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ANCIENT CHINESE MUSICAL INSTRUMENTS AS DEPICTED ON SOME OF THE EARLY MONUMENTS IN THE MUSEUM

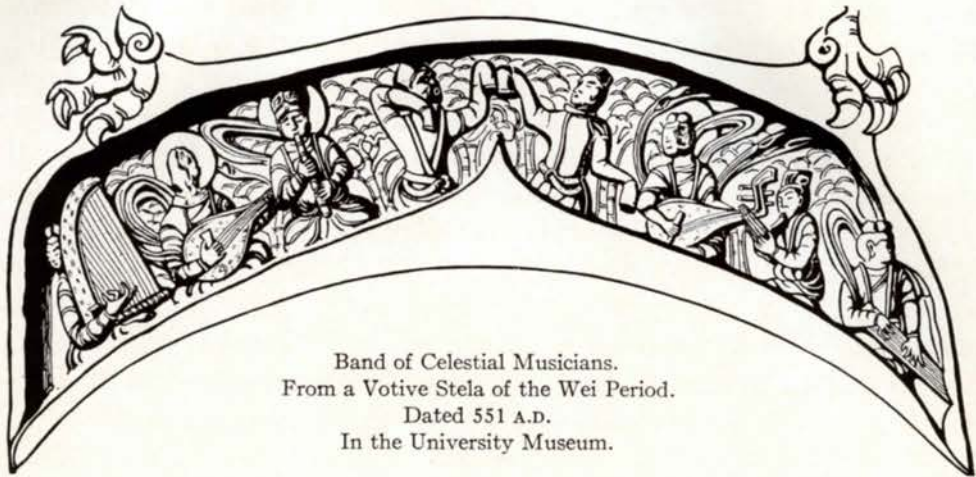
BY HELEN E. FERNALD

Illustrations by the Author

AMONG the Chinese collections of the University Museum there are a number of figures representing musicians with their instruments in their hands. Some of these are in bas relief carved on the stone sculptures, notably the Wei votive stelae, where bands of celestial music makers appear above the niches. Others are the T'ang clay mortuary figurines already described in previous numbers of the JOURNAL. There are later examples also, occurring on porcelains, on textiles, and on the Ming coromandal screen. A study of the instruments depicted, especially those on the earlier monuments, brings up a number of interesting points about their origin and use and about Chinese ideas of music in general.

Music was of great antiquity in China. According to tradition it was invented by Fu-hsi (2953 B.C.), first of the Five Divine Rulers. He was said to have introduced the lute and the lyre.¹ Nü Wa, mythical female sovereign who succeeded Fu-hsi, has been credited with the invention of the shêng or Chinese mouth organ. Legends cluster around the name of Huang Ti, the Yellow Emperor, who ruled about 2698 B.C. He is said to have encouraged the practice of music, teaching that it was in accordance with the rules of propriety and made the people happier and better. To him is attributed the honor of bringing order out of chaos by inventing the lüs, a

¹ European books have translated it "lute and lyre." The probability is that the characters are ch'in and sê, but I have not been able to verify this by reference to the original Chinese text. The ch'in and sê were types of psaltery, not lutes or lyres.



Band of Celestial Musicians.
From a Votive Stela of the Wei Period.
Dated 551 A.D.
In the University Museum.

series of pitch pipes by which all other instruments were regulated. The legend goes that he sent one of his ministers to Ta-hsia, a far distant place beyond the K'unlun mountains (probably Bactria), to obtain bamboos of uniform thickness from which to make the lü.¹ However, it was to the Emperor Shun (2255 B.C.) that the Chinese looked back with greatest veneration as the founder of their philosophy of music. Shun was himself a musician and composed the piece called Ