaltery ... ... IV. B. a. §.
„ (bowed) ... ... IV. B. c. §.

Rattles ... ... I. A. 4.
Reeds, double ... ... III. B. a.
„ *free* ... ... III. B. b.
„ *ribbon* ... ... III. B. end.
„ *single* ... ... III. B. c.
„ *mechanically blown* ... III. B. d.

San Hsien ... ... IV. B. a. §§. 4.
Shao Êrh ... ... III. A. a. 3. (3).
Shao Tzŭ ... ... III. A. a. 2. (4).
Shê ... ... IV. B. a. §. 2., F. silk. *c.*
Shêng III. B. b. 2. (1)., F. stone, gourd. *c. p.*
Shêng Tzŭ ... ... III. B. b. 1.

Shou Ch'iu ... ... I. A. 4. (7).
Shou Ku ... ... II. A. 5. (1).
Shu Ti ... ... F. bamboo. *p.*
Shuang Ch'in ... ... IV. B. a. §§. 2.
Shuang Fêng Kuan ... F. bamboo. *p.*
Shuang Kuan ... ... III. B. a. 1. (1).
Shui Chan ... ... F. clay. *p.*
Shui Ch'iang ... III. A. a. 3. (4). *d.*
So Na ... ... III. B. a. 3. (1).
Sonorous stone ... . I. B. 2.
Ssŭ Hu ... ... IV. B. c. §§. 1. (5).
Ssŭ Kên Hsien Êrh IV. B. c. §§. 1. (5).
Ssŭ Pu Hsiang ... IV. B. a. §§. 3. (2).

Ta Hu Ch'in ... IV. B. c. §§. 2. (3).
Ta Kuan ... ... III. B. a. 1. (1).
Ta Wang ... ... III. C. 2. (4).
T'ai P'ing Hsiao ... ... III. A. a. 3. (1).
T'ai P'ing Kuan ... ... F. bamboo. *p.*
Tan Ch'in ... ... IV. B. c. §§. 1. (1).
Tan Hsiao ... ... III. A. a. 2. (3).
Tan Kuan ... ... III. B. a. 1. (1).
Tang Lo ... ... I. B. 1. (7).
Tang Lo ... ... I. B. 1. (5).
Tang Tzŭ ... ... I. B. 1. (4).
T'ang Ku ... ... II. A. 6., (5)., F. skin. *p.*
T'ao Ku ... ... II. A. 4. (1).
T'ê Ch'ing ... ... I. B. 2. (1).
T'ê Chung ... ... I. B. 4. (2).
Ti ... ... III. A. b. 2. (1).
Ti (ancient) ... III. A. a. 2. (3), 3. (1), F. bamboo. *c.*
Ti Ko Tzŭ ... ... III. A. a. 2. (5).
Ti Tzŭ III. A. b. 2. (1), III. B. a. 3. (2).
Ti Wang Niu ... ... III. A. a. 2. (6).
Ti Wêng ... ... III. A. a. 2. (5).
T'i Ch'in ... ... IV. B. c. §§. 2. (2).
T'i Tang ... ... I. B. 1. (9).
T'ieh Huang ... ... F. metal. *p.*
T'ieh Ma ... ... I. A. 4. (8).
T'ieh P'ai ... ... I. B. 1. (1).
T'ieh Pan ... ... I. B. 1. (1).
T'ieh Ti ... ... F. metal. *p.*
Tien Êrh ... ... I. B. 1. (5).
Tien Ku ... ... II. A. 5. (3).
Tien Tzŭ ... ... I. B. 1. (2).
T'ien Ku ... ... II. A. 6. (2).
T'ien Wêng ... ... III. A. a. 2. (6).
T'o ... ... I. A. 6. (5).
T'ou Kuan ... ... III. B. a. 1. (1).
Tsou P'i P'a ... ... F. silk. *f.*
Tsu Ku ... ... II. A. 6. (2).
Tui Hsiao ... ... III. B. c. 1.
Tung Hsiao III. A. a. 2. (3), F. bamboo. *c.*
T'ung Ch'ing ... ... F. metal. *p.*
T'ung Ku ... ... I. B. 1. (5).

Violin IV. B. c. §§., [III. B. a. 1. (3).]

Wa Wa Êrh ... ... III. B. a. 3. (1).
Wan Ch'in ... IV. B. c. §§. 2. (1).
Wan Hao T'ou ... ... III. C. 2. (3).
Wan Hu ... ... IV. B. c. §§. 2. (1).
Wei Ku ... ... F. skin. *f.*
Whistles ... ... III. A. a.
Whistle (nut-shell) ... III. A. a. 2. (7).
„ (T'ai An) ... III. A. a. 3. (4).
„ (tin) ... III. A. a. 3. (3), 4.
Wood-drums ... ... I. A. 6.

Ya ... ... I. A. 3. (1), F. wood. *c.*
Ya Ku ... ... II. A. 6. (4).
Ya Ti ... ... III. A. b. end.
Yang Ch'in ... ... IV. B. b. 1.
Yao Ch'in ... ... IV. A. 2.
Yao Ku ... ... II. A. 4. (1), 6. (4).
Yao P'ien ... ... IV. A. 1. (2).
Yao T'ang Ku ... ... II. A. 4. (1).
Yen Ma ... ... I. A. 4. (8).
Yen Yüeh Hsiao ... ... F. bamboo. *p.*
Yin Ch'ing ... ... I. B. 3. (2).

Ying ... ... I. A. 3. (1), F. wood. *c.*
Ying Ku ... ... II. A. 6. (2).
Yo ... ... III. A. a. 2. (2).
Yo (*seven-hole*) ... ... F. bamboo. *p.*
Yü ... ... I. A. 2.
Yü ... ... F. gourd. *c.*
Yü K'o ... ... I. A. 4. (8).
Yü Ku ... ... II. A. 3.
Yü Pang ... ... I. A. 6. (7).
Yü T'ung ... ... II. A. 3.
Yüeh Ch'in IV. B. a. §§. 1., [F. silk. *p.*]
Yün Hsiao ... ... III. A. a. 2. (3).
Yün Lo ... ... I. B. 1. (11).
Yün Pan ... ... I. B. 2. (2).

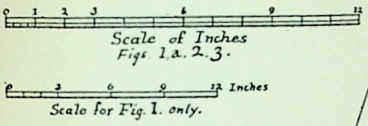
NOTE ON THE ILLUSTRATIONS.

It has unfortunately been impossible to make the illustrations all of one kind. There has not been time or opportunity to make a complete set of measured drawings, and on the other hand it would have been impossible to get photographs of all the instruments shown in the first six Plates. It is hoped that references in the text and the explanation which accompanies each Plate will make the illustrations easy to use in spite of some inevitable confusion in their arrangement. The Frontispiece is enlarged from a photograph by the Rev. R. Allen. Plates VIII [except the *Hua mei chiao tzŭ*], IX, X [except 6], and XII are from photographs most kindly taken for the Society by the Rev. F. W. Galpin from specimens in his well-known collection. Plates VII, X 6, and XI are from the work of a native photographer in the *Mei Hua Pei* at Hangchow. All the illustrations are photographs or carefully measured drawings of actual instruments with the exception of two or three models in Plate XII, and some copies from native books in the first six Plates.

Explanation of Plate I.

STONE GONGS.

1. T'ê Ch'ing (modern shape.)
1a. Pien Ch'ing (modern shape, *see* Plate XII.)
2. Pien Ch'ing (ancient shape, tuned to D; after *Tsai Yü*.)
3. Pien Ch'ing (from Shao Hsing.)


0 1 2 3 4 9 12
Scale of Inches
Figs. 1,a. 2. 3.
0 3 6 9 12 Inches
Scale for Fig. 1. only.

1,a.
1.
2.
3.

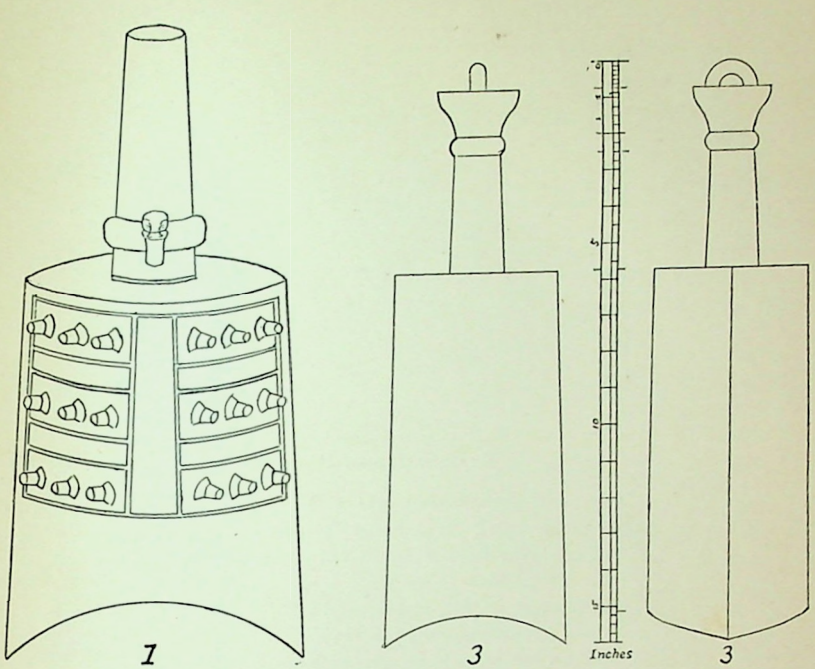
Plate I.

Explanation of Plate II.

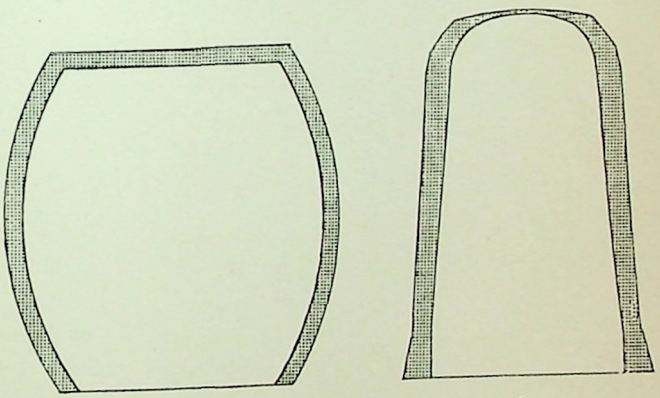
BELLS WITHOUT CLAPPERS.

1. Ancient Bell (after *Tsai Yü.*)
2. Pien Chung (section, modern.)
3, 3. ? Pien Chung (*Sung* dynasty pattern.)
4. ? Pien Chung (from T'ai Ts'ang.)

The Scale does not apply to Fig. 1.



1 3 3



2 4

Plate II.

Explanation of Plate III.

1. Yo (vertical flute, after *Tsai Yü.*)
1a. Yo (not played, *Ming* dynasty pattern.)
2. Fêng Huang Hsiao (vertical flute with top closed.)
3. T'ai P'ing Hsiao (whistle.)
4. Ti (ancient whistle, after *Tsai Yü.*)
5. Ch'ih (transverse flute, modern.)
6. Ch'ih (transverse flute, ancient, after *Tsai Yü.*)
7. Ch'ih (transverse flute, after a *Sung* dynasty drawing.)
8. Ti tzŭ (transverse flute, modern.)
9. Pang tzŭ Ti (transverse flute, modern.)

III. A. a, b.

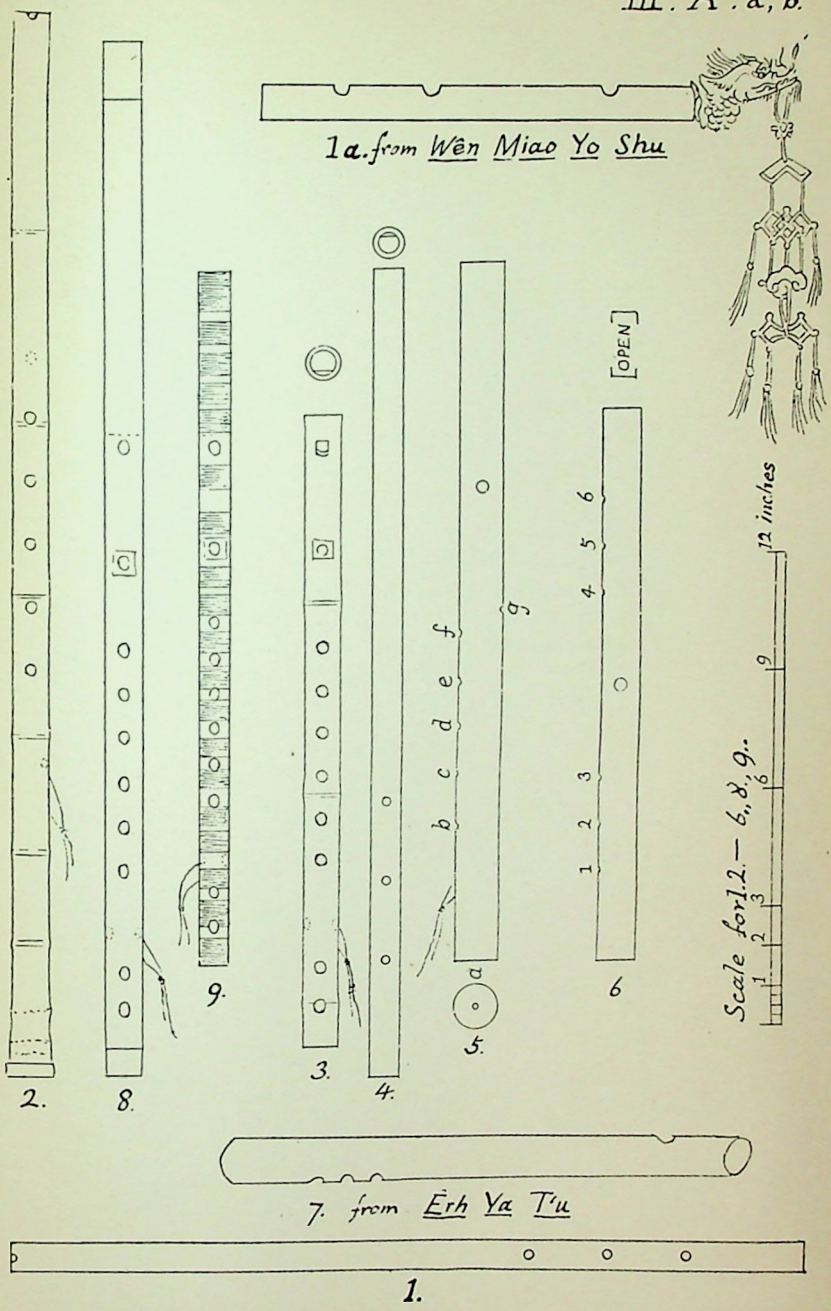


Plate III.

Explanation of Plate IV.

1, 2. Kuan (double reed with cylindrical pipe.)
3. Hu Chia (double reed, after a native drawing.)
4. Hua Chiao (? double reed, after a native drawing.)
5. Chi Na (double reed with conical pipe.)
6. Ch'un Kuan (single reed with cylindrical pipe, toy.)

III. B. a, c.

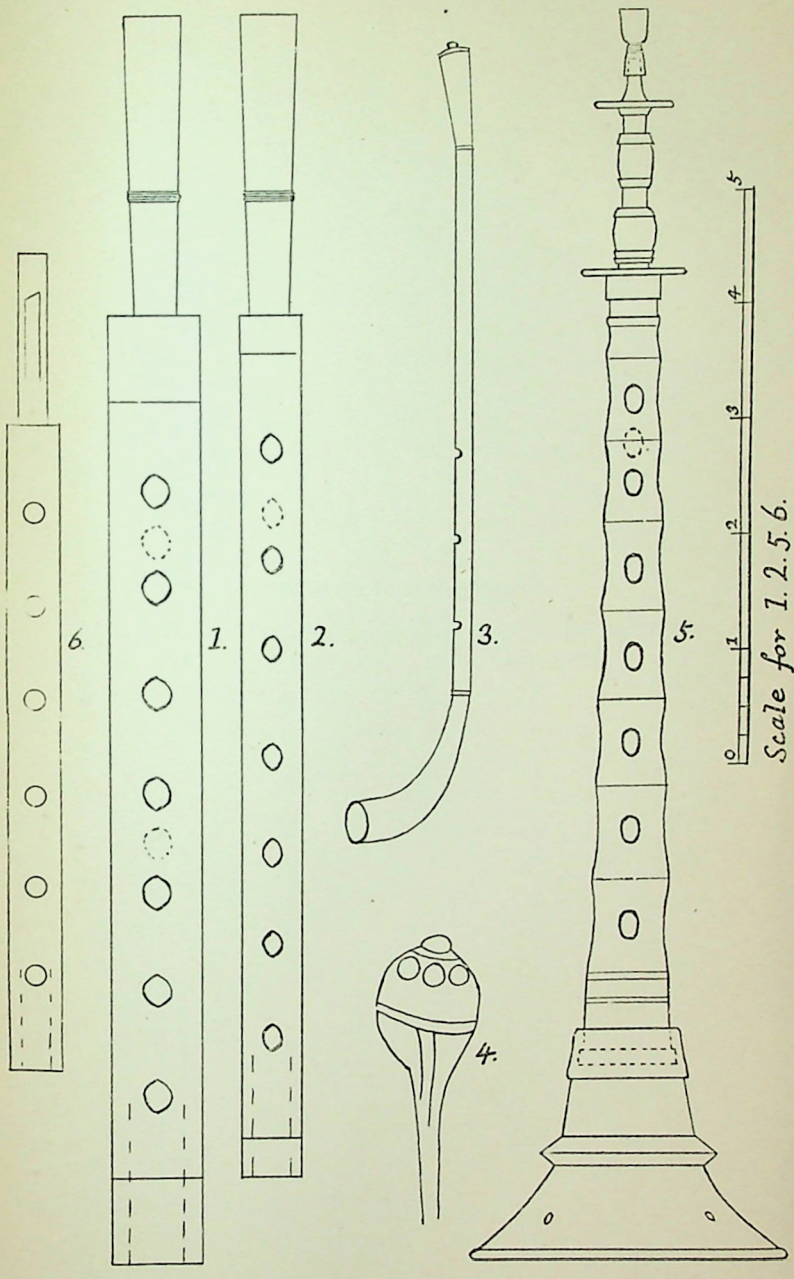
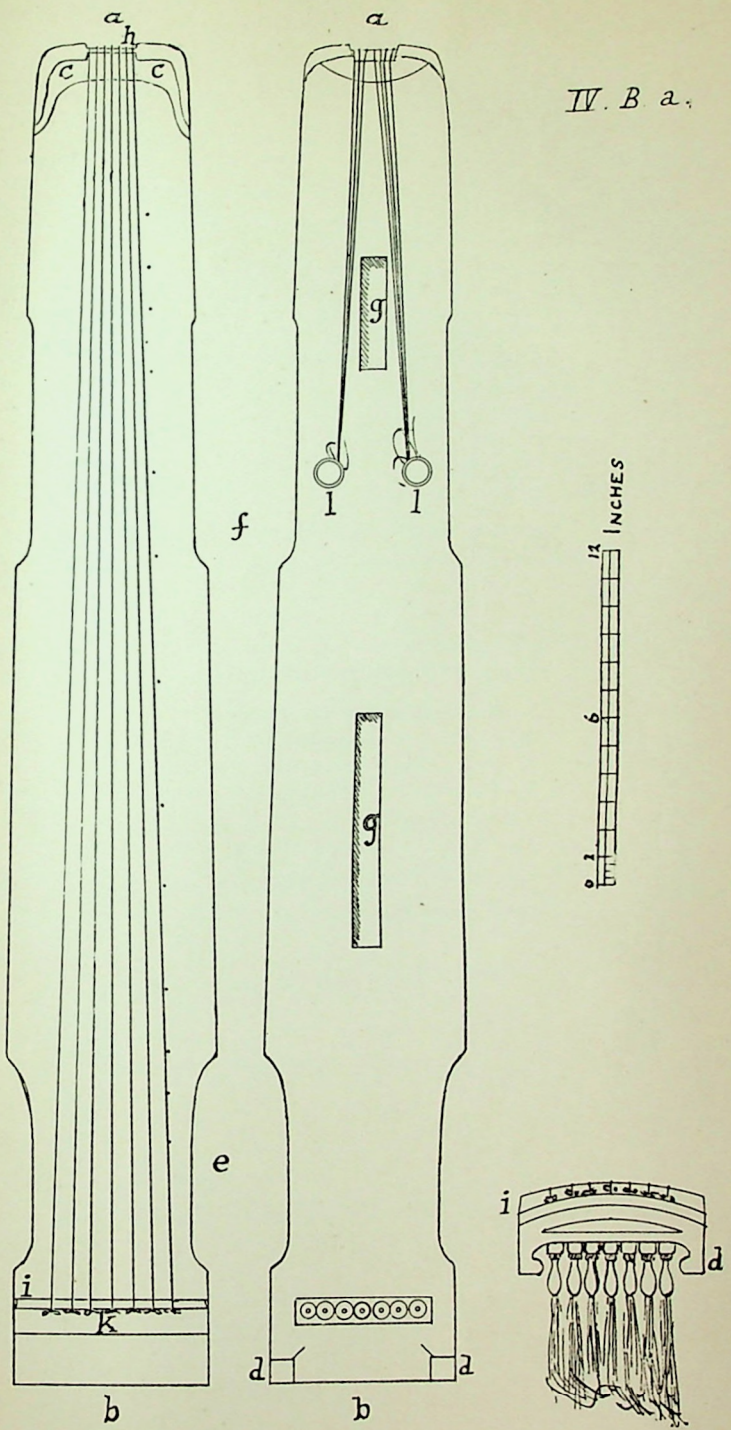


Plate IV.

Explanation of Plate V.

Ch'in (horizontal psaltery, views of upper and under sides and broad end.)



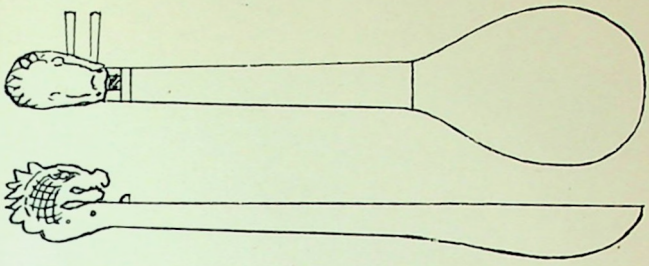
IV. B a.

Plate V.

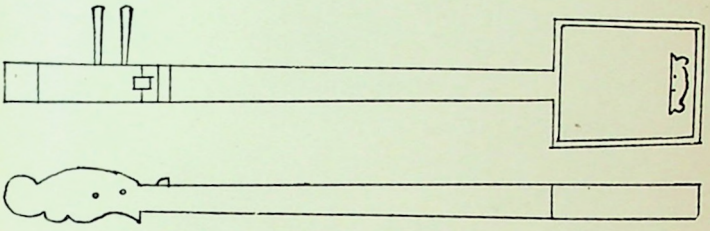
Explanation of Plate VI.

1. Hu Po (guitar, perhaps Mongolian.)
2. La Ch'in (bowed psaltery, *see* Plate X.)
3. Ta Hu Ch'in (violin, perhaps Mongolian.)
4. Êrh Hsien (violin, perhaps Mongolian.)

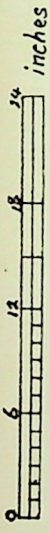
IV. B. a, c.

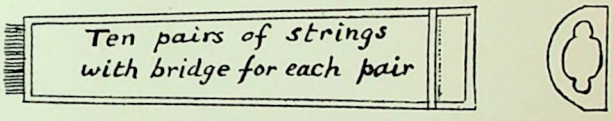


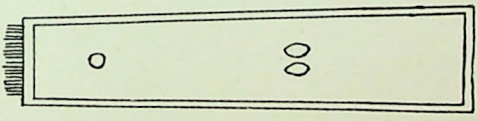
3.



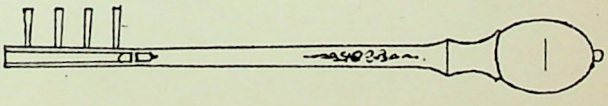
4.

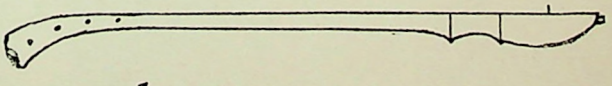






2.





1.

Plate VI.

Explanation of Plate VII.

1. Mu Yü (wood drum.)
2. Po (cymbals.)
3. Chin Ku (gong.)
4. Lo (gong.)
5. Pao Chün Chih (gong.)
6. Ling (bell with clapper.)
7. 7. Ma Ling (horse bells.)
8. Pang Ku (drum, properly with folding stand ; *see* Plate XII.)
9. Tien Ku (drum.)
10. T'ang Ku (drum.)
11. T'ao Ku (rattle drum.)

The above are all from Hangchow.

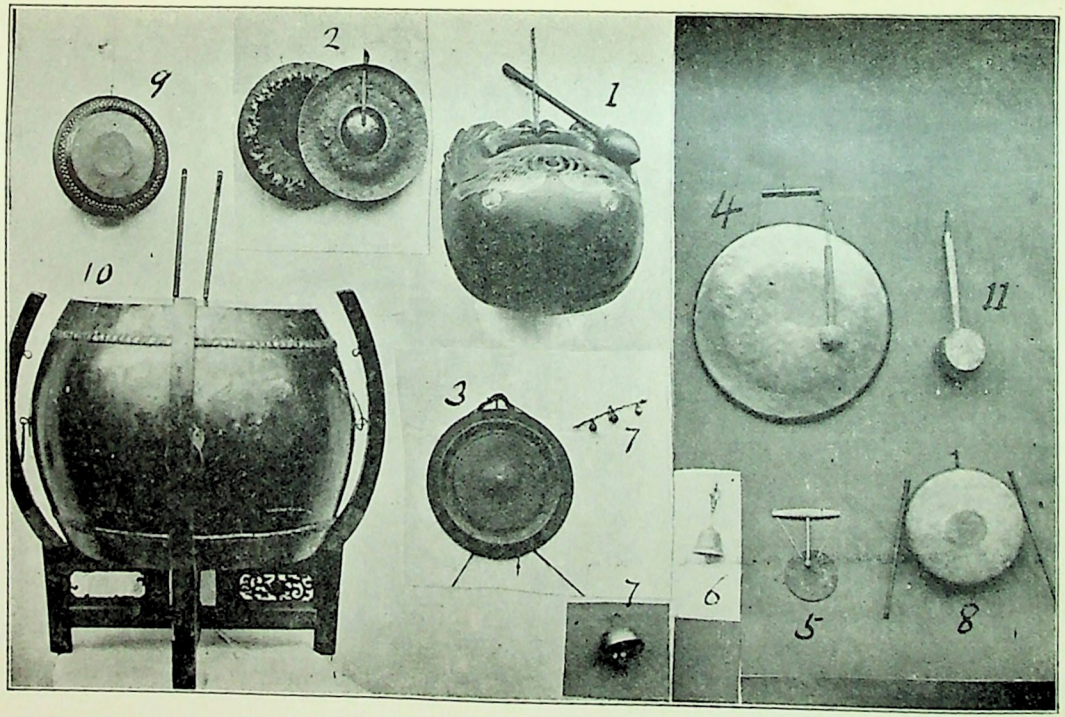


Plate VII.

Explanation of Plate VIII.

Below :— Hsüan (clay resonator, front and back views, from Soochow.)

Top left-hand corner :—Hua Mei Chiao tzŭ (toy whistle, from Shantung.)

Top right-hand corner :—Ku Kuai (toy with free reeds of bamboo, from Nanking.)

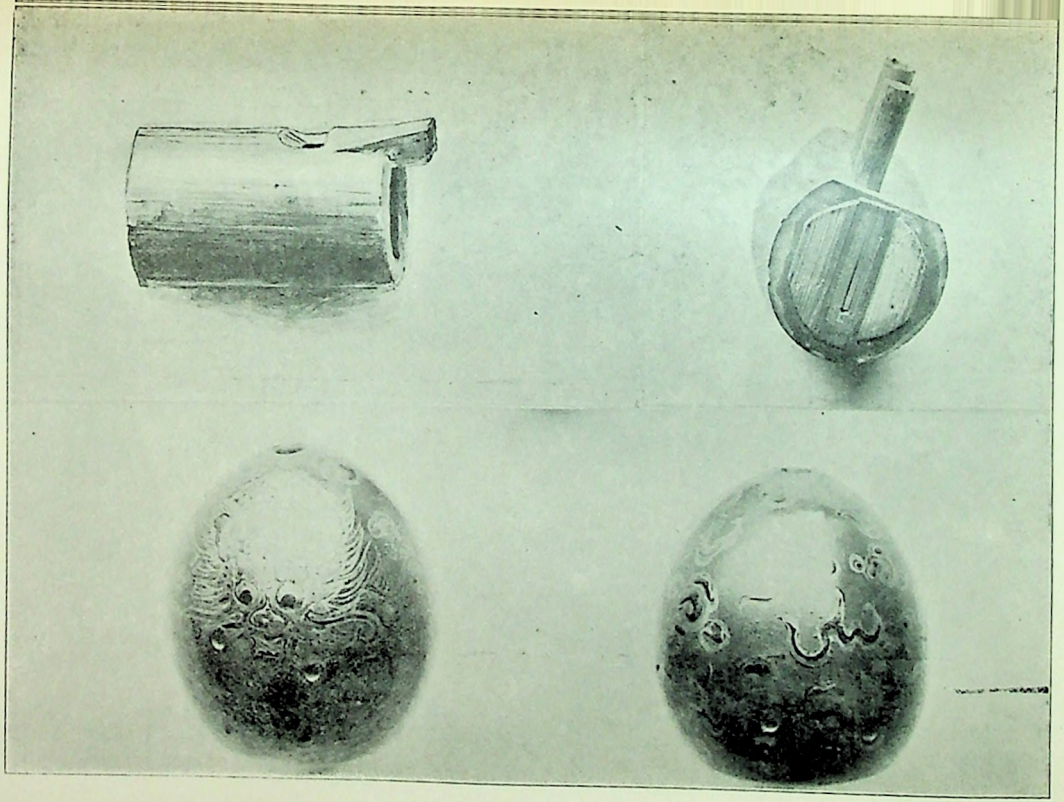


PLATE VIII.

Explanation of Plate IX.

1. Hao T'ung (brass horn.)
2. Glass horn. From Shantung.
3. La Pa (brass horn.)
4. Hao (brass horn. III. C. 3. From Mr. Galpin's collection.)
5. Cha Chiao (brass horn.)

1, 3, and 5, probably from the South, closely resemble specimens found in Mid and North China.

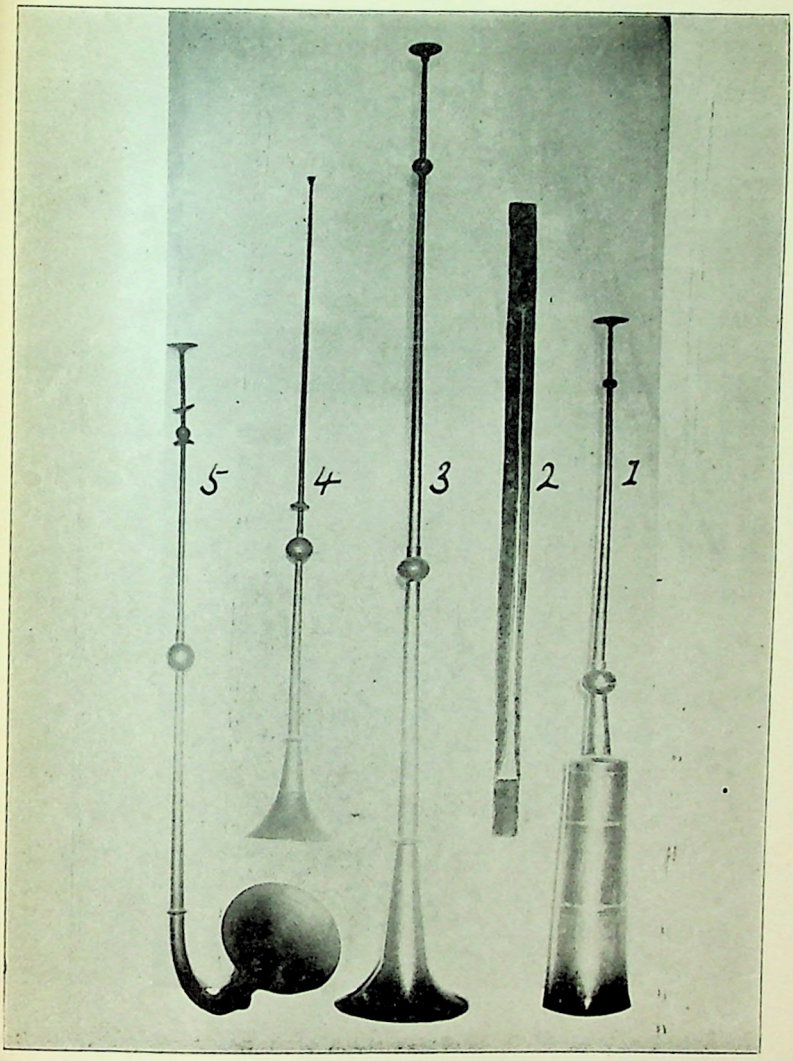


Plate IX.

Explanation of Plate X.

1. Yao Ch'in (kite harp. From Shanghai.)
2. Chêng (psaltery, strung with brass wire, with plectrum; *see* Plate XI. ? Cantonese.)
3. Yüeh Ch'in (guitar, with plectrum.)
4. P'i P'a (guitar, with 12 frets.)
5. Hsien tzŭ (guitar, with snake skin table.)
6. Yang Ch'in (dulcimer. From Hangchow.)
7. La Ch'in (bowed psaltery. From Peking.)
8. Hu Ch'in (Tan Ch'in).
9. „ (Ssŭ Hu).
10. „ (Hu Hu).

8–10: violins. See description of Cantonese specimens pp. 125-126.

Excepting 1, 6, and 7, the above are probably from South China.

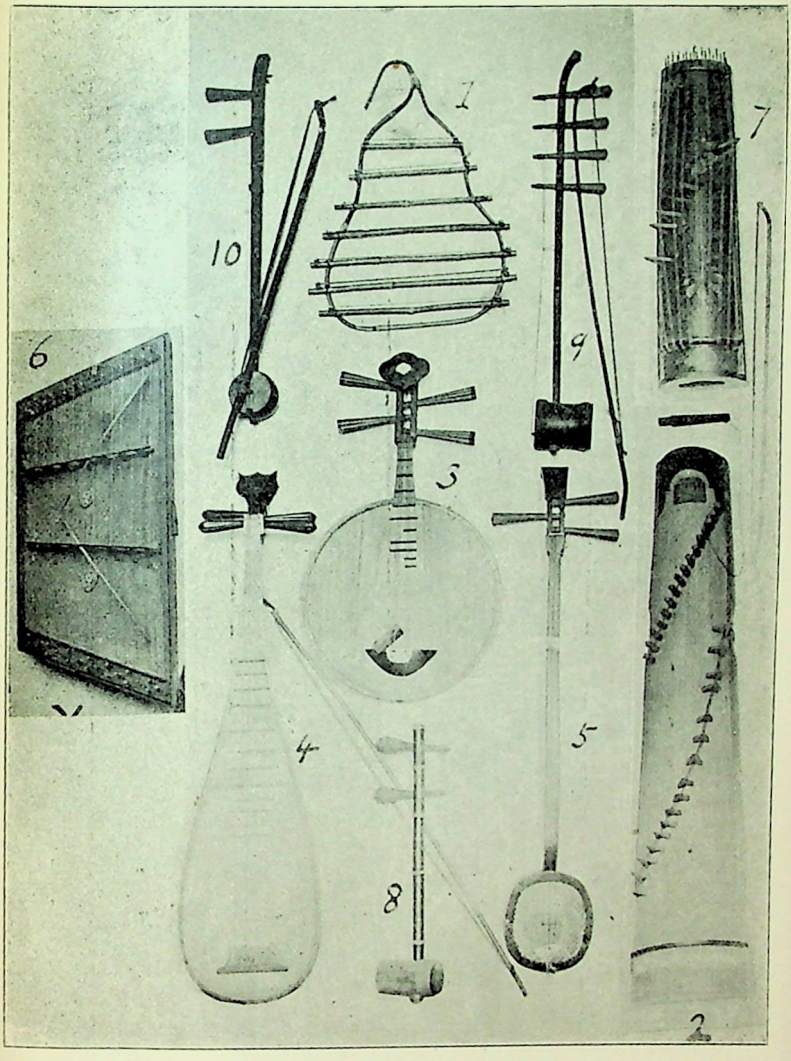


PLATE X.

Explanation of Plate XI.

1. Chêng (psaltery, with silk strings; *see* Plate X. From Hangchow.)
2. Hsien tzŭ (guitar.)
3. P'i P'a (guitar, with 10 frets.)
4. Hu Ch'in (Tan Ch'in.)
5. „ „ (Êrh Hu.) } violins.
6. „ „ (Hu Hu.)

The above are all from Hangchow.

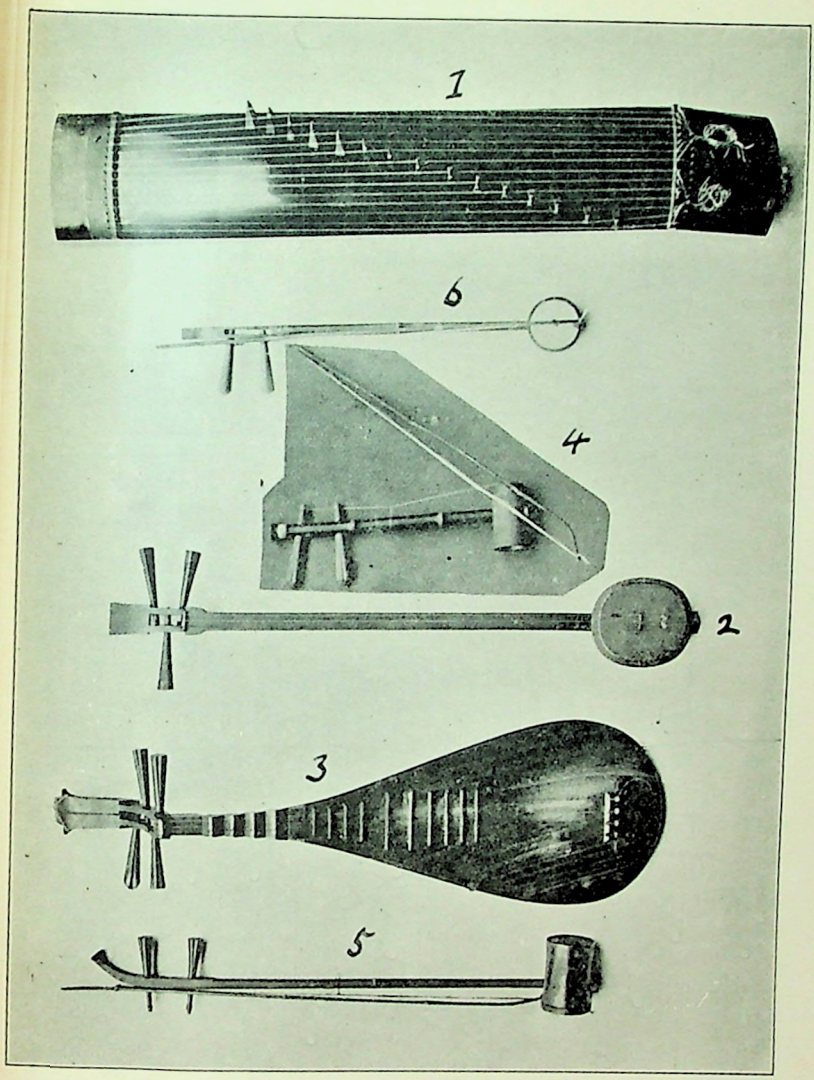


Plate XI.

Explanation of Plate XII.

At the top :—P'ai Hsiao (panpipes. S.) } As used at the Confucian ceremonies.
On rack below :—Ch'ih (flute, pair. S.) }
Hsiao („ „ „) }
Ti („ „ „) }

To the left :—Ch'un Kuan (single reed. Sh.)
Shêng (free reed organ.)
Yin Ch'ing (cup-gong and beater, from T'ien t'ai.)
Hua Ku (hand drum. H.)

To the right :—Kuan (double reed.)
Shêng (organ.)
Huan t'ou (barber's sign. P.)
T'ao Ku (rattle drum.)

In centre and below :—Po Fu (drum on stand, small model. H.)
Mu Yü (wood drum.)
Chu (box on stand, small model. H.)

To the left :—Gong, with beater.
K'ung Chêng (whistling top. Sh.)
Gong, with broad flat beater (cf. T'i Tang.)
Ko Ling (pigeon whistles, one large two small. P.)
Pang (wood drum with stick attached.)

To the right :—Hsing êrh (pair of small bells. P.)
K'ung Chêng (top, with sticks and string. P.)
P'ai Pan (castanets).
Chung (bell without clapper, ancient pattern.)

Above Bell :—Kang Tung (? Mongol horn. P.).

On bracket :—Hsüan (clay resonators, 6 finger-holes, modern. S.)
Hsüan (ancient, with 5 finger-holes, model.)

On left hand bracket :—Yü (Wooden Tiger, small model, with beater full-size. H.)

Below Chu :—Chang Ku (Drum, with braces. Sh.).

To the left :—Ch'ing (stone gong, one of set of sixteen. From Anhui.)

To the right :—Man T'ou Ku ('Loaf drum,' on folding stand.)

The locality of each instrument is generally marked, when known, with a capital letter.—H.=Hangchow, P.=Peking, S.=Soochow, Sh.=Shanghai.

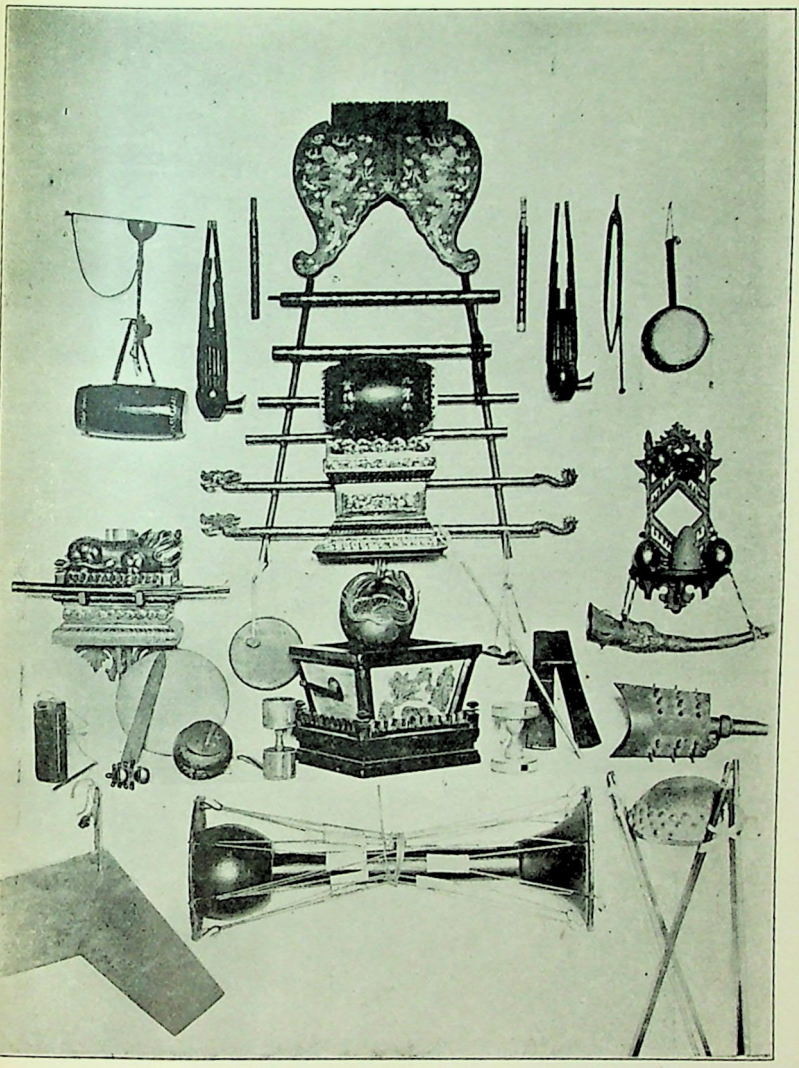


PLATE XII.

Explanation of Plate XIII.

Reduced copy of part of a rubbing taken in 1907 from the sculptures in the *Hsiao Tzŭ Tang* 孝子堂 in the district of *Fei Ch'êng* 肥城 in Shantung. The original of this piece measures 16½ by 11⅛ inches.

"A large two-horse chariot in front, with a canopy supported upon a central pole mounted with dragons' heads, carries two drummers, beating a leather drum with hanging bells of metal attached, and a band of four musicians [below] with pandean pipes, besides the charioteer; reminding one of the chariot which always accompanied the general to battle in olden times, when, we are told, the drum was sounded for advance, the metal bells as a signal for retreat."—*Chinese Art* vol. I. p. 37.

The sculptures are attributed to the first century before Christ.

The drum is perhaps the *Kao* 鼛, "a chariot drum used in war," which is mentioned in several ancient books.

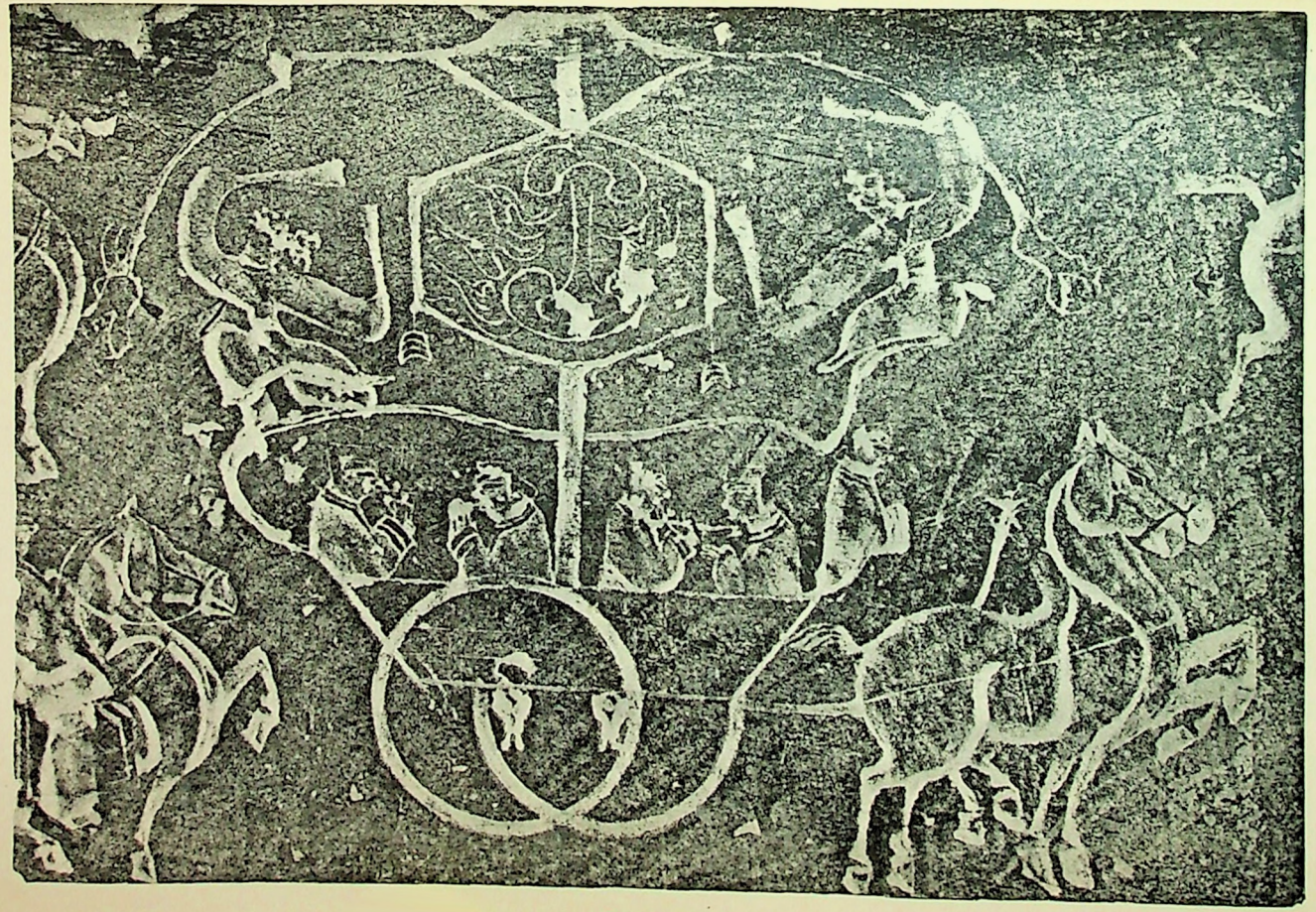


PLATE XIII

NOTES AND QUERIES.

The Library. During the last nine months the Library has been re-catalogued and re-shelved. Upon the strong recommendation of Mr. Bolton of the Boston Athenæum, who last year rendered invaluable aid, it was decided to make a "dictionary catalogue" on cards, classifying according to the Dewey Decimal Classification and Index, used in conjunction with the Cutter Author Numbers. It may be well to give in the words of the author a short explanation of this classification.

"The field of knowledge is divided into nine main classes, and these are numbered by the digits 1 to 9—Encyclopædias, periodicals, etc., so general in character as to belong to no one of these classes are marked nought and form a tenth class. Each class is similarly separated into 9 divisions, divisions are similarly divided into 9 sections, and the process is repeated as often as is necessary. The books on the shelves are arranged in simple numerical order, and since each subject has a definite number it follows that all books on any subject must stand together."

The Cutter Numbers for their part provide each book with a Shelf Number in addition to its Class Number.

In the dictionary catalogue each work appears under its author, its title, if this be one likely to remain in the minds of the reading public, and under numerous cross references. Thus it is hoped that students may find the contents of the Library at their ready disposal, and that its riches may be of service to the public. The main classification is appended, as is also a sub-division of Eastern languages kindly made by Mr. Kingsmill and Mr. Morse.

DIVISIONS.

000 General Works.
- 010 Bibliography.
- 020 Library Economy.
- 030 General Cyclopedias.
- 040 General Collections.
- 050 General Periodicals.
- 060 General Societies.
- 070 Newspapers.
- 080 Special Libraries. Polygraphy.
- 090 Book Rarities.

100 Philosophy.
- 110 Metaphysics.
- 120 Special Metaphysical Topics.
- 130 Mind and Body.
- 140 Philosophical Systems.
- 150 Mental Faculties. Psychology.
- 160 Logic.
- 170 Ethics.
- 180 Ancient Philosophers.
- 190 Modern Philosophers.

200 Religion.
210 Natural Theology.
220 Bible.
230 Doctrinal Theol. Dogmatics.
240 Devotional and Practical.
250 Homiletic. Pastoral. Parochial.
260 Church. Institutions. Work.
270 Religious History.
280 Christian Churches and Sects.
290 Non-Christian Religions.

300 Sociology.
310 Statistics.
320 Political Science.
330 Political Economy.
340 Law.
350 Administration.
360 Associations and Institutions.
370 Education.
380 Commerce and Communication.
390 Customs. Costumes. Folk-lore.

400 Philology.
410 Comparative.
420 English.
430 German.
440 French.
450 Italian.
460 Spanish.
470 Latin.
480 Greek.
490 Minor Languages.

500 Natural Science.
510 Mathematics.
520 Astronomy.
530 Physics.
540 Chemistry.
550 Geology.
560 Paleontology.
570 Biology.
580 Botany.
590 Zoology.

600 Useful Arts.
610 Medicine.
620 Engineering.
630 Agriculture.
640 Domestic Ecomomy.
650 Communication and Commerce.
660 Chemical Technology.
670 Manufactures.
680 Mechanic Trades.
690 Building.

700 Fine Arts.
710 Landscape Gardening.
720 Architecture.
730 Sculpture.
740 Drawing. Design. Decoration.
750 Painting.
760 Engraving.
770 Photography.
780 Music.
790 Amusements.

800 Literature.
810 American.
820 English.
830 German.
840 French.
850 Italian.
860 Spanish.
870 Latin.
880 Greek.
890 Minor Languages.

900 History.
910 Geography and Description.
920 Biography.
930 Ancient History.
Modern.
940 Europe.
950 Asia.
960 Africa.
970 North America.
980 South America.
990 Oceanica and Polar Regions.

SUB-DIVISION.

495 Eastern Asiatic Languages.
.1 CHINESE.
.11 *Mandarin.*
.111 Northern Mandarin.
.112 Southern (Central) Mandarin.
.12 *Southern Dialects.*
.121 Canton Punti.
.122 Hakka.
.123 Fukien Dialects (incl. Swatow.)

.13	*Wu Dialects.*	.4	Ushwar (Tunguz)—*cont.*
.131	Soochow (Shanghai, Taihu).	.42	Manchu.
.132	Chekiang (Ningpo, Chusan).	.43	Korean.
.2	Mantse.	.5	Mongol.
.21	Burmese.	.51	Tangut.
.22	Shan, Laos.	.52	Khalka.
.23	Lolo.	.53	Buriat.
.24	Loi.	.54	Khingiz.
.3	Indo-Chinese.	495.6	Tibetan.
.31	Cambodian.	.7	Japanese.
.32	Annamese.	.71	Aino.
.33	Tonkinese.	.72	Loochow (Riukiu).
.4	Ushwar (Tunguz).	.73	Formosan.
.41	Gilyak, Nuchen, etc.		

Kennelly's Edition of Richard's Comprehensive Geography.*

We have to welcome this publication as, we believe, the first systematic Geography of the Chinese Empire which has been published. This nominally new edition has been so modified and enlarged that it may be called a new work ; and we may fairly congratulate the College at Siccawei on the style and spirit in which it has been brought out.

It is a work of 711 pages besides preface, description of orthography adopted and full table of contents ; and the first remark that we have to make with regard to it, before proceeding to review the work itself, is to draw attention to the very marked advance made in reducing to a logical system, one founded too on historical grounds, the hitherto ignorant and fantastic styles adopted by the writers of text-books of the various nationalities when seeking to transliterate Chinese words. It is not easy amidst these fantastic systems to pick out the least objectionable ; but there can be no possible doubt as to which is absolutely the worst ; and the palm here must be given to that introduced into the British service on the authority of the late Sir Thomas Wade, and to which, owing to its having been adopted by the Imperial Maritime Customs, wide prominence has been given amongst modern writers on China. The system adopted by Père Kennelly in conjunction, we believe, with Mr. H. B. Morse is that which, since the days of Sir William Jones, has been adopted in transliterating by students of every nationality the sounds of every other Asiatic language besides Chinese ; and it is apparently to ignorance of this fact that we must

* Tusewei Press, Shanghai, 1908.

attribute the continued existence of the false and misleading Wadean system, which has done so much to throw back into chaos the recent study of Chinese.

The amended orthography has, we are pleased to be able to state, been adopted by the Chinese Imperial Postal Service, and though not altogether ideally perfect, doing away as it does with diacritical marks and conventionalised combinations, will doubtless be widely availed of. This would remove one of the worst stumbling-blocks which at present bar the entrance to Chinese studies and remove the reproach often flung against them that the study of Chinese, in the great majority of cases, implies the decay or atrophy of all other knowledge.

As a right understanding of the physiography of a land is largely dependent on a correct knowledge of its geology, the work is introduced by a slight sketch of the more widely prevalent formations, largely founded on Richthofen, and even going back to observations by Pumpelli. Unfortunately Père Kennelly is no geologist, and has been innoculated with many of the least defensible of Richthofen's theories. He speaks of China and the Eurasian continent in connection with Palæozoic time, and would reason as to modern geographical distribution from unproveable surmises as to the extent of imaginary primeval continents. This is a favourite custom with a certain school of geologists, and Père Kennelly is only innocently following in the beaten track. Still these speculations, if we can forgive them in experts, are not justifiable in geographers who have only a secondary knowledge of the other science. As a fact we know nothing of the distribution of ocean and continent prior to the miocene, and very little even then; our knowledge of the geography of the earth only beginning to have its dawn in the pliocene. We know that from cambrian to carboniferous times the greater part of the area of the portion of the earth, which we know now as "China," was at the bottom of a huge ocean, and that is all we are justified in asserting. No Mesozoic formations beyond a few isolated, probably fresh water, patches have yet been described; so that probably this region of the world remained above water.

In any case, after the coal measures occurred a huge blank, which has left no remains; till in the later Tertiary, the land now northern China, was sculptured much as at present; the hills probably a trifle higher. Then the whole land went down or, more likely, the sea came up, and what we call Asia from the Yellow Sea to Mid Russia formed one huge mediterranean. It was in this sea that the loess was deposited; and after its deposition the land emerged once more and the continent of Asia, as we know it, was formed. This was so recent that man was already an inhabitant of many regions of the earth.

This is all that we are justified in saying as to the past geography of the land, beyond adding in general terms that, even so late as the pliocene, not one of the present continents was in existence. It may, however, be added that Tibet and the Himalayas had a different history in the main from China, not a single pimple existing at the beginning of the Tertiary age to represent what is now the most lofty mountain range on the face of the globe. Another favourite blunder of the fashionable geologic school is in constituting recent time into a geological age ranking as a Quaternary epoch with the three great epochs, Palæozic, Mesozoic and Cænozoic; as a fact we are in the closing period of the Tertiary, a time when, as at the close of the two former periods, geological change and deposition has arrived at a minimum. As these later phenomena are more marked in China than anywhere else on the face of the earth, it is more especially important in describing its physiography that we should have a clear understanding of the immediately preceding stage. Although, then, we have, for the predisposing causes of the orography of China to look back to early Palæozoic formations, which form the essential back-bone of the land, its geologic history as it exists at the present time cannot be traced further than the pliocene, or at most the miocene, when were laid the foundations of the present continental masses.

The critical period in the development of modern China may be safely assumed as that of the Loess Sea, and here it is curiously supplementary to that of Europe with the reservation that, of the continents of Europe and Asia, Europe is much the older of the two. At the closing period of the European Ice age, when palæolithic man inhabited the caves of Southern France, Asia for the most part formed the bed of an Asiatic Mediterranean. By degrees as the rigour of the climate commenced to give way to more genial conditions, and the southern tribes came to spread themselves over the land, the Cave-dwellers moved northwards and eastwards until they crossed the Urals into the now rising plains of Northern Asia, where they seem to have found a climate more genial than the present. As climate gradually grew warmer in Europe, tradition has it that the cold came on North Asia, and these newly arrived immigrants were forced down on to the fair-haired peoples who had taken up their residence in Central Asia. This is the story that we learn from Greek, Indian, Zoroastrian and Chinese tradition alike. We find the same tale repeated in the case of the larger mammals. The mammoth, the woolly rhinoceros, and the white Mongolian pony had once been fellow dwellers with palæolithic man in the plains of Southern France, where we find their rude, but characteristic, pictures still preserved on slabs of slate. The beasts moved with their human fellows, and we find their remains imbedded

in the frozen Tundras of Siberia; like the men, too, they had to move south and east, and the last we see of them is in the loess-covered plains of Northern and North-western China. Here the pony still survives, and here we have abundant evidence, in Mencius and the old ballads of the *Shi*, as well as in the *Ch'un-t'siu*, to show that the other two lived till well into history. The Siang-shu, *Shi*, I. iv. 8. thus tells of the elephant:—

See! o'er the mead the lordly mammoth hies;
His skin from barbed darts a well proved shield:
Yet, trapped at last, through hunter's wiles he dies:—
So ruthless man, how thick his coat, must yield.

Mark his huge limbs! fiercely he stamps, and thinks
Under his feet the fragile form to fling:
But mired, with greater bulk he sooner sinks:—
So reckless men their own disasters bring.

No other elephant than the mammoth has ever been found in these loess quagmires, nor rhinoceros other than the tichorhine, and the state of preservation of the remains points to the recent period of their entombment.

With this explanation of the antecedent geological history of the land of China, we can the readier arrive at an understanding of the people, and understand to what extent, and in what manner, it has drawn upon its neighbours. Popularly, especially in America, though ethnologists like Prof. A. H. Keane have in recent times added currency to the error, the Chinese people have been classed as Mongolians; independent of the fact that Mongolian was a political and at no time an ethnic appellation, the northern element has entered but very little into the race. Mainly the primitive stock is to be referred to the Indo-Chinese peninsula, and cognate races are to be seen in Miaotse, Lolos, Shans, etc., who overflowed into the new lands. Partly too the old races who had been moving out of Europe before the southern invasion, on the approaching cold of Northern Siberia, also contributed to the population the, so-called, "Mongolian" element, which Turks more or less pure contributed to swell. Most important of all—for it is to them that China owes her primitive civilisation, her myths and her very speech—came the light-haired invaders from the North-west who founded the various petty kingdoms of which the China of the day was composed, and who collectively called their home the T'ien-hia, "Under-heaven,"—the first name of the land. These, somewhat after the fashion of the Angles in England, more than a thousand years later, though never allowing any higher allegiance than that due to their own chieftains, still so

far ackowledged the claims of common descent that they looked upon the T'ien-hia as a common inheritance; moreover they guarded their own particular family of Cheo as jealously as ever did Hellene his own birthright. It was these Cheos who, somewhere about the twelfth century B.C., first laid the foundation of a state in China. It was as distinctly founded on the family as in old Greece was that of Agamemnon "King of Men"; but though Agamemnon did exercise sway over "Argos and many islands" it was not as overlord, but merely as senior among equals; and equally the King of Cheo claimed, not as certain half-informed scholars would have it, to be overlord, but to be simply *King* of Cheo, the other members of the hegemony taking their places as *Kung*, *Heo* or *Tse*, but in each case only over their own hereditary dominions.

About the same time as the Cheos were settling in North-west China, another distantly related, more or less blond, race made its appearance in the South-west and South. These were the Mans of the older writers. According to their own tradition they came of the same clan as the Maurya King of Ayodya, King Açoka. They were to be found spread widely over the Indo-Chinese peninsula, in Tungking, Siam, Lower and Upper Burma, and extensively along the borders of Tibet. At the very beginning of Chinese history they had entered Kiangsi (the P'angli country), Honan and Hupeh (Kimchung 黔中), Yunnan, and were pressing into Ssech'wan. These Mans during the whole of the existence of the Cheo hegemony were contesting the ultimate supremacy in the coming state, in which contest one of their junior branches, the people called in modern Chinese T'sin but originally Ser, were finally in B.C. 246, under King Cheng, victorious; and the entire T'ien-hia submitted to the rule of the T'sin conqueror.

There was no precedent for the new rule, and King Cheng in assuming the head seems at first to have been averse from change, and uncertain what title he should assume as supreme ruler of the T'ienhia. One thing he saw plainly, and that was that if the new order were to be permanent it would be necessary to abolish all the old states, and map his now consolidated realm out anew; so the old territorial boundaries were entirely abolished, and the new state, now to be known as T'sin simply, was divided into a number of provinces for judicial and administrative purposes, for the future to be known as Hiens. Practically the first Empire was established, and the work of amalgamation, which had so far gone on satisfactorarily, needed only the cap-stone. Up to this King Cheng had been himself the director, but when the time came to select his imperial title no precedent was to be found, and King Cheng thought the affair grave enough to call his entire Council together. In all ages monarchs perhaps have assumed divine attributes, but that of King Cheng was more especially marked by

the habit. Antiochus II, actually a contemporary, had adopted the title of God (Theos); the mythical rulers Yao and Shun, really the ancient Asiatic gods Varuna and Vushnu (Uranos' and Zeus), were handed down in tradition as "*tis*," identical with Lat. *dii*, so it was hardly a coincidence that it was this very title of god, 帝, emphasised by the affix of hwang, 皇, overspreading, that was selected for the title. By bravery and administrative ability he had first consolidated his huge empire and had laid its foundations so strongly that he really had no misgivings as to its stability for all ages to come; so what more fitting title to adopt than that of First Grand.Divine (Sovereign) of T'sin? King Cheng's vaticinations as to the solidity of the foundations of the Empire that he had founded were justified by the result: though the son to whom it fell proved unequal to the task of ruling it, the Empire itself was not destroyed, and needed no reconstruction when Liu Pang vaulted into the vacant saddle; and notwithstanding that the storms of more than twenty centuries have since passed over the fabric it still survives, battered and worn by time indeed, yet not withal so damaged but that another master mind like that of King Cheng's could readily restore it to pristine strength.

It is because, under the influence of an ignorant and prejudiced literati which has throughout misrepresented the early history of China, these things have been hitherto placed before the world in a false light, that it becomes necessary to enter into so much detail before commencing the Review of Père Kennelly's interesting and instructive introduction to the geography of China. Unfortunately European scholars in describing these things, instead of breaking ground for themselves by going to headquarters, have been in the vicious habit of accepting unquestioned what has been presented to them by their Chinese predecessors; and the result is seen in the entire falsification of all our information regarding China, whether the subject be history, geography or merely ordinary statistics. Though the present work is in many of these respects an advance on its predecessors, it is not yet in all complete, and will still need much revision.

At the very start, on page 7, we find the name of the country thus treated:—The country, we are told, "is also called China, presumably on account of the T'sin dynasty, under which it became better known to the nations of the West." This is a curious instance of the inversion to which all things Chinese are liable at the hands of the supposed scholars. It is quite true that the name of China became better known to the West through the T'sin dynasty, but that name, as explained above, was Serica—not because it was "the silk-producing" country, but because the name of T'sin as pronounced by themselves was Sera, so that Serica was simply the adjectival form, "The Seric Land." When the Hans came into power China, as all

Chinese students know if they are only let alone, became Han Kwoh, the Land of Han. But Han, as anyone who has studied comparative philology can see for himself, was pronounced Dhan, and the Persians, through whom the word passed, had a habit of palatising the dental, and pronounced words beginning with *d* as if the initial were *ch*, so China is simply Dhin-a for Dhana. The name Cathay, by which it was known in medieval times, is equally simple. From the 4th century down to the Ming, except during the interval of the T'ang and early Sung, North China had been under the dominion of Turkish peoples, of whom the K'itan or K'itat were the most distinguished; during the Mongol dynasty, when the bands of Jenghiz and his successors carried terror into Europe, their eastern empire was always spoken of as K'ita or K'itai, Europeanised into Cathay. With most of these errors a little original study will be sufficient for their correction; but unfortunately the little original study is the thing tabooed, it being so much easier to go and ask the "teacher" when a doubt arises than think for oneself.

Proceeding to the China of the present day, where the facts come within the personal experience of the compilers, the Geography presents a different aspect, and has been carefully brought down to date. Even here unavoidable slips occur, most of which are, however, typographical, or the results of hasty translation. A curious one of the latter description occurs on page 25, where the book states that:—the second (bend of the Hwang-ho) winds round the Ku-ku Nor. This is of course a mere slip, not intended, and only arose from hasty translation. Other slips occur from too hastily accepting statements presented as official: thus with regard to the populations of the several provinces, there are extraordinary discrepancies. The population, for instance, of Shantung appears as 38½ millions, being at the rate of 683 to the square mile; as a large portion of the province is occupied by barren mountains this is certainly not correct. The population of the richest and most thickly populated province, which moreover contains the largest number of great cities, including Soochow, Shanghai, Wusieh, Nanking and Chinkiang, is returned at less than 24 millions, or at the rate of 620 to a square mile. Fukien is put down as being for the area 60 per cent. more populous than Chekiang, and Anhwei, except in a few spots an infertile province with few important towns, is returned as having a population of 432 to the square mile. True the Customs returns state so much, but the Customs returns are only official so far as their own statistics are concerned, and the Geography professing to be a "comprehensive" and up-to-date work, and published under the high authority of Siccawei, should certainly take thought of these things, and not publish as authentic the mere guesses of uninstructed native officials, without a word of warning as to their lack of authority.

With these preliminary remarks we may proceed to give an outline of the work, which is divided into two books—for China proper, and for the Outer Dependencies. The first, after a general introduction, describes in four chapters the North; in four chapters also the Central region; in four chapters the South; a chapter is then devoted to a general description of the Coast, including its nature, harbours, appearance, climate, etc. In the latter are comprised descriptions of prevalent winds, the Monsoons, Typhoons; Ocean and Continental wind Circulation; Fogs and all those phenomena interesting to navigators. A careful account of the Lights, and descriptions of the main peculiarities of the various ports, their tides and currents follow, so that this chapter becomes one supplementing with up-to-date information the various Coast Pilots. As this has the high authority of Siccawei Observatory behind it, it must command respect.

The 5th Section of this book, on the Political and Economic Geography, devotes itself more especially to Populations, Religions, Languages, Education; Government and Administration, Revenue, Army and Navy, and Agriculture, to which latter a separate chapter is devoted; all these being treated from the latest standpoint. Too much commendation cannot be given to these theses, the more so that they are written impartially, and, what is difficult to attain in a book of this description, without religious or national bias. This is well exhibited in the descriptions of the beginnings and progress of such institutions as the Foreign Customs; the Imperial Post Office, the latest administrative success of Sir Robert Hart; as well as of the methods and progress made by the several Missionary associations, Roman Catholic or Protestant. The following introduction to the latter will explain the method of treatment.

"Besides these three religions, (Confucianism, Taoism and Buddhism), the most widely diffused in China are *Shamanism*, *Christianity* and *Mohammedanism*.

"*Shamanism* prevails chiefly amongst the tribes of Yunnan and Kweichow in S.W. China. They fear spirits, worship natural objects (the sun, wind, mountains, rivers, etc.) and have wizard priests, who propitiate with offerings the malevolent spirits.

"*Christianity* is spread throughout the whole of China, in two different forms, the *Catholic* and *Protestant*.

"*Catholicism* is called in China *T'ienchu-kiao*, or *Religion* of the *Lord of Heaven*, this name having been adopted to signify that the proper object of its worship is the true and living God, Creator of Heaven and Earth, and not the material heavens, which, together with the earth, are the object of imperial worship in China. . . . . It teaches that there is but one personal and supreme God, who is the Creator of heaven and earth, and to

whom is due divine honour. It acknowledges but one true and universal Church, to which all men are called. . . . . The Catholic Church reckons at present in China about one million believers.

"*Protestantism* is generally called in China *Yesu-kiao*, or *Religion of Jesus*. The Protestant form of Christianity originated in the XVIth century. It rejected the headship and authority of the Catholic Church, and set itself up as a free and independent Church, based on the Bible interpreted by private judgment. It is divided into numerous sects and denominations, and has in China about 150,000 full adherents."

The statistics given by Père Kennelly give, however, rather above a quarter of a million in 1902. Christianity, though it has made its mark in China, is as yet hardly strong enough to stand alone without external support.

Not less interesting and important is the account given of recent changes in the curriculum of Chinese Education since the beginning of the century. This is of course not complete, the whole thing being at the moment in a state verging on chaos; but the necessity of enlarging the system to include the modern sciences, history and geography, foreign languages, gymnastics and in the higher grades political economy and civil and international law, is now universally, as well as officially, recognised.

Some unusually sensible remarks are made bearing on the condition of agriculture throughout the Empire. From the crude accounts of the eighteenth century Europe generally has been led to believe that in China agriculture is in a very advanced state, and that the very utmost use is made of the soil. In one respect this is true, but the cultivation is best described as microscopic, with the result that, except in the rich plain lands adapted for the growing of rice, the greater part of the vast arable lands of China is verging on desert conditions.

"A striking feature of Chinese agriculture is that cattle-breeding and the planting of trees are almost entirely neglected. There are no large herds of cattle or flocks of sheep as are found in other countries; no natural or artificial meadows, and the woods and forests are not thinned. The only pasture lands are the slopes of mountains, which cannot be used for any other purpose; the only forests those which have grown spontaneously in high and uncultivated places. Even these latter, which are seldom met with except in Hunan, Fukien and Kweichow, are disappearing rapidly. The consequence of this lack of foresight is that China is almost destitute of firewood, and has to import timber at heavy cost from distant countries. . . The methods applied have not got beyond the most rudimentary stage, and improvements arrived at in other countries are but little known . . . . There are no roads on which horses or buffaloes can bring home the crops.

The small weak plough does its work but superficially. If the soil produce an abundant harvest, this is entirely due to its fertility and the patient labour of the husbandman."

This is all literally true, but is but half the tale. Agriculture has, in verity, run mad amongst the Chinese, who have converted the culture of cereals into a fetish to which every other process must yield. The aboriginal tribes when the agricultural settlers, the "LI-min," arrived were for the most part pastoral, the country was covered with glades and rich pastures. One of the old ballads (*Shi*, III, i, 3.) thus sings :—

Where then along the western streams,
Our Duke T'anfu his prancing teams
At earliest dawn to water led :
There by the flanks of K'i he spied
Kiang the fair,—a peerless bride,
And there in mutual love they wed.

Where midst rich meads the fields of Chow
With iris and narcissus glow
He called the clan in council grave.
Shall we still further rove? Or shall
We here in peace and plenty dwell?
The tortoise, Stay ! its answer gave.

Such was North China some twelve centuries before Christ when the agriculturist first arrived from the plains of Central Asia—with fertile glades watered by running brooks, and gentle slopes covered with luxuriant herbage through which peeped forth the rich flora of the plains. The higher land was covered with the handsome and abundant forest growth, the scant remains of which are the envy of the botanist; and peace and plenty reigned supreme. Now-a-days North China is rapidly reverting to desert. The hillsides have been denuded of their trees; and the soil deprived of its cover ; and exposed to the rains and the winds of heaven, has been carried away wholesale to fill the already shallow Gulf of Pechili. The once gently undulating meadows have been scored into hideous cañons with bleak bare sides on which not a wild flower can grow ; the grass has been ruthlessly stripped off the surface, and to such a length does the peasant's hatred for grass grow, that the few blades that here and there contrive to shoot out are torn up by the roots to feed the few domestic animals, or thrown into the fire to supply the place of fuel. The few shrubs that can contrive to outlive the constant cropping are kept down to the surface of the ground, and when more haste than usual is needed the roots are grubbed

up, utterly forgetful of the future; and the consequence is that, over thousands of square miles where once firewood was to be gathered in abundance, now none of any description is to be had, and the village children are sent out into the highways to gather the chance droppings of the mules and asses passing. The result is that there is not a particle left to manure the by no means fertile soil, for, in spite of all assertions to the contrary, unmanured loess forms a particularly unproductive soil; and the only means of manuring left, by continually using up the freshly upturned soil, result in still more rapid denudation, the upturned soil being annually carried away in dust-clouds by the spring gales, which, their prevalent direction being towards the east, annually deposit the soil in hundreds of thousands of tons in the Hwanghai.

This rapid destruction of the arable soil of North China has been proceeding with more than redoubled speed during the last two hundred years; the reigning Manchus in their policy of isolating the people having given it every encouragement. The secondary result of the denudation is that the climate of North China is rapidly reverting to desert conditions; a fact, which, taken in connection with the general desiccation of Central Asia, cannot be viewed with indifference by the statesman whose duty it is to take thought for the future.

Of course in the first edition of a work intended to be so comprehensive, there are many errors and contradictions; even in so simple a matter as fruits this is apparent. When, *e.g.* on page 18, it states that in North China trees are few, and include "the poplar, willow and pine," it only refers to very modern conditions, the flora of North China, as elsewhere correctly stated, being one of the richest in the same latitudes on the face of the earth. So again the statement that the "persimmon" and plum tree are imported from the South is entirely incorrect, they being special products of North China, where they are indigenous. The case is correctly stated, without exaggeration of any sort, in the special chapter devoted to agriculture.

Chapter VII, devoted to the "Rise and Progress" of the Empire, is unfortunately prefaced with the usual unfounded tales regarding early China, which modern writers, even those who ought to know better, will insist in foisting on an uninstructed public. It commences with the often asserted, but wholly imaginary and gratuitous statement, that the Chinese Empire is "the oldest in the world." As a fact it is newer than the empire of Alexander the Great, the last of old world empires. It is not as old by some four centuries as the Roman Empire, with which modern history has its beginning, and the great empires of antiquity, Egypt, Babylon, Assyria, as well as the old Greek states, had all passed away before the great

Shi-Hwang-Ti laid the foundations of the first Chinese Empire. The first event in China, of which even Chinese tradition speaks—the founding of the kingdom of Cheo by the mythical Chinese Dioskuri, the Cheo-kung, themselves as shadowy as Castor and Pollux—is relegated by the Chinese themselves to a later date than did the old Greeks, on like mythical foundations base the capture of Troy. No useful purpose is to be served by the repetition of these old stories, which are for the most part based on late Buddhist inventions; and never ought to have deceived even the uncritical scholars of the seventeenth and eighteenth centuries. This is the great blemish of the book; and we hope when a new edition is called for that these unseemly excrescences will be removed, and consigned to well-merited oblivion.

Another defect needing excision is the imaginary geology. We do not here blame Siccawei, but its blind guides. Geology is a dangerous track for the uninstructed to travel, and with our present insufficient information, it were better far to leave it for the experts to wrangle over.

The second part of the work is devoted to the Dependencies—Mongolia, Manchuria, Turkestan and Tibet; it is marked with the same care as the first, but we have already exceeded our limits.

THOS. W. KINGSMILL.

Miscellaneous Notes.

Lao-tsz is stated by Sz-ma Ts'ien to have been born in 苦縣 in the state of Ts'u. Mr. Giles, who catches at any straw in order to support his absurd theory about the forgery of Lao-tsz's classic and personal history, argues that in Lao-tsz's time the empire had not yet been divided into *hien*. But in the *Chun-ts'iu* history there are frequent mentions of *hien* in the country of Ts'u long before the birth of Lao-tsz. Thus in B.C. 598, when the petty state of 陳 was annexed, it was turned into a *hien* of Ts'u state. It is also stated that the 大夫, or governors, of the various *hien* in Ts'u were in the habit of arrogating to themselves the appellation of 公, which was used by vassal princes irrespective of whether they were 公, 侯, 伯, 子, or 男. In the year B.C. 597 it is recorded that Ts'u had annexed nine petty states and turned them into *hien* 夷於九縣.

Another argument used by Mr. Giles to show that Lao-tsz was a fraud is that neither Kwan-tsz nor Sün-tsz mentions him. As Kwan-tsz lived two centuries before Lao-tsz he could not well mention him, and Mr. Giles has simply copied an error of Wylie, who inadvertently puts Kwan-tsz down to the 5th instead of the 7th century B.C.

As to Sün-tsz, not only does he mention Lao-tsz in his 11th chapter, but he compares him with Confucius and other philosophers; Mr. Giles is thus totally untrustworthy. To revert to the question of *hiens*—not only in the state of Ts'u was the *hien* division known: in B.C. 594, as a reward for his services, a successful general was presented with 瓜衍之縣. In 584 two places called 申 and 息 are described as being *hien* in the state of Ts'u 楚之二縣; and in 582 a place called 銅鞮 is described by a commentator as being 別縣 of Tsin, as it still is of Shan Si province. In 578 an envoy from Tsin to Ts'in charges the latter with having invaded certain of its cities on the river 入我河縣. In the year 564 a fire took place in the state of 宋, and an official bearing the title of 隧正 is mentioned as assisting to put it out: it is explained by the commentator that five 縣 formed one 隧, which must therefore have nearly corresponded to the modern 府. In 555 the two towns 純 and 啚 in the state of Lu (Shan Tung) are stated by the commentator to have been two *hien*. In 517 a statesman of Ts'u was called upon to arbitrate between two officers; he said: "this appellant is a prince; the other gentleman is 方城外之縣尹也." In the same year Tsin state was about to present a city 將與之縣 to a refugee from Ts'u. Finally, in the year 543, in speaking of the people of the Tsin capital, the *Tso Chuan* uses the words 絳縣人. From all this it follows that Mr. Giles' observations touching 苦縣 are quite worthless. It may be added that there are numerous later instances of 縣 in the *Tso Chuan*, but the above are all within the course of Lao-tsz's lifetime, and there are besides many specific descriptions of what the military duties of each *hien* were, how large they were, etc.

Giles says 虜 is the same as 擄, which is quite a mistake. In the first place 虜 existed centuries before the second character was invented. In the second,—although it can always be used intelligibly for the second character, even in modern times,—yet 擄 can *never* be used for 虜 in the substantive sense of "Tartars," "bandits," or "plunderers," as the 北虜 were considered to be.

E. H. PARKER.

Mr. Francis B. Forbes.

We regret to record the death of Mr. Francis B. Forbes, who was President of this Society two years, 1873–4. The Society was under deep obligation to Mr. Forbes at that time for the great amount of work which he did in its interest. In his President's Address delivered February 13th, 1874, Mr. Forbes outlined the work and aims of the Society. In this address he pointed out the needs

of the recently formed Museum and the urgent necessity of the steady growth of the Library. The thorough appreciation of the contributions which have been made by this Society to the knowledge of the western world concerning China has never been more ably expressed than in this address. He had the assistance at the time of such men as Mr. Alexander Wylie, Mr. G. F. Seward, Mr. Henri Cordier and Mr. W. H. Medhurst. It was a high honor that Mr. Forbes should be chosen President from among such a coterie of eminent men, but the great service which he rendered the Society fully justified his selection. A successful merchant, he was thoroughly interested in literary and scientific matters, and among the many merchant princes of early commercial life in China, Mr. Forbes' name will always remain conspicuous.

LITERARY NOTES.

Japan's Beziehungen zu China. (Relations of Japan with China from the oldest times up to the year A.D. 1600.) By the Rev. ALBERT TSCHEPE, S.J. The Catholic Mission Press of Yen-chow-fu, Shantung.

This is another valuable work from the never tiring pen of this learned German, who, as far as we know, has published up to the present day four books in French, two in German—printed partly at the Catholic Mission Press of Shantung, partly at Siccawei—and several essays in German, published at the Government Press of Berlin. How he could do so, away from any library, with generally only Chinese books at his disposal, in the midst of a busy parochial life, is a puzzle to many.

The matter of the book itself is interesting. It confirms in many points what has already been said about Japan by such scholars as H. Parker, P. Aston, J. Rein, H. Chamberlain, etc. of, for instance, Japan's history, previous to her intercourse with China, compiled by themselves, being altogether unreliable, ridiculously conceited, and composed to suit their national vanity. It confirms Japan's great indebtedness to China, inasmuch as she raised it above pure barbarism. In fact the histories of both countries, China and Japan, after that period, generally agree and may be taken—jusqu'à nouvel ordre—as trustworthy. Their intercourse began most likely a few hundred years before Christ. The story of the Emperor Tsing-shi-hoang 秦始皇, 246-210 B.C., sending one of his physicians Sü-fu with 3,000 boys and as many girls under the age of puberty to Japan, for the elixir of immortality 不死之藥, is very generally known by almost every average lettré of China. The physician not having found the elixir dared not return to China with his boys and girls, so he settled down in Japan. But the 300 of Father Tschepe should be corrected into 3,000.

The answer, which the Rev. Father gives to his question, "Where do the Japanese come from?" is worth translating:—"As there are no historical documents," says he, "nor any points of support, nothing is left but consulting anthropology. This science assures us that the Japanese are a mixed people, made up of three elements: 1st—the Mongol-Malayan type, 2nd—the Corean, and 3rd—the Ainos type. The almond-shaped eyes and the protruding cheek bones are the special marks of the Mongolian type. The

head of the Japanese is not the head of the Mongolian race, but points to the Polynesian. The hairs of the Japanese are the black, bristly and thick hairs of the Mongols, but very often they are crisp or curly, and so disclose negro blood. And while the Mongolian face is furnished with but little beard, we find at times among the Japanese splendid specimens in this line."

The relations between both countries were insignificant till 1267 A.D., when, under Kubilai, the grandson of Genkiskhan, trouble began with Japan, about Corea. After that comes the period of inroads by Japanese pirates, of their devastations and pillaging along the whole southern coast of China, from the mouth of the Yang-tse down to Canton. Che-kiang province suffered continually and most horribly from these pirates. They generally came in hundreds of boats with their arms hidden in the hold, and a cargo of sulphur and other inflammable articles above. When they found the coast clear of soldiers, they plundered the country and used these articles to burn houses with, but in the contrary case they offered them as merchandise. These disguised robbers became, in the long run, pioneers in the hands of the Japanese government. Ningpo was plundered and devastated several times; the same is to be said of Hang-chow; Shanghai was taken and plundered in the summer of 1553 A.D. The next year these pirates overran the whole Delta: Su-chow, Sung-kiang 松江, Chang-shuh 常熟 were taken, and even the shores of the Tai-hu 太湖 were devastated. In 1556 U-wei-chow 無爲州 and even Lü-chow-fu 盧州府, in the province of An-hwei, were taken and pillaged.

A paragraph of p. 242 will be interesting:—"When 崑山 Kun-shan was besieged by 7,000 Japanese, a Chinese general came to its rescue from Su-chow, but he was ignominiously beaten at Cheng-i 眞義 (one of the railway stations to Chinkiang), about 7 miles west of Kun-shan, when the Japanese among the booty found 佛郎機—machines from the *Franks* (common name of Europeans at that time) which the Chinese had got from the Malays or Arabs—so they say—also big spelter and lead tubes, which with powder would throw large balls a great distance. The question is clearly about catapults and cannons, which latter are mentioned here by the Chinese for the first time. We know however that the Japanese pirate chief Wang-cheng 汪眞 had cannon in his boats several years before." These invasions caused numerous embassies to be sent to Japan, which, however, in some instances, had to return to China without even an answer from Japan to the Chinese emperor; and when Japan in her own interest sent an embassy to China, this embassy most often consisted of a whole little army, although it had been mutually agreed that Japan should send no more than 300 people with only 30 armed men. This army naturally lived at the expense of the different towns they passed through on their way from

Ningpo to Peking. It even happened that they besieged and plundered a town once, killing officials and innocent people, which nevertheless was officially ignored at Peking. On the contrary, on one occasion the Japanese envoys having complained that the return presents had not the value of theirs, although they had sent presents of the value of 3,470 ounces of silver only, while the value of the Chinese presents was tenfold, the Chinese emperor added 10,000 ounces of silver. This also not being enough the envoys made a row about it and began threatening, so that the emperor had the weakness of adding 1,500 rolls of silk!

As we said before, the book is certainly interesting reading, but we would suggest to the Rev. Father that the interest would be more widely felt if the book were written in French or English, the former language being very familiar to him, at least from what may be judged by his Histories of the kingdoms of Ts'in, Wu and Teh'ou. At the same time nobody can gainsay that among the general public, not omitting the savants, the French language is better and wider known than the German, let people account for it as they think fit, perhaps owing to its greater grammatical difficulties and the intricacy of its sentences, but the fact nevertheless is there. The more so as in the preface it is clearly acknowledged that the author's German had become rather "rusty," so that the Rev. Father, being perfectly conversant with the French language, would find the labours of his task lessened.

We venture another observation: the office of a critic being to first familiarize himself with all that has been written about the matter at stake, by foreign and native writers, and then only to form his judgment about the question, we find the Rev. Father clinging perhaps too exclusively to Chinese sources, which is very likely accounted for by his insular position away from any well-stocked library.

With regard to the orthography of the Chinese sounds, the publishers say that they believe in the greater adaptability of the German language in the rendering of the proper pronunciation of Chinese sounds than the English or the French language. Instead of Peking, Nanking, Fu-kien they write Bêi-djing, Nan-djing, Fu-djien, etc. This may be very true and their orthography may be very good for representing the Shantung pronunciation, but Germans in other parts of China, where Mandarin is spoken, would find it incorrect. What is wanted, is not a multiplying of Chinese romanizations but a simplifying of them. The compiling of a common orthography acceptable to the three principal languages, *viz.* English, French and German, might most likely be brought about with very little concessions on each side.

J. T.

Lun-Heng; Part I. **The Philosophical Essays of Wang Chung**: Translated from the Chinese, and annotated by ALFRED FORKE, Professor of Chinese at the Seminar für Orientalische Sprächen, Berlin. Leipzig, Otto Harrassowitz: London, Luzac & Co.: Shanghai, Kelly & Walsh, Ld.

In the *Lun-yu*, II, chap. v, a conversation is recorded between the sage Confucius and Meng I, one of the ruling ministers of his native state of Lu. "Mang I asked his opinion as to the mutual duties between man and man, Ch. 孝,* the Master replied, not to exhibit perversity in his dealings. Some time after he was driving with a disciple, Fan-ch'i, and in the course of conversation remarked, Mang-Sun asked me the other day as to the proper relations that should exist between man and man; I replied—to steer clear of perverse dealings.—What did you mean by this? asked Fan-ch'i. Simply, replied Confucius, that we should act towards the living with decorum; that in performing funeral rites for the dead we should do so decorously, and in our sacrificial ceremonies we should place decorum in the front rank."

Wang Ch'ung had been by his contemporaries accused of Scepticism, because he had refused to accept unquestioned certain dogmatic assertions of the current school of philosophers; his reply was a triumphant assertion of the necessity of enquiry:—If Fan-ch'i had not cross-questioned Confucius as to the inner meaning of his curt and enigmatical reply to the powerful minister, the world would have been the poorer as to the true

* 孝 *hiao*, had not in the time of Confucius, nor for centuries after, the restricted meaning of "filial piety," which it came to acquire, and which in the writings of Chuhi assumed a ridiculously exaggerated form. Legge, following his Chinese authorities, not only translates *hiao* as "filial piety," but altogether gratuitously inserts the word parents in the closing sentence, reading it:—that "parents" when alive should be served according to propriety. Not only is there no warrant in the text for this reading, but it is inconsistent with such an interpretation. In chap. viii., *e.g.*, Tsehia asks the same question, and the Master, more at ease talking to a professed disciple, tells him:—It is not easy to reply (in words), but here is a case, the juniors (of a family) are undergoing privations, yet there are provisions and drink, but the elders keep them for themselves:—how are we to look upon this as *hiao* 孝? There were plainly other duties between man and man than those of the child to the parent; and Confucius desired in as plain language as he could command to impress this mutual obligation on his disciples.

opinions of the sage; and what he, Wang Ch'ung, did in calling in question the dogmatic interpretation of Confucius was to discover whether or not these dogmatic explanations were in accordance with the true teachings of the Master.

This, Dr. Forke's work reminds us, was the aim of Wang Ch'ung's life. In a sentence worthy of note for its vivid English, he thus describes the man:—"Although he was poor and had not an acre to dwell upon, his mind was freer than that of kings and dukes; and though he had no emoluments counted by pecks and bushels, he felt as if he had ten thousand *chung* to live on. He enjoyed a tranquil happiness, but his desires did not run riot, and though he was living in a state of poverty, his energy was not broken. The study of ancient literature was his debauchery, and strange stories his relish."

Now curiously the Chinese as a race have ever had a conscious feeling that one of their besetting weaknesses as a people has been this habit of "wei" 違, not disobedience, as the commentators translate it, but simply "contrariness"—the faculty of getting at cross purposes; and Confucius feeling that he possessed a full share of the national failing devoted the whole of his second book to warning his disciples against it. If, however, it stood in the way of Confucius's promotion during his life, with Wang Ch'ung its after effects still cling to his memory; and to the present day Wang Ch'ung remains one of the most unpopular of their philosophers amongst the Chinese at large. Yet in Western eyes Wang Ch'ung stands out in broad relief as one of the most, if not actually the most, original and philosophic of Chinese thinkers.

Wang Ch'ung deserved better than this at the hands of his countrymen, and Dr. Forke has taken up a grateful task in opening up to the knowledge of the world this most characteristic of the long roll of Chinese philosophers. Dr. Forke describes his doctrines as materialistic, which to some extent they are, owing to the prominence given by him to what a modern would called the physical basis of life. He in this respect approaches Epicurus, but his materialism is by no means that of the modern Materialistic School. "*Epicurus*," says his translator, "attaches great importance to physics. The knowledge of the natural causes of things shall be an antidote against superstitions. *Wang Ch'ung* likewise takes a lively interest in all physical problems, and tries to base his arguments on experience as far as possible. His method is quite modern. If he often falls into error nevertheless, it is not so much owing to bad reasoning as to the poor state of Chinese science at his time." "The professed aim," again, "of Epicurus is human happiness. By delivering them from errors and superstitions he intends to render people happy. *Wang Ch'ung* likewise

hopes to do away with all inventions, fictions, and falsehoods, but in doing so he has truth, and not so much happiness in view." In all this Wang Ch'ung, unconsciously perhaps, was a true forerunner of the modern school of thought which before acceptance of a theory demands rigid proof. That he did not effect more was due to the very inchoate state of the knowledge of natural phenomena current in his day. Still he had undoubtedly glimpses of many ideas which did not develop till many ages after his death; "All sensations," he held, "are caused by the vital fluid:—When it is thinking or meditating it flows into the ears, the mouth, or the eyes. When it flows into the eyes the eyes see shapes; when into the ears the ears hear sounds; and when into the mouth the mouth gives vent to words." We are still as far off as was Wang Ch'ung from the understanding of what is this vital fluid. We know, which he did not, that it brings about certain chemical combinations otherwise impossible, and that when it parts company with these combinations, which we explain as the "physical basis of life," the combinations at once are capsized, and the elements proceed to enter into an entirely different series of associations. Reasoning from the phenomena familiar to him Wang concluded that the soul wholly depends on the vital force which has its seat in the blood. It is, so to say, an attribute or a phenomenon of the vital force. When by death the human body decays, the blood is decomposed and the vital force residing in it destroyed, which destruction necessarily results in the annihilation of its appendix, the soul, also. Before man is born his soul forms part of the original vapours. It is a diffuse and formless mass, like the contents of an egg before it is brooded, a mere force or a scrap of air without conscience or intellect, or any of the characteristic faculties of the human soul. At the birth a part of the original vapours coagulates, as it were, and enters the body in which it stays during lifetime. When the person dies, it is dispersed and scattered, and returns into its former aerial state, losing thereby its individuality and all purely spiritual faculties.

There is no doubt that the reasoning here is perfectly logical. There was no room here for ghosts or spirits, and hardly any for the existence of a soul, and Wang Ch'ung accordingly denied all. But other men with, at least, equal mental faculties, and reasoning from the same facts, have come, as Plato, to exactly opposite conclusions. The great problem of life and death remains still the mystery of mysteries, never to be cleared up till humanity has advanced at least as long a stage forward as now separates him from the lower animals. Perhaps, indeed, the idea is beginning to dawn on the world that life after all is universal, and is not confined to one orb or set of physical conditions; that it has, in fact, to be correlated with

energy, as an ever existent and impalpable reality, exhibited only by its effects on matter, and like energy indestructible, and permeating the entire universe.

Of course Wang Ch'ung could not carry his reasoning beyond the capacities of the age, and accepted as the foundation of all things the interactions of the principles of light and darkness, which in the long ages before him had formed a basis for Chinese thought. Dr Forke compares this with the similar ideas of Epicurus and his disciples, and quotes at length Lucretius as to the pristine separation of light and heavy :—"The principle of division is the same :—the light primary bodies Wang Ch'ung and the Chinese cosmogonists term *Yang*, the heavy ones they designate by *Yin*. Only in respect of the line of demarcation the Epicureans and the Chinese differ, for whereas the former regard earth alone as heavy, and water, air and ether as light matter, the Chinese comprise earth and water under the term Yin, and air and fiery ether under Yang. This according to Wang's theory pretty well accounts for the formation of the universe. "Fire forms the sun, the moon, and the other luminaries of heaven, while from water and its sediments earth, the oceans, and the atmosphere are developed." These theories, it is well to remember, did not originate with either Greeks or Chinese ; they are part and parcel of the earliest human concepts ; Greeks, and Babylonians, and Jews held very similar views ; the visible heaven was an iron or brazen vault, a veritable firmament, and the work of creation consisted largely in "striking apart" the waters above the firmament from those below, and rescuing the universe thereby from chaos.

Where, however, Wang Ch'ung saw further than his contemporaries, and where he approaches nearest to the moderns, is in not only basing the entire of his philosophy on the physical phenomena of nature, but in demanding rigorous proof. True many of the supposed phenomena seem strange in our eyes, but then they were universally believed, and the general consensus before the age of experiment was not a thing to be lightly cast aside. As we have seen, Wang's questioning disposition was looked upon by his contemporaries as scepticism, and though in our days the world acknowledges that scientific truth can only be arrived at by a rigid cross examination of nature herself, the process has in many cases to be veiled, as if it were something to be ashamed of. Still Wang did enquire, but owing to the incompleteness of the instruments employed the answers were far from the truth. "Heaven turns from east to west around the pole star as a centre, carrying with it the Sun, the Moon, and the Stars. The sun and the moon have their own movements in opposite direction from west to east, but they are so much slower than that of heaven that it carries them along all the same." We have no right to complain of this, which

really represents the results of many centuries of close and continuous observation with the tools available at the day, but we can the better understand the difficulties in the way. Again:—Heaven makes in one day and one night a complete revolution of 365 degrees, one degree being calculated at 2,000 li; the distance made by heaven every 24 hours measures 730,000 li; the sun proceeds only one degree, or 2,000 li, the moon 13 degrees, or 26,000 li. Wang states that this is the opinion of the learned. Heaven's movement appears to be very slow owing to its distance from the earth, but really it is very rapid: the Chinese mathematicians have computed the distance at 60,000 li, but Hwai-Nan-Tsê, the Taoist philosopher, says it is only 50,000. The body of the earth is more solid than that of heaven, being produced from the Yin fluid, and whereas heaven is in constant motion, earth does not move at all: it measures 10,000 million square li (say 2,500 sq. km.) and is of the shape of a perfect square. Wang Ch'ung arrived at these figures in the following manner. The city of Loyang in Honan is by the Chinese regarded as the centre of the world, and Annam as the country over which the sun in his annual course reaches his southern point; Annam would be therefore the southern limit of the earth, and the distance between Loyang and Annam is 10,000 li. Now Chinese who have been to Annam say it is not the end of the world, which is a long way further south, say 10,000 li more. Again Loyang, though the centre of the known world, cannot be the centre of the earth, which must be under the pole star—the centre of heaven. Suppose the distance from Loyang to the centre of the earth immediately under the Pole star to be 30,000 li, this would make the distance from the centre to the southern limit to be 50,000 li, so that the earth would really be 100,000 li from north to south, and the same from east to west. Assuming Wang's premises correct the reasoning is faultless. That the premises are not correct was none of Wang's fault, but due to the total want of any method of verification.

But mistakes can be made from other sources, and here Dr. Forke has to share the blame, the error being verifiable. On page 18 Dr. Forke thus commences a paragraph:—At all times Heaven has been personified and deified. With the Chinese as with us Heaven has become a synonym for God, and Wang Ch'ung notices that human qualities have been attributed to him. We see in him the Father of mankind; the Chinese, an emperor, the Supreme Ruler, Shang Ti. Now this is the exact converse of what really happened. In China, as in other ancient mythologies, the personal heaven is the more ancient, giving way gradually to the more abstract heaven, the T'ien of modern China. In the oldest hymns of the Chinese preserved in the *Shi King*, it is the personal T'ien-tse, the old German Donar, the Vedic Indra, to whom sacrifices are made; and T'ien-tse is never *the* Shang Ti,

but only *one* of the shang tis, i.e. *dei superi*, not at all *Deus Supremus*. Dr. Forke is too good a Chinese scholar to have committed the error had he only pondered over the old language. The conclusion of the paragraph shows that this was really the idea uppermost in the minds of the old Skalds.

Still, with all these defects of want of knowledge, and, what is much more difficult to surmount, false information honestly given and received, it is startling to find on how many topics Wang Ch'ung has anticipated the current of modern thought. Adopting from the Taoists the principle of spontaneity, he thus evokes a theory of evolution:—He shows that heaven cannot display a conscious activity like man, because such activity is evoked by desires and impulses which require organs—eyes, mouth, ears, etc. The heavenly fluid is not a human body with eyes and ears, but a formless and insensible mass. The observation of the natural growth of plants and of the regularity of other natural phenomena precluding the idea of special designed acts, has confirmed our philosopher in his belief in spontaneity. "The principle of Heaven is inaction," he says, "accordingly, in spring it does not do the germinating, in summer the growing, in autumn the ripening, nor in winter the hiding of the seeds. When the Yang fluid comes forth spontaneously plants will germinate and grow of themselves, and when the Yin fluid rises they ripen and disappear of their own accord." The movement of the Yin fluid is spontaneous likewise; "Heaven and earth cannot act, nor do they possess any knowledge." They are not inert, but their activity is unintentional and purposeless; thus spontaneity is the law of nature.

Eighteen centuries later, with all the apparatus of modern science behind him, Darwin, in his theory of "Natural Selection", (a work which may be said to have completely revolutionised the world of thought and reason), carried this doctrine of spontaneity, dimly seen by the old Chinese philosopher in the first century, to its logical conclusion. On the 24th November 1859 was published the "Origin of Species," and from that day the entire current of human reasoning may be said to have assumed a new channel.

Wang Ch'ung's philosophical works are for the most part contained in the 論衡 *Lun Heng*, which we may translate as "Critical Disquisitions," a work in 84 essays, of unequal interest and value, of which Dr. Forke has translated 44. He has besides given a condensed epitome of the whole, so that the European student is now in possession of all that is valuable of the work. Dr. Forke has the inestimable advantage of not only being a thorough Chinese (and we may add English) scholar, but of being able to think and reason in both languages on his own initiative,—the very rarest

of faculties in one who has devoted himself to Chinese studies. If we gain no absolutely new knowledge from the study of the old Chinese philosophers we are, at least, introduced by Dr. Forke to a hitherto unsuspected development of early Asiatic thought.

T. W. K.

How to Identify old Chinese Porcelain. By Mrs. WILLOUGHBY HODGSON. Chicago: A. C. McClurg & Co.

While this publication lays no claim to being a finished history and description of Chinese porcelain, it is unquestionably one of the best books available for the student who is commencing the serious study of Chinese porcelain. The classification is well arranged and the illustrations of characteristic examples are well chosen. The book can be sincerely recommended as a safe introduction to this fascinating study.

The History of Babylonia and Assyria. By HUGO WINCKLER, Ph.D., Professor in the University of Berlin. Translated and edited by James Alexander Craig, Ph.D., Professor of Semitic Languages and Literature in the University of Michigan. London: Hodder & Stoughton. 1907. Price 6*s*.

This valuable work is nothing less than an attempt to construct the history of Egypt, Assyria, Babylonia, Media, Chaldea, etc. out of the materials recently discovered by antiquarians. It clearly shows that the knowledge of these ancient empires, which we have derived from Herodotus and Xenophon and from biblical authorities, must be thoroughly overhauled. Students of ancient history in China would learn much, if it were possible to follow the same method in their work.

"Peking to Paris: An Account of Prince Borghese's Journey Across Two Continents in a Motor Car." By LUIGI BARZINI. One hundred illustrations. New York: MITCHELL KENNERLY.

This is an account of Prince Borghese's journey from Peking through Mongolia and across Siberia and Russia to Paris. It is written in the style of a newspaper correspondent, but contains much interesting information concerning Kalgan, the Gobi Desert, the desert city of Udde and the plains of Mongolia. It lays no claim to scholarship, but is an interesting account of hurried travels.

The Trade and Administration of the Chinese Empire. By H. B. MORSE, A.B., Harvard; Member of the Royal Asiatic Society, England; Commissioner of Customs and Statistical Secretary, Inspectorate-General of Customs, China. Kelly and Walsh, London and Shanghai, 1908. Pages ix and 451, with maps, illustrations and diagrams.

This book has a singular and very superior practical value. No other work has appeared thus specialized to the non-foreign problems of the Chinese Government and to the methods and distribution of trade throughout the Empire. It will prove a most useful reference work in government, commercial and editorial offices. Its well selected, substantial and masterfully elucidated information will be foundation for sound official policy and for many a successful commercial enterprise. Certain chapters will interest even the casual reader, say those on opium and extraterritoriality, each a subject on which public opinion tends to form itself without knowledge of the facts; these subjects are set forth in definite outline under clear illumination, especially the opium question. The chapters on currency, revenue and trade will be especially prized by financiers and economists. The development and operation of the Imperial Maritime Customs Service, known to the world for its institutional success, is here shown by Mr. Morse as well in its personnel and its official associations as in its administrative machinery, and this acquaintance gives us a warmer admiration for the leading men of the service.

Mr. Morse himself entered the Customs Service in 1874, then newly graduated from Harvard College, and he has since continued in it, being now a Commissioner and the Statistical Secretary. His career has been essentially contemporaneous with, as it has been co-adjutant to, that of the distinguished Inspector-General, Sir Robert Hart. Mr. Morse's official position for a period of thirty-three years, thus gives his statements the highest authority.

By necessity, aside from the Customs statistics, the book is largely based on personal observation. Few sources of information are cited. The standpoint is that of China. However, for a perfected work of scholarship treating of foreign interests in China, it is indispensable to have time for research in the government archives of Europe and America; but as written in China and without drawing upon the European and American repositories of knowledge of the Orient, the general familiarity of the author with the contents of such repositories, his fine abilities as an administrative official of the Chinese Government, and his eminent scholarship, are apparent in every chapter. I would say that the most valuable feature of the book is that its material has been obtained by Mr. Morse at first hand.

There is perhaps too large a proportion of description of the treaty ports. The government of foreign communities in these ports, though described more nearly to date than in any other book and with better explanation of the general nature of the various "foreign settlements," "concessions," and the like, could well have been treated on the basis of the various enabling documents and on authoritative precedents. Every interest, both foreign and Chinese, requires a better definition of municipal and jurisdictional authority and privileges at Shanghai, Tientsin, Hankow, and other cities where foreigners reside in large numbers.

Mr. Morse's volume is overburdened with statistics. Their significance to the author will not appear to most of those who read or use the book. The surveys of a railway engineer with their bearings and distances to extreme degrees of accuracy of course give the railway management a better line, but to send your freight or to travel on the railway you do not need to know the engineer's triangulations. A good half of the statistics should have been omitted and the remainder more humanized.

The great detail of the chapter on Chinese Government is a long step away from statistics, and for foreign officials in actual dealing with Chinese officials and for merchants in whose behalf action is being taken, this detail will not prove too minute; but for such only.

The sketch of Chinese history, forty centuries in forty pages, with which the volume opens, was admirably done by Dr. F. L. Hawks Pott, President of St. John's University at Shanghai, well known for his scholarship in this subject. If even as little as this brief review of Chinese history could be generally understood in Western countries, not to say to many a Western official newly coming to China, foreign interests in China would be much better conserved.

Mr. Morse's description of extraterritoriality is not that of a lawyer, and it is not made from the sources, except where he refers to the texts of treaties. Even so available a source as the correspondence of Caleb Cushing, the American negotiator of the treaty of 1844, between the United States and China, was apparently not used. Mr. Cushing, afterwards Attorney-General of the United States, who, alone of all the other foreign representatives in China, gave extraterritoriality its original and specific legal basis, both in the treaty and in subsequent interpretations, is not mentioned by Mr. Morse. The very important jurisdictional conferences of the ministers at Peking in 1879, in which reports from all of the open ports of China and the views of all of the ministers were discussed, the American minister, George F. Seward, being in charge of this subdivision of the conference, is also not mentioned. On page 183 it is said that "the foreign resident in China is subject to no one provision of the law of China." Are not the customs and

port regulations, distinct from the treaty provisions, laws of the Chinese Empire pure and simple? and does not the Chinese Government levy fines and take forfeitures under laws relating to the Customs and to the ports? How can land in China be held by a foreigner without involving *lex loci*! There are many foreigners resident in China who have technically lost their claims to foreign protection; there are others whose governments have no treaties of extraterritoriality with China; both classes of foreigners are technically and in practice subject to Chinese law. The fact is that extraterritorial privileges in China are and must, in the nature of things, be on all sides closely hedged about by the sovereign authority and law of China. The selection of cases in the extraterritorial courts contained in the appendix neither shows a typical day's litigation in the courts at Shanghai, which may have been in part the author's intention, nor does it set forth important principles.

The best chapters are those on currency, foreign and internal trade and opium. The chapter on currency was read by Mr. Morse at the meeting of the North China Branch of the Royal Asiatic Society in the autumn of 1906.*

The chapter on trade is an epitome of the many excellent statistical reports which, from quarter to quarter, have contributed much to the excellent reputation of the Maritime Customs administration. Mr. Morse could easily have enriched these chapters with more description of the early and leading merchant firms that started the foreign trade in China and with incidents illustrative of present day conditions.

The present book must be looked upon by Mr. Morse's acquaintances something as a forerunner of the larger work on the foreign relations of China which, with his present official leave, we are hoping he may find time to put forward. With his personal knowledge of so many of the important affairs of China and with his scholarship and his talent for literary work, we regard him as excellently prepared to write of the foreign relations of the Empire.

F. E. HINCKLEY.

Heiligtümer des Konfuzianismus. The Holy Places of Confucianism in K'ü-fu. By the Rev. Père A. TSCHEPE, S.J. Yen-Chow Fu, Press of the Catholic Mission.

Before commencing our Review it is only right that we should refer to the beautiful typography, and the extremely artistic style of the recent works proceeding from the Catholic Mission Press at Yencheo, which would

* *See* Journal, Vol. XXXVIII.

be an ornament to any library. We must also refer to the half-tone illustrations, which would not discredit the daintiest press in the United States, where perhaps the art is carried to its highest perfection.

The work, although a good deal more than a mere guide book, does not pretend to rise to a critical disquisition on the Confucian philosophy, nor is to be taken as an authoritative historical essay on Confucius and his times. Although Confucius, or, as the name was in Chinese, K'ung Kiu, was born actually in Tseo, his mother moved when he was little more than an infant to K'üfu. K'üfu was the capital of the old state of Lu, which although small in area, yet on account of its mythical connection with Tan, one of the Chinese traditional Cheo-kung, and brother of Fah, the Wu-wang, and its early development of civilisation, is perhaps better known than any of the other states of the old Cheo hegemony. Père Tschepe enters at some length into the meaning and explanation of the name of the city K'üfu: as however the name goes back to a period long antecedent to the introduction of writing, it is hardly necessary to follow him here; for all we know about it we may accept the name as a sound, and nothing more. So likewise there is no occasion to enquire as to its supposed history prior to the Cheo-kung, remembering what Mencius tells us of their having chased away the elephants and rhinoceroses, which, up to that time, had had their home in these regions. It is by no means necessary that an author writing a history of St. Peter's or of St. John's of the Lateran, should enlighten his readers as to the story of Rhea Silvia and the Roman twins, and it would be as well for him who would write a history of the Tomb and temples of Confucius to begin his narrative at furthest with the fifth century B.C.

Certain late Chinese authors set themselves to work out a scheme of chronology from the extremely corrupt *Shu King*, which they assumed to be the "Classic of History." To this these scholars(?) tacked on as of equal value historically the Appendix to the *Shi Ki*, written by Ssema Cheng about the year A.D. 720. This precious *pot pourri* was réchauffé̊d by Ma Twanlin, and Ma Twanlin was translated (?) by de Mailla in the eighteenth century; and this is the "History" of China! As a record it is utterly valueless—worse than Hume's History of England; yet our modern writers on China are content to quote ad nauseum from this turbid stream. Père Tschepe is unfortunately no exception to the rule.

If, however, we are compelled to pass these strictures on what Père Tschepe, doubtless in perfect innocency, believes to be historical, we have little but praise to bestow on his topographical descriptions. In the second chapter is given a characteristic sketch of the gradual growth of the cult of the Sage from the year B.C. 195, when Kao Tsu, the first Emperor of the new Empire of Han returning from a successful campaign in the Hwai country.

visited K'üfu and offered up to the memory of Confucius a "T'ai-lao" sacrifice consisting of pigs, sheep and oxen, not as Père Tschepe would have it of one of each. In the year 59 the Emperor Ming Ti ordered that Confucius should be studied in all the State schools, and in the year 72 he visited the shrine and made a solemn sacrifice to Confucius and his disciples. From this time the honours paid to the memory of Confucius have continually increased, and to Confucius have been additionally introduced, not only his own immediate disciples, but his father, his wife, the other sage Mencius, his wife and disciples. The State Worship has, in fact, come not to be so much a personal cult of Confucius as an apotheosis of Chinese Government in the abstract. In the fifth century the honours paid to the Sage come to partake of a divine nature; a regular liturgy came into use, and music was officially devised for the quarterly sacrifices, which according to the precedent settled by the first Han Emperor continued to be of the three animals. The music was an extraordinary attempt to revive the old mimes, held in the courts of the ancient princes before the establishment of the first Empire, and were characteristically bungled, the extant ballads being misrepresented. It was not till the accession of the great T'ang dynasty, however, that the honours paid to the Sage's memory, which had been gradually partaking more and more of the character of divine worship, culminated, and the Confucian cult became practically the established religion of the land.

After, under the feeble rule of the later T'ang monarchs, the empire had fallen into a state of disorder, five *rois fainéants* divided the Chinese realm between them, and the conditions of the state rapidly returned to those prevailing after the fall of the later Hans. The whole country cried out for union, and on the accession of the Sungs, Confucianism, as the representative of law and order, naturally came to the front with an accession of strength and vigour. The times were eminently favourable for centralisation, and a powerful school of philosophy came into fashion, which, professing to be founded on the theories promulgated by Confucius and Mencius, brought into prominence the doctrine of an all-pervading Cosmos evolved from the twin principles of the Yang and Yin—the generative and receptive principles of nature. This movement was taken up by a young student, Chu Hi, who, born in the year 1130, the son of an official in Fukien, and brought up in all the doctrines of his class, early in the second half of the 12th century began to take a leading place amongst the official hierarchy.

His early studies had been directed to the arcana of Buddhism and Taoism; but finding no support here for his ethical theories of government, he went back to the crude and impulsive doctrines of the relations of prince

and subject foreshadowed by Confucius. The idea fell in with the times; the early Sungs were striving for some solvent which would convert into a unified magma the centrifugal ideas floating about, which, for upwards of seven hundred years, with the exception of the powerful interlude of the T'angs, had prevented the formation of a unified state; and Chu Hi offered them such an elixir. Although Confucius was the lay-figure on whose frame Chu Hi professed to hang his newly invented theories, there is little in common between them: the new Confucianism introduced by Chu Hi elevated to the place occupied in the minds of the vulgar by the Buddhist and Taoist deities the Official Hierarchy itself, and it was only as a vague emblem of the Hierarchy, as in fact the outer and visible sign, that the image of Confucius himself as a living entity came to be placed in the temples of the "Literati."

The Emperor had for his peculiar objects of worship the only objects, heaven and earth, that could claim to be his superiors. The commonalty had the deities of Buddhism and Taoism, who from their less exalted station could control their vulgar needs. For the Literati of the Empire,—the real governing power, apart from Emperor and commonalty alike, was reserved under the lay figure of Confucius, and the other apotheosised sages, the real and substantial presence of the Hierarchy itself.

The third chapter is devoted to a careful and elaborate description of the various temples and altars, and the inscriptions erected in honour of Confucius himself, as well as of his wife. The fourth describes at length his grave, the tablets, the way of honour, and the various pavilions, and honorary arches. Not the least interesting of these relics of the Sage is the House of Mourning, where for three years the disciples lamented the deceased Master; his devoted follower, Tse Kung, doubling the period of watching by the tomb.

Only second in interest to the Master himself, and exceeding him in the romance of his short life, was his beloved disciple Yen Hwei. Devoted by his father to the service of the Sage, from boyhood he became the most loyal and earnest of those who surrounded him. If the others were ready to learn, it was Yen Hwei's particular task to follow out in his inner life the precepts of the Master. His devotion was thoroughly unselfish, so unselfish that though Confucius himself urged him to accept a post where he could rise to eminence, his unselfish nature made him prefer to remain as the humble attaché of his beloved master. Confucius always intended him as his successor, who would repeat to a succeeding generation the lessons he had so diligently learnt; but this was not to be. Age came early upon him, at twenty-nine his hair turned grey, and three years after he died, to the inexpressible grief of the Sage. Subsequent ages have given him the

honorary title of Fuh Sheng, the "Seconder of the Sage." His temple lies some six hundred paces to the north-east of that of the Sage himself, and is in Chinese eyes only a little less magnificent.

The third part of Père Tschepe's work is taken up with a description of the temples and hallowed spots dedicated to the memory of the "Second Sage," Mencius. By the Chinese Mencius is always classed with, but a long way behind, Confucius; yet we can hardly conceive two men more entirely unlike, or with so little in common. As a fact Mencius never was understood by the modern Chinese, and even his language as handed down is practically incomprehensible. It has never been translated either into modern Chinese, nor, for the matter of that, into any other language, for what passes current as such is little more than a travesty. There was more than one reason for this, and perhaps the chief is that he lived just on the verge of the introduction of writing as a representation of language instead of a mere indication of events. There is abundance of evidence from actual remains, figured in the Kin-shih So and kindred archæological works, as well as from still surviving bronzes, some of which are in my own possession, that at this period the only writing current in China was strictly hieroglyphic, or rather idolic, and was in no sense phonetic. Writing is not once mentioned in the discourses of Confucius nor Mencius, and the whole of their teaching was oral. It was only as the T'sins came on the scene that any conception of representing language arose, and this could have been only very rudimentary till Li-Sse introduced the Siao-chw'en, which for the first time enabled speech to be recorded. It was not for several generations after the death of Confucius, probably not till the time of Wu Ti, that any attempt to write down the words of Confucius was attempted. As they are presented to us to-day the language is distinctly modern. Mencius's discourses must have been sooner committed to writing, and the language is far more archaic, so archaic that its rendering has always formed a stumbling-block, and to the present day we have to depend on the traditional rendering passed through two thousand years of ignorant scholars.

Confucius was above all an antiquarian and a moralist; and his attempts at practical government all ended in ridiculous fiascos. Owing to him the memory of the old Balladry of China has been preserved, though in an extremely tattered condition, owing to the fact that he had no means of representing the sounds, and they had to be entrusted to the memories of his disciples down to the accession of the Hans. He likewise passed on the ancient hieroglyphic chronicles of his native state, but to render these intelligible, he had to impress them also on their memories by oral

lectures; and these subsequently committed to writing, when such became possible, form the collection known as the Tso-Chwan, literally the "Assisting Narrative."

On the other hand Mencius was a clear-headed man of business, and a clever and capable administrator. He thought little of ethics in the abstract, and confined himself to the practical side of administration. In economics he was far in advance of his age, and many of his economical discourses, especially those connected with free-trade and the movement of commodities, will bear comparison with the axioms of Adam Smith.

As the Chinese never understood him, so it was not till far later than Confucius that he came to be honoured as a sage. It is probable that if his countrymen had at any period come to comprehend his teachings, the obscurity into which they fell would have continued to all time. To the Chinese he has ever continued to be a "*vox et preterea nihil.*"

THOS. W. KINGSMILL.

The Awakening of China. By W. A. P. MARTIN, D.D., LL.D. New York: Doubleday, Page & Co. 1907.

It may be said that there are two main methods of estimating the value of books such as that which Dr. Martin has lately written. The first is to count the amount of research necessary to write such a book as redounding to the credit of the writer. The second is to appraise the worth of the book by the amount of personal experience which the writer has been able, or thought fit, to put into it. In the case of Dr. Martin's *The Awakening of China*, now under review, it is to be much regretted that the latter method cannot be made use of, owing to the fact that out of 32 chapters only 6 contain Dr. Martin's own views and experiences. The remaining 26 chapters are merely a brief summary of the history of China, which any cultivated student of Chinese history could collect from half a dozen standard works.

From the composition of this book it is difficult to avoid the conclusion that it was written for an uneducated public who knew little of China, its past history or its present condition; yet, considering the almost unique experience of the author, it may be permitted us to regret that his personal experience and opinions were not given to the public in the first 26 chapters, and the last 6 kept for the historical portion of his work.

Having made our protest let us now endeavour to acquaint ourselves with Dr. Martin's opinions and conclusions upon some of the chief points of interest in later day Chinese affairs.

In the opening words of the preface to this work are to be found a fair and true statement of the present situation in the far East, and these words may be said to give the keynote to the conclusions at which Dr. Martin has arrived. He says :—"China is the theatre of the greatest movement now taking place on the face of the globe. In comparison with it, the agitation in Russia shrinks to insignificance; for it is not political, but social. Its object is not a changed dynasty, nor a revolution in the form of government; but, with higher aim and deeper motive, it promises nothing short of the complete renovation of the oldest, most populous, and most conservative of empires. Is there a people in either hemisphere that can afford to look on with indifference? When, some thirty years ago, Japan adopted the outward forms of Western civilisation her action was regarded by many as a stage trick—a sort of travesty employed for a temporary purpose. But what do they think now, when they see cabinets and chambers of commerce compelled to reckon with the British of the North Pacific? The awakening of Japan's huge neighbour promises to yield results equally startling, and on a vastly extended scale."

With this opening statement few people who have a right to express an opinion will disagree, and in later chapters the conclusions drawn by the gifted author are equally cogent. So much has been written of late with regard to the reorganization of China, which the world waits to see follow "the Awakening," that Dr. Martin's views must carry great weight. Speaking of the numerous military changes in chapter 29, he says "the Chinese are right in making military reorganization the starting point of a new policy," and no doubt this is a correct statement within limits, but I venture to think there is a still more imperative need which no nation can afford to ignore, and is that not financial reorganization? In a book lately published which has been justly described as "the most weighty political document of our day," Lord Cromer's *Modern Egypt*, the gifted author has laid down as the foundation stone of national greatness a sound financial system. In this connection his remarks are so entirely applicable to China that no apology is needed for quoting them in extenso: Lord Cromer writes :—"In all very complex situations there is generally one problem which is the key of the whole. The ordinary man fusses about among a multitude, tinkers a little here and a little there, finds nothing come of it, and gives the business up in disgust. The wise man seizes upon the one thing needful, and discovers when he has achieved this that all things are added unto him. The key of Egypt was finance. She wanted large irrigation schemes, a new army, a better system of education, some relief from taxation, and most of the machinery of civilised government; but one thing she needed more than all—financial solvency." Substitute China for Egypt in the above quoted paragraphs, and

could advice more suited to the present position of the former nation be offered to those in whose hands its future destiny lies?

Of personal intercourse with Chinese of all ranks few Europeans have perhaps greater experience than has Dr. Martin. From a Viceroy like Chang Chi Tung down to humble converts to the Christian faith, Dr. Martin has had the opportunity of sounding all the various phases and depths of the Chinese mind, and few Europeans should be better able to tell us how inexplicable its workings are. In this connection the following story of how a Chinese Viceroy acted only a year or two ago, during an illness, may be of interest. From what Dr. Martin has said of Viceroy Chang Chi Tung we may presume that he has a high opinion of that ruler's natural ability, and also of his strength of character, and clear common sense. Yet what could be more pitiful—amusing is no word to use in such a case—than the position of this enlightened Viceroy when face to face with personal ill health. Writes Dr. Martin in chapter 30 :—"The first doctor he consulted was a Chinese of the old school. Besides administering pills composed of—

'Eye of newt, and toe of frog,
Wool of bat, and tongue of dog,'

the doctor suggested that one thing was still required to put the patient in harmony with the course of nature. Pointing to a fine chain of hills that stretches in a waving line across the wide city, he said : 'The root of your trouble lies there. That carriage road that you have opened has wounded the spinal column of the serpent. Restore the hill to its former condition and you will soon get well.' The Viceroy filled the gap incontinently, but found himself no better. He then sent for English and American doctors, dismissing them in turn to make way for a Japanese, who had him in charge when I left Wuchang last summer."

Upon another question which is of supreme interest to Westerners, Dr. Martin has something both new and instructive to say. Talking of the anti-foreign agitation, which to some observers appears to be increasing rapidly in the shape of intolerance of foreign help and advice, the author of *The Awakening of China* writes thus :—"So far from being new, an anti-foreign spirit is the normal state of the Chinese mind. Yet during the year past it has taken on new forms, directed itself against new objects, and employed new methods. It deserves therefore a conspicuous place among the new developments in the China of the twentieth century. Where everything is changing, the temper of the people has undergone a change. They have become restless as the sea, and fickle as a weather-vane. The friends of yesterday are the enemies of to-day ; and a slight or petty annoyance is enough to make them transfer man or country from one to the

other category. Murderous outbreaks, rare in the past, have now become alarmingly frequent, so much so that the last year might be described as a year of anti-foreign riots. The past nine months have witnessed four such outbreaks. In four widely separate provinces, venting their fury pretty impartially on people of four nationalities and of all professions, they were actuated by a common hate and indicated a common purpose. That purpose—if they had a purpose—was to compel a re-adjustment of treaty relations."

Dr. Martin then proceeds to discuss the American boycott in its various phases, and, although more a personal matter for American nationals than for the world in general, no country can afford to disregard the hint thus gently given by the Chinese. At the present moment Japan is said to be suffering somewhat severely from a boycott engineered in the first instance by the Cantonese in the South, and whether such a method of retaliation is a fair return for an unfriendly act upon the part of Japan is not now the question. The fact remains that a new and very powerful weapon lies in the hands of the Chinese to compel if not equality of treatment with Western nations, at any rate a fair hearing for those who cannot as yet back their just demands by force. From the subject of boycotts the author passes to other questions of hardly less interest. Among these are the suppression of opium, Missionaries in China, journalism, change of costume, polygamy and domestic slavery. Upon all these varied subjects much interesting discussion might be based, but there are few who would not rather listen than discuss while Dr. Martin holds forth.

For any student of present day affairs in China there are few questions of more absorbing interest than that which we discuss when we ask whether China can reform herself, or whether, on the other hand, she will have to call in the help of foreigners to enable her to break away from the past. Dr. Martin's opinion, as the writer understands it, is in favour of the latter course. No one realises more fully than Dr. Martin the hopeless behaviour of the Manchu clique in 1900 which almost brought China to disaster. Nor is he afraid to be accused of inconsistency in advocating that Foreign nations should forget the past and make every allowance for the ignorance and incapacity of her then rulers. In the last few years Dr. Martin sees undoubted signs of real progress in China; let us hope that his wide experience may prove that his judgment is correct. *The Awakening of China* is a book to be read, for no one who has spent 40 years in that country can fail to have a deep insight into the character of this inscrutable nation.

C. D. Bruce.

The Ancient History of China. By FRIEDRICH HIRTH, Ph.D. New York: The Columbia University Press. 1908.

On opening Dr. Hirth's recently published book one is filled with eager expectations of finding a critical examination of the early history of China, but unfortunately such hopes are doomed to disappointment. One who is familiar with the works of Montanus, Martinius, Semedo, Klaproth, Du Halde, Gutzlaf, Williams, Macgowan, Chavannes and Douglas, is filled with dismay that Dr. Hirth should have left his work just where he found it from his predecessors. The fabulous cosmogony of the Chinese is followed by an account of the mythological and legendary period, which Dr. Hirth naively and innocently dates from B.C. 2852. He is at pains to explain twice in his volume that he is following the chronology of Professor Arendt, but he might as well have stated that he was following Semedo, Schaal, or Martinius. When one is wandering in mythical mists, the question of a few years earlier or later would not serve to distinguish Dr. Hirth's chronology from that in vogue by the first foreign writers on Chinese history. Ussher's biblical chronology, which fixed the dates of events of the Old Testament with such fantastical certainty, has had its parallel in the assigning of accuracy to early Chinese events. It was evidently in vain for Professor Arendt and his follower, Dr. Hirth, that the Ussherian chronology was utterly demolished more than a generation ago. The accurate date of Fu-hi's reign is given as 2852-2738 B.C., although in the text describing this first emperor it is stated that he is represented as "partly a supernatural being and partly an emperor of human form. The lower part of his body is represented by a serpent tail intertwined with the serpent tail of a female figure," but notwithstanding this description a definite date is assigned for this marvellous existence. The adoption of such a chronology is rightly condoned in the earlier authors of whom we have spoken, and even the work of Macgowan can be tolerated, because it is only an abbreviated translation of the Chinese work, *I-chi-luh*; but Dr. Hirth's work is more ambitious, and claims to be the result of "research in subjects of Chinese history and culture," and as such it must be judged by the standards of modern historical study. By these standards the adoption of this fanciful chronology, as the result of serious consideration of authorities, places Dr. Hirth's work outside of the pale of enlightened scholarship. Twenty pages of the Appendix are devoted to chronological tables, in which the dates are again repeated, as if the important thing in historical study was the fixing of dates, rather than in giving a connected account of the rise and development of a nation.

The chapter on "The Age of Lau-tzï and Confucius" adds nothing to our knowledge of the events of that time, nor to our appreciation of the philosophy of these two men. What is given is largely taken from the

Prolegomena of Legge's Chinese Classics, and the additions to our knowledge of that period which have appeared in various learned publications since Legge's time have been entirely overlooked.

The adoption of a new method of spelling Chinese words cannot be commended. It is said to be based upon the spirit of the phonetic principles adopted by the Royal Geographical Society of London and the United States Board on Geographic Names. We have tried to discover in what respect this new spelling of Dr. Hirth's corresponds to the spirit mentioned, but have been unable to do so. It would have been much wiser if Dr. Hirth had contented himself with adopting the principles which are followed by the Chinese Statistical Department and the Siccawei publications. Such spelling as *Ch'ŏng-wang* and *Chóu-li* will never commend itself to a reading public which has demanded that all diacritical marks shall be dispensed with.

The Index at the back of the book is very complete, and has been done with great care and due regard to modern methods. The book is also well printed ; but apart from these two good points we fail to find anything in this publication to commend. This is what can be expected of an author who writes one year on Chinese Pictorial Art and the next on Chinese History. Knowledge of the Chinese language does not necessarily beget correct esthetic taste nor historical instinct. The profound scholarship of Dr. Hirth in the language and literature of China and in philology is well known and highly appreciated. It is a pity that his studies are not conducted on lines in which he is an acknowledged expert.

A Sketch of Chinese History. By F. L. Hawks-Pott, D.D. 2nd Edition. Shanghai: Kelly & Walsh, Ltd. 1908.

The work of Dr. Pott is meant as a school text book and as such is to be heartily commended. The origin of the Chinese race, as given in the Introduction, is hardly that which is now generally adopted by western scholars. The value of the early myths of China is correctly estimated by Dr. Pott, and he has not fallen into the quagmire of belief in myths and legends as historical facts. The sketch of early Chinese history is very rapid, but it gives a succinct account of the growth of China from a small state to a large empire. Two divisions of the book are taken up by an account of the second struggle with the Tartars and the struggle between the Chinese and western European nations. It is not a complete account of recent relations between foreign nations and China, but will serve as a useful compendium to Chinese students who are studying the English language, as well as to recent arrivals in China from Europe or America.

J. C. F.

Hors d'œuvre. By A. MICHIE.

This volume of mingled verse and prose is another proof of the immense amount of ability lying loose around on the China coast, where there are men who in addition to command of their own particular business or profession seem to have command of half a dozen others as well. Of such is Mr. Michie. This volume, which he ushers into the world with a modest preface, is altogether charming and well worth reading and possessing.

In his verses there are occasional lame lines—what poet has not lame lines? Shakespeare has scores: but Mr. Michie is quite a master of the difficult art of writing Society verses. These must be crisp and allusive: they must hit off the foibles of the day with a deft touch, and give expression in poetic form to the average man's view of life and its events. Mr. Ashby-Sterry does this and Mr. Michie does it too with equal grace and sureness of touch. Who that has lived in the East can fail to say "Amen" to these lines from "Nantai *v.* Fleet Street":—

> The balmy breeze of Orient, rich-stored with tropic spice,
> As sung by Fleet Street poets, must be very very nice:
> But we who shortly after dawn on empty stomachs roam,
> Inhale that fragrant tropic breeze and wish we'd stopt at home.

The longer poem, "Owed to Autumn," embodies an ingenious idea which all residents in the East, except the few like the reviewer who detest winter, will endorse:—

> In place of sempiternal chicken
> The pheasant comes in toothsome bands,
> Which gastronomically quicken
> And rouse our salivary glands—
> Quail, duck, et cetera—the glutton
> Fills up with them and Shanghai mutton.

Mr. Michie's muse can also strike a deep and tender note, as the concluding verses "God be wi' ye!" prove.

Turning to the author's prose, we can give it sincere praise. No art is more difficult than that of writing short stories. Mr. Michie's are very good. "A Chinese Fluke," telling how the jovial Wang Fu became Senior Wrangler, is excellent: "What's in a Name" might send out novelists to Mongolia for material.

Mr. Michie has also another well developed faculty—that of description. His account of "A Chinese Dinner-Party" is just one that we should all have liked to have written in a descriptive letter to friends at home, if we had only possessed the brains.

The only mistake in any of the author's allusions that we have been able to find is making Ashtareth an Egyptian goddess: she was Canaanite and Phœnician.

C. E. D.

In the Footsteps of Marco Polo. By Lieut.-Col. BRUCE. W. Blackwood & Sons.

It is difficult to measure fairly the value of a book of travel, because such books are now written by all sorts of people, for all sorts of readers, and with very different objects. Compare Horace's account in Satires I, 5, of his journey from Rome to Brindisi with Gill's "River of Golden Sand"—to select an average modern book of travel:—the first deals entirely with men and women, is full of humour, and tells just so much about the country traversed as is interesting and heightens the picture, while the latter is no more than a conscientious and dreary list of mountains, bridges, inns, herbs, etc., described as if for the catalogue of an auctioneer who had been ordered to put the country up for sale. Broadly all books of travel fall into two classes: but of the first there are very very few and of the other very very many. The first are written by men of cultivated intellect and imagination, to whom the great human comedy is a never ending source of interest and amusement, and who regard strange places as worth describing principally because they provide a new set of conditions, subject to which men and women have to arrange their lives: such authors might write poetry or romance if they stayed at home, foreign travel does no more than provide them with a strange picturesque material—compare "Letters from High Latitudes," "Iöthen and Lady Mary Wortley Montague's Letters. The second class is written by ordinary men, better or worse, descending from books like Knight's "Where Three Empires Meet" to the dreary Catalogue described above.

Between such writers of genius and the drudge who tells you how many miles he went and what he ate, there is of course a gradual descent, and upon that gradation I would give this book a good place—somewhere in the upper half. I doubt whether soldiers as a class describe their travels well: they give too much value to roads, transport, fodder, water, bridges, and all the apparatus that is necessary in order that Cæsar may convey 100,000 men into Gaul and there use them as a hammer to effect a purpose. For the bird's-eye view of the historian there is nothing more enthralling than battles and war, regarded as the means of establishing a higher moral standard. "No state can count on "being always at peace. Nations, like individuals, sin themselves and towards "one another. War is a means of expiation for past offences and of reform "and improvement," says Heffter. The soldier, like a hammer, is useful—nay, when a nail has to be driven home, indispensable—but not interesting unless he has other claims than those of a soldier. Therefore, a man who is merely a soldier is not likely to write a good book of travel. On the

other hand the soldier's training gives him an eye for country and a power of organization that fit him to reach difficult: places and parts of this journey were more than difficult. They started from Leh and reached Peking by way of the Altyn Tagh, North of the Kuen-lun Range—one of the most inhospitable regions in the world [*see* Illustrations facing p. 68]. And Col. Bruce supplements the qualities of the soldier by those of the keen sportsman; and here it is that this book reaches its highest level—the description of the game of polo in the village street on the occasion of a wedding [on p. 23] and a day's pig-sticking [on p. 109] are really excellent.

Further, the author has been at great pains to throw all the light he can from Chinese history on the places he visited: these excursions are sometimes a bit dull, but how can that be helped? What one misses most in this book is such a description of the people and their way of life as would enable the reader to compare the inhabitants of these mountain and desert regions with the Chinese of the seaboard amongst whom our lot is cast, and of whose virtues and failings we have a clear conception. Are the people who live in the oases on the desert on the Northern slope of the Kuen-lun very different?

I strongly recommend this book to the notice of the members of our Society.

F. S. A. Bourne.

RECENT BOOKS ON CHINA AND THE FAR EAST.

[*Any of the books contained in this List or mentioned in the "Literary Notes" may be obtained of the Publishers of this Journal, Messrs. Kelly & Walsh, Limited, Shanghai.*]

D. R. C.—*Lui Sing and Other Stories.*

S. F. MAYERS.—*List of the Higher Metropolitan and Provincial Authorities of China*; corrected to August 21st, 1907.

ARTHUR H. SMITH.—*China and America To-day.* A Study of Conditions and Relations.

CHARLOTTE LORIMER.—*The Call of the East.*

Customs.—*Native Customs Trade Returns No.* 3. Quinquennial Reports and Returns, 1902–06.

C. D. WILKINSON.—*A History of, and Treatise on, the Law in Hongkong Relating to Trade Marks.*

CHANG NIEH-YÜN.—*Translation of the Chinese Bankruptcy Code of* 1905, with an Editorial by J. H. Teesdale.

C. CAMPBELL BROWN.—*China in Legend and Story.* 14 illustrations from photographs.

PAUL LECHESNE.—*Indo-Chine Réflexions* 1905, *Actualités* 1906, *Possibilités* 1907.

Revised Mining Regulations and Supplementary Mining Regulations of China. Specially translated, 1907.

The Sayings of Confucius, edited with an Introduction by Lionel Giles, B.A. (Wisdom of East Series).

CLIVE HOLLAND.—*Old and New Japan.* With 50 coloured pictures by MONTAGU SMITH.

Calendrier-annuaire pour 1908. Observatoire de Zi-Ka-Wei, Chang-haï.

P. H. KENT.—*Railway Enterprise in China*; an account of its origin and development, with Maps.

F. F. VON RICHTHOFEN.—*Tagebücher aus China.* 2 vols.

Customs.—Memorandum on Wild Silkworm Culture in South Eastern Manchuria.

Customs.—List of Lighthouses, Light-vessels, Buoys and Beacons on the Coast and Rivers of China; corrected to December 1st, 1907.

B. L. PUTNAM WEALE.—*The Coming Struggle in Eastern Asia.*

2011

NEIL GORDON MUNRO.—*Prehistoric Japan.*

WILLIAM LOFTUS HARE.—*Buddhist Religion.*

J. J. M. DE GROOT.—*The Religious System of China; its Ancient Forms, Evolution, History and Present Aspect, Manners, Customs and Social Institutions.*

Connected therewith Vol. V, Book II.—*On the Soul and Ancestral Worship.*

Customs.—Miscellaneous Series, No. 30. Treaties, Conventions, etc. between China and Foreign States. Vol. I—Russia, International Protocol, Great Britain, United States of America, France, Import Tariff Agreement.

Letters from the Raven. Being the Correspondence of Lafcadio Hearn with Henry Watkins.

VERONICA.—*The Islanders of Hongkong.*

A. MICHIE.—*Hors d'œuvre.*

HELEN H. ROBBINS.—*Our First Ambassador to China.* Being the Life and Correspondence of George, Earl of Macartney, and his experiences in China as told by himself.

COUNT DE LESDAIN.—*From Pekin to Sikkim, through the Ordos, the Gobi Desert and Tibet.*

F. A. MACKENZIE.—*The Tragedy of Korea.*

JULES GORY.—*Notes on the Chinese Government Bank.*

LIST OF MEMBERS

(Corrected to June 30th, 1908)

Members are particularly requested to notify the Hon. Secretary of any change of address or other necessary correction to be made in this List.

Name.	Address.	Year of Election.

Honorary Protector.

His Majesty LEOPOLD II, King of the Belgians.

Honorary Members.

Bushell, Dr. S. W., C.M.G. ...	Ravensholt, Harrow-on-the-Hill England	1868
Chavannes, Prof. Edouard ...	1, Rue des Ecoles, Fontenay aux Roses, Seine, France	1889
Cordier, Prof. Henri	54, Rue Nicolo, Paris	1886
Eitel, E. J., PH.D.	Kent Tower, Adelaide, South Australia	1887
Gaikward, Prince Sampatrao ...	Baroda, India	1898
Giles, Prof. Herbert Allen ...	Selwyn Gardens, Cambridge, England	1880
Hart, Sir, Robert, G.C.M.G., LL.D...	Peking	1858
Hirth, Prof. F.	Columbia University, New York	1877
Kingsmill, T. W.	2A, Yuhang Road, Shanghai ...	1864
Lanman, Prof. Charles, R. ...	Harvard University, Cambridge, Mass.	1908
Lockhart, Hon. J. H. Stewart, C.M.G.	Weihaiwei	1885
Marques-Pereira, J. F.	73, Rue Garrett, Lisbon, Portugal	1900
Martin, Rev. W. A. P., LL.D. ...	Peking	1864

2906

Name.	Address.	Year of Election.
Moule, Rt. Rev. G. E., D.D. ...	Hangchow	1864
Parker, Prof. E. H., M.A. ...	18, Gambier Terrace, Liverpool ...	1877
Putnam, Herbert, LL.D. ...	Library of Congress, Washington, D.C.	1908
Rockhill, Hon. W.W.	American Legation, Peking ...	1885
Satow, Sir Ernest, G.C.M.G. ...	Salcombe House, Sidmouth, England	1906

Corresponding Members.

De Groot, Dr. J. J. M.	Leyden, Holland	1887
Forke, Dr. A.	Windscheid Strasse 25, Charlottenburg, Germany	1894
Fryer, Prof. John, LL.D. ...	Univ. of California, Berkeley, Cal.	1868
Gardner, C. T., C.M.G.	*c/o* Foreign Office, London ...	1900
Jamieson, George, C.M.G. ...	110, Cannon St., London	1868
John, Rev. Griffith, D.D. ...	Hankow	1864
Keische, Ito, M.D.	Tokyo, Japan	1875
Lindau, Rudolph, PH.D. ...	Auswartiges, Amt, Berlin	1864
Little, Archibald J.	Falmouth, England	1868
Little, Mrs. Archibald J. ...	Falmouth, England	1906
Lockhart, William, F.R.C.S. ...	67, Granville Park, Blackheath, London	1864
Playfair, G. M. H.	British Consulate, Ningpo ...	1885
Richard, Rev. Timothy, D.D. ...	Christian Literature Society, S'hai	1894
Rondot, Natalis	20, Rue Saint-Joseph, Lyons, France	1864
Széchényi, Count Béla	Zinkendorf, Hungary	1880
Volpicelli, Z. H.	Italian Consulate, Hongkong ...	1886
Williams, E. T., M.A.	American Legation, Peking ...	1889
Williams, Prof. F. W.	135, Whitney Avenue, New Haven, Conn., U.S.A.	1895

Life Members.

Beauvais, J.	French Consulate, Hoihow, Hainan	1900
Bessell, F. L.	Imperial Customs, Ichang ...	1905
Box, Rev. Ernest	London Mission, Shanghai ...	1897
Bright, Wm., ...	Stat. Dept., Customs, Shanghai ...	1885
Brown, Sir J. McLeavy... ...	Chinese Legation, 59, Portland Place, London, W.	1865
D'Anty, Pierre Bons	Consulat de France, Chungking ...	1889
Drew, E. B.	Cambridge, Mass.	1882
Ferguson, John C., PH.D. ...	16, Love Lane, Shanghai	1896
Hall, J. C., M.A.	British Consulate, Kobe	1888
Hippisley, A. E.	Hongkong & S'hai Bank, London	1876
Kranz, Rev. Paul	34, Weihaiwei Road, Shanghai ...	1897
Krebs, E.	German Legation, Peking ...	1895
Laufer, Berthold, PH.D. ...	Columbia University, New York...	1901

208

Name.	Address.	Year of Election.
Leavenworth, Chas. S., M.A. ...	*c/o* Brown, Shipley & Co., 123, Pall Mall, London	1901
Lyall, Leonard	Hongkong & S'hai Bank, London	1892
Morse, C. J.	1825, Asbury Avenue, Evanston, Illinois, U.S.A.	1901
Nielsen, Albert	Amoy	1894
O'Brien-Butler, P. E.	British Consulate, Chefoo ...	1886
Ohlmer, E.	Goslaustrasse, Hildesheim, Germ.	1885
Olcott, Col. H. S.	Adyar, Madras, India	1902
Plancey, C. Colin de	15, Avenue de Villars, Paris, France	1877
Rocher, Louis	Imperial Customs, Nanking ...	1884
Stanley, Dr. A.	Municipal Offices, Shanghai ...	1905
Taylor, C. H. Brewitt	Peking	1885
Tochterman, Karl	Grosse Barlinge 14 Hanover, Germ.	1902
Trollope, Rev. M. N., B.A. ...	Chemulpo, Korea	1900
Vouillemont, E. G.	Luzy Haute-Marne, France ...	1888
Waeber, C.	9, Todleben Boulevard, Riga, Russia	1894

Ordinary Members.

Aalst, Jules A. van	Imperial Customs, Canton ...	1888
Acheson, Guy	I.M. Customs, Soochow	1908
Akehurst, A.	Chaufoong Road, Shanghai ...	1906
Alexéieff, Prof. Vassili	Peking	1907
Allen, H. J.	10, The Norton, Zenley, Wales ...	1872
Anderson, F.	Ilbert & Co., Shanghai	1905
Anderson, G. C.	Jardine, Matheson & Co., Hongkong	1880
Andés, Konrad J.	Imperial Customs, Peking ...	1903
Arnold, Julian A.	American Consulate, Swatow ...	1904
Ayscough, Mrs.	6, Peking Road, Shanghai ...	1906
Ball, J. Dyer	Supreme Court, Hongkong ...	1883
Barchet, S. P., M.D.	American Consulate, Shanghai ...	1899
Barton, S.	British Consulate, Shanghai ...	1906
Beebe, R. C., M.D.	Nanking	1889
Bell, H. T. Montague	*N.-C. Daily News*, Shanghai ...	1907
Bergen, Rev. P. D., D.D. ...	Weihsien, Shantung	1903
Betz, H.	German Consulate, Tsinanfu ...	1900
Bevan, Rev. H. W. L.	London Mission, Shanghai ...	1906
Bitton, Rev. W. N.	London Mission, Shanghai ...	1902
Boerschmann, Ernst	Peking	1908
Bondfield, Rev. G. H.	B. & F. Bible Society, Shanghai ...	1900
Bosustow, J. C.	Municipal Council, Shanghai ...	1905
Bouinais, A. P.	Imperial Customs, Shanghai ...	1900

Name.	Address.	Year of Electi
Bourne, F. S. A.	H.B.M.'s Supreme Court, Shanghai	1885
Bowra, C. A. V.	Imperial Customs, Seoul, Korea ...	1897
Boyé, Dr.	Auswartiges, Amt, Berlin ...	1902
Brandt, C.	Imperial Customs, Shanghai ...	1896
Brazier, Henry W.	Imperial Customs, Shanghai ...	1905
Brazier, James R.	Tientsin	1906
Bredon, Sir Robt. E., M.A., K.C.M.G.	Peking	1885
Brenan, Byron, C.M.G.	*c/o* Foreign Office, London ...	1884
Brett, H. J.	H.B.M.'s Consulate, Shanghai ...	1906
Bristow, H. H.	British Consulate-Genl., Shanghai	1897
Broad, Wallace	Shanghai	1903
Brockman, F. S.	Y.M.C.A., Shanghai	1902
Browett, Harold	22, Yuenmingyuen Road, S'hai ...	1891
Brown, Thomas	Norfolk House, Cheam Road, Sutton, Surrey, England	1885
Bruce, Lieut.-Col. C. D. ...	Municipal Police, Shanghai ...	1900
Busse, F. W. K.	German Consulate, Chengtu ...	1904
Butler, G. Hamilton	American Consulate-Genl., S'hai...	1908
Campbell, C. W., C.M.G. ...	British Legation, Peking	1890
Cannan, A. M.	*c/o* Messrs. Reiss & Co., Shanghai	1908
Carl, Francis A.	Custom House, Nanking	1906
Carruthers, A. G. H.	I.M. Customs, Shanghai	1908
Chalfant, Rev. F. H.	Weihsien, Shantung	1904
Cheshire, F. D.	American Consulate-Genl., S'hai...	1906
Clairborne, Miss Elizabeth ...	4, Thibet Road, Shanghai ...	1908
Clark, J. D.	*Shanghai Mercury*, Shanghai ...	1895
Clementi, C.	*c/o* Colonial Secretary, Hongkong	1905
Clennell, W. J.	British Consulate, Kiukiang ...	1900
Cloud, Fred D.	American Consulate-Genl., S'hai...	1908
Coales, O. R.	British Consulate, Newchwang ...	1906
Cornaby, Rev. W. A.	Christian Literature Society, S'hai	1903
Cory, A. E.	Wuhu	1908
Couling, Rev. S.	Weihsien	1894
Cousland, Phillip B., M.B., C.M.	2, Shantung Road, Shanghai ...	1908
Cox, Dr. S. M.	39, Soochow Road, Shanghai ...	1908
Cunningham, A.	*S. C. Morning Post*, Hongkong ...	1895
Darroch, John	210, Kiangse Road, Shanghai ...	1906
Darwent, Rev. C. E., M.A. ...	Union Church, Shanghai	1899
Davidson, J. W.	503, Phœnix Bldgs., Minn., U.S.A.	1904
Dawson, Gröne H.	Commissioner of Customs, Moukden	1908
Denby, Charles	U.S. Consul-General, Shanghai ...	1908
Dennys, H. L.	Hongkong	1877
Donovan, J. P.	Ch. Imp. Post Office, Hankow ...	1891
Douglas, J. C. E.	Shanghai	1905

Name.	Address.	Year of Election.
Dowie, R. G.	53, Range Road, Shanghai ...	1906
Drake, Noah F., PH.D.	Tientsin	1904
Duncan, A.	Imperial Customs, Shanghai ...	1896
Essex Institute	The Secretary of, Salem, Mass., U.S.A.	1906
Ferguson, T. T. H.	Imperial Customs, Tientsin ...	1900
Ferro, G. Vigna del	Italian Consulate, Shanghai ...	1903
Fischer, Emil S.	Tientsin	1894
Fox, Harry H.	British Consulate, Chengtu ...	1907
Frazer, E. D. H., C.M.G. ...	British Consulate, Hankow ...	1907
Frazer, M. F. A.	*c/o* Foreign Office, London ...	1888
Frieswyk, G. A.	Soc. Fran. d'Explor. Min. en Chine, Shanghai	1905
Fryer, George B.	Butterfield & Swire, Chefoo ...	1901
Fulford, H. E., C.M.G.	British Consulate, Newchwang ...	1885
Fung Yee...	1753, Park Road, Shanghai ...	1900
Gardner, H. G.	Hongkong and Shanghai Bank, Shanghai	1906
Garritt, Rev. J. C., D.D. ...	Nanking	1907
Ghisi, E.	Società Col. Italiana, Shanghai ...	1893
Gilchrist, E.	Chinese Post Office, Shanghai ...	1908
Giles, Bertram	British Consulate, Foochow ...	1902
Giles, Lancelot	British Consulate, Tientsin ...	1902
Goffe, H.	British Consulate, Wuhu ...	1905
Goodcell, Roscoe A.	Provincial College, Chinanfu ...	1905
Gowland, G. H.	Chartered Bank, Shanghai ...	1907
Grodtman, Johans	5, Canton Road, Shanghai ...	1898
Guernier, R. C.	Imperial Customs, Shanghai ...	1901
Halbritter, R. H.	Carlowitz & Co., Shanghai ...	1901
Handley-Derry, H. F.	British Consulate, Tientsin ...	1903
Harding, H. I.	British Consulate, Canton ...	1904
Hardstaff, R. J.	368, Boylston St. Boston, Mass., U.S.A.	1907
Harris, A. H.		1902
Hauchecorne, A	French Consulate, Chungking ...	1898
Hemeling, K.	Imperial Customs, Peking ...	1902
Hers, Joseph	Belgian Consulate, Shanghai ...	1907
Hildebrandt, Adolf	*c/o* Max Nössler & Co., Shanghai	1907
Hinckley, F. E., PH.D.	American Court, Shanghai ...	1907
Hiscock, F. H.	Poste Restante B.P.O., Hankow....	1905

Name.	Address.	Year of Election.
Hobson, H. E.	Imperial Customs, Shanghai ...	1868
Hogg, E. Jenner	Unkaza, Shanghai	1908
Holm, F. W.	Vacuum Oil Co., Shanghai ..	1903
Hosie, Alex., M.A.	H.B.M.'s Consulate-Genl., S'hai ...	1877
Houstoun, J. H. W.	Imperial Customs, Yochow ...	1900
Hussey-Freke, F.	Imperial Customs, Tientsin ...	1899
Jackson, Rev. James	Wuchang	1908
Jameson, J. N.	3, Kiukiang Road, Shanghai ...	1908
Jamieson, J. W.	Chinese Protectorate, Capetown ...	1888
Jeffreys, W. Hamilton	4, Minghong Road, Shanghai ...	1908
Jenks, Prof. J. W.	Cornell University, Ithaca, N.Y....	1903
Jernigan, T. R.	3, Hongkong Road, Shanghai ...	1906
Jesus, C. Montalto de	28, North Szechuen Road ...	1902
Johnston, R. F.	Chinese Post Office, Weihaiwei ...	1907
Jones, Loftus E. P.	5, Hongkong Road, Shanghai ...	1908
Kannowski, Mrs.	17, Ford Lane, Shanghai	1908
Kano, Dr. N.	Prof. Kyoto Univ., Kyoto, Japan	1902
Kanzaki, S.	Mitsui Bussan Kaisha, Shanghai...	1906
Karlbeck, Orvas	Mutual Telephone Co., Shanghai	1908
Kermer, P. P. M.	Imperial Customs, Wuchow ...	1901
Kinnear, H. R.	Gibb, Livingston & Co., Shanghai	1907
King, Paul H.	Imperial Customs, Wuhu	1886
Kingsmill, Gerald	2A, Yuhang Road, Shanghai ...	1905
Kratzsch, Dr. K.	German Consulate, Shanghai ...	1906
Ku Hung Ming	Conservancy Board, Shanghai ...	1906
Lalcaca, Cawas, M.D., L.R.C.P....	47, Kiangse Road, Shanghai ...	1908
Lanning, George	Municipal Offices, Shanghai ...	1908
Lay, W. G.	Imperial Customs, Canton ...	1902
Leveson, W. E., M.A.	Municipal Council, Shanghai ...	1905
Liddell, C. Oswald	47, Szechuen Road, Shanghai ...	1908
Little, Edward S.	12, Kiukiang Road, Shanghai ...	1900
Lowder, E. Gordon	Imperial Customs, Peking ...	1904
Lucas, S. E.	Chartered Bank, Shanghai ...	1906
Lyon, D. Willard	Y.M.C.A., Shanghai	1904
Mackinnon, J. B.	Municipal Council, Shanghai ...	1905
Macoun, J. H.	Imperial Customs, Peking ...	1894
Main, Dr. Duncan	Hangchow	1900
Marsh, E. L., M.D.	17, Whangpoo Road, Shanghai ...	1908
Mayers, Sydney F.	British Legation, Peking	1907
McCallum, C. A....	Imperial Customs, Foochow ...	1901

Name.	Address.	Year of Election.
McIntosh, Gilbert	Presbyterian Mission Press, S'hai	1889
Mencarini, J.	Imperial Customs, Amoy	1884
Merklinghaus, Dr. P.	German Consulate, Tsinanfu ...	1906
Milles, W. J., F.R.C.S.	Hongkong Road, Shanghai ...	1885
Moore, Bishop D. H.	Portland, Oregon, U.S.A.... ...	1901
Moorhead, Dr. H. B.	Tongshan	1901
Morgan, Rev. Evan	44, Boone Road, Shanghai ...	1907
Morrison, G. E., M.D.	Peking	1897
Morse, H. B., B.A.	*c/o* Dr. Proctor, Great Bookham, Surrey, England	1888
Moule, Rev. A. C.	Tai An, Shantung	1902
Nocentini, L.	Via del Proconsolo 21, Firenzi, Italy	1884
Nord, D.	German Consulate, Ichang ...	1904
Nully, R. de	Imperial Customs, Amoy	1884
Ohlinger, Rev. F.	Meth. Pub. House, Woosung Road. Shanghai	1905
Oppé, H.	*c/o* Drummond, White-Cooper and Phillips, Shanghai	1908
O'Shea, J.	*Shanghai Times*, Shanghai ...	1908
Palun, I. M.	51, Szechuen Road, Shanghai ...	1907
Parker, Rev. A. P., D.D. ...	Anglo-Chinese College, Shanghai	1901
Paulun, Dr.	20, Whangpoo Road, Shanghai ...	1893
Pearson, C. Dearne	*Shanghai Mercury*	1908
Pearson, G. W.	British Consulate-Genl., Shanghai	1908
Pelliot, Paul	Mission Archéologique de l'Indo-Chine, Saigon	1901
Perkins, N. G.	Barlow & Co., Shanghai	1905
Peters, H....	German Consulate-Genl., Shanghai	1906
Petersen, V.	Imp. Chinese Telegraph Co., S'hai	1906
Pettigrew, Hon. R. F.	Washington, D.C., U.S.A. ...	1900
Pettus, Wm. B.	12, Szechuen Road, Shanghai ...	1908
Piry, Theophile	Imperial Customs, Peking ...	1885
Post, Nicolas	Austro-Hungarian C'sulate, H'kong	1897
Prentice, John	47, Yangtsepoo Road, Shanghai ...	1885
Ravens, T. H. B. von	Imperial Customs, Shanghai ...	1903
Rayner, Chas.	Carlowitz & Co., Shanghai ...	1886
Reid, Dr. Gilbert	International Institute, Shanghai	1907
Reinsdorff, F.	German Consulate, Tamsui, Formosa	1883
Reiss, E. O.	Custom House, Peking	1906

Name.	Address.	Year of Election.
Remusat, J. L.	*c/o* T. G. Smith, Villa Dollie, Argenteuil, Seine et Oise, France	1885
Reymond, du Bois, Dr. C. ...	23, Burkill Road, Shanghai ...	1907
Richardson, J. W.	Imperial Customs, Kiukiang ...	1889
Ridge, W. Sheldon, B.A. ...	*Shanghai Times*, Shanghai ...	1904
Ritchie, W. W.	Imperial Post Office, Tsinan, Shantung	1907
Rössler, Dr. W.	German Consulate-Genl., Shanghai	1904
Rosthorn, A. Edler von ...	Austro-Hungarian Legation, Peking	1888
Rowe, H. B.	Municipal Offices, Shanghai ...	1907
Sahara, T.	*Shanghai Mercury*	1908
Sayer, G. Burton	*N.-C. Daily News*, Shanghai ...	1908
Schab, Dr. von	13, Whangpoo Road, Shanghai ...	1901
Schindler, Dr. A. K.	23, Burkill Road, Shanghai ...	1907
Schirmer, Curt, Dr.	German Consulate-Genl., Shanghai	1903
Schjöth, Fr.	Skovvaien 16, Christiania, Norway	1885
Schmidt, K.	Shantung Eisenbohn Gesellschaft, Tsingtau	1888
Schraimer, Dr.	Tsingtau	1895
Schregardus, N. H.	Imperial Customs, Shanghai ...	1900
Scott, James	British Consulate, Canton ...	1893
Seco, R.	Spanish Consulate-Genl., Shanghai	1906
Shengle, J. C.	Kiangsu Acid Works, Shanghai ...	1905
Siebold, L.	Imperial Customs, Peking ...	1903
Simpson, B. Lenox	Peking	1907
Sites, Prof. C. M. L., PH.D. ...	M.E. Mission, Foochow	1899
Sly, H. E.	63, Carlton Hill, London, N.W. ...	1900
Smith, Rev. Geo. B.	2490, Shattock Ave., Berkeley, California, U.S.A.	1907
Southey, T. S.	Imperial Customs, Shanghai ...	1880
Stapleton-Cotton, V.	Hongkong and Shanghai Bank, Lombard St., London	1906
Starkey, E.	Chinkiang	1906
St. Croix, F. A. de	Alfred Dent & Co., Shanghai ...	1893
Stepanov, Simeon T.	Russo-Chinese Bank, Shanghai ...	1897
Stuart, Geo. A., M.D.	Nanking	1897
Tachibana, M.	Imperial Customs, Antung (Tatungkow)	1900
Tanner, Paul von	16, Poststrasse Libau, Russia ...	1881
Taylor, F. E.	Imperial Customs, Chinkiang ...	1885
Teesdale, J. H.	Messrs. Stokes, Platt and Teesdale, Shanghai	1908
Thyen, Joh.	Hankow	1894
Touche, J. D. la	Custom House, Chinkiang ...	1907
Ting I-hsien	Customs Statistical Dept., S'hai ...	1890
Twentyman, J. R.	Shanghai Dock Co., Shanghai ...	1894
Twyman, B.	British Consulate-Genl., Shanghai	1907

Name.	Address.	Year of Election.
Valentin, Jules	Messrs. Cuisenier & Cie., Paris ...	1901
Vitale, G.	Italian Legation, Peking	1894
Voelkel, S.	Pharmacie de l'Union, Shanghai ...	1885
Wallace, D.	Foochow	1906
Warren, Sir Pelham, K.C.M.G. ...	British Consulate-Genl., Shanghai	1901
Warren, R. L.	*c/o* British Consulate, Shanghai ...	1906
Washbrook, W. A.	Chinkiang	1881
Weiss, J.	German Consulate-Genl., Shanghai	1901
West, John	Kelly & Walsh, Ld., Shanghai ...	1901
Whittick, F. G.	Imperial College, Tsinanfu, Shantung	1908
Wilson, Rev. J. Wallace ...	London Missionary Socy., Changsha	1901
Wilton, E. C.	British Consulate, Ichang... ...	1900
Winford, W.	*c/o* Kingsmill & Co., 10, Hankow Road	1907
Wingate, Lieut.-Col. A. W. ...	Bareilly, U. P., India	1901
Wood, A. G.	Hillshaw, Old Park Road, Enfield, Middlesex, England	1879
Woodhead, H. G. W.	*N.-C. Daily News*, Shanghai ...	1906

K 1

KELLY AND WALSH, LIMITED, PRINTERS, SHANGHAI.

PUBLICATIONS OF THE SOCIETY.

Old Series:

Vol I,	Part I, , (June 1858)	$ 2.50
„ I,	„ II, (May 1859)	2.00
„ I,	„ III, (Dec. „)	1.00
„ II,	„ I, (Sept. 1860)*	1.00

New Series:

Vol. I,	(Dec. 1864)	1.00
„ II,	(„ 1865)	1.00
„ III,	(„ 1866)	1.00
„ IV,	(„ 1867)	1.50
„ V,	(„ 1868)	3.00
„ VI,	(1869–70)	1.00
„ VII,	(1871–72)	1.50
„ VIII,	(1873)	1.00
„ IX,	(1874)	1.50
„ X,	(1875)	3.00
„ XI,	(1876)	1.00
„ XII,	(1877)	2.00
„ XIII,	(1878)	1.00
„ XIV,	(1879)	1.00
„ XV,	(1880)	2.00
„ XVI,	(1881) Part I ...	2.00
„ XVI,	(„) „ II ...	1.50
„ XVII,	(1882) „ I ...	1.50
„ XVII,	(„) „ II ...	1.00
„ XVIII,	(1883)	2.00
„ XIX,	(1884) Part I ...	1.00
„ XIX,	(„) „ II ...	1.00
„ XX,	(1885) No. I ...	0.50
„ XX,	(„) „ II ...	0.75
„ XX,	(„) „ III ...	0.75
„ XX,	(„) „ IV ...	0.75
„ XX,	(„) Nos. V–VI ...	0.75
„ XX,	(„) complete ...	2.50
„ XXI,	(1886) Nos. I–II ...	1.50
„ XXI,	(„) „ III–IV...	1.50
„ XXI,	(„) „ V–VI ...	1.00
„ XXI,	(„) complete ...	2.50
„ XXII,	(1887) Nos. I–II ...	2.00
„ XXII,	(„) Nos. III–IV	2.00
„ XXII,	(„) No. V ...	1.00
„ XXII,	(„) No. VI ...	1.00

New Series:

Vol. XXII,	(1887) complete ...	$ 5.00
„ XXIII,	(1888) No. I ...	2.00
„ XXIII,	(„) „ II ...	2.00
„ XXIII,	(„) „ III ...	2.00
„ XXIII,	(„) complete ...	5.00
„ XXIV,	(1889–90) No. I ...	2.00
„ XXIV,	(„) „ II ...	2.00
„ XXIV,	(„) „ III ...	2.00
„ XXIV,	(„) complete	5.00
„ XXV,	(1890–91) No. I ...	5.00
„ XXV,	(„) „ II ...	0.75
„ XXV,	(„) complete	5.00
„ XXVI,	(1891–92) No. I ...	2.00
„ XXVI,	(„) „ II ...	2.00
„ XXVI,	(„) „ III	3.00
„ XXVI,	(„) complete	5.00
„ XXVII,	(1892–93) No. I ...	2.00
„ XXVII,	(„) „ II...	3.00
„ XXVII,	(„) complete	5.00
„ XXVIII,	(1893–94) No. I ...	3.00
„ XXVIII,	(„) „ II...	3.00
„ XXVIII,	(„) complete	5.50
„ XXIX,	(1894–95) No. I*...	5.00
„ XXX,	(1895–96) „ I ...	2.00
„ XXX,	(„) „ II...	2.00
„ XXX,	(„) „ III	1.50
„ XXX,	(„) complete	6.00
„ XXXI,	(1896–97) No. I ...	2.50
„ XXXI,	(„) „ II...	2.50
„ XXXI,	(„) complete	5.00
„ XX	(1897–98) No. I*...	2.00
„ XXXII,	(1899–1900) No. I	2.00
„ XXXIII,	(„) „ II	2.00
„ XXXIII,	(„) „ III	2.00
„ XXXIII,	(„) complete	6.00
„ XXXIV,	(1901–1902) ...	2.50
„ XXXV,	(1903–1904) ...	2.50
„ XXXVI,	(1905)	4.00
„ XXXVII,	(1906)	6.00
„ XXXVIII,	(1907)	6.00
„ XXXIX,	(1908)	6.00

* Only Part I published.

A discount of 10 per cent. is allowed to the Public if a complete set of the Journal, as far as can be supplied, is purchased. Members of the Society are entitled to purchase the Journal at a reduction of 40 per cent. on the above prices by applying to the Honorary Librarian.

A CATALOGUE OF THE LIBRARY OF THE CHINA BRANCH of the Royal Asiatic Society (including the Library of the late Alex. Wylie, Esq.) systematically classed. 3rd edition. Shanghai, 1894. 8vo. $3.00

Published by KELLY & WALSH, LIMITED, Shanghai.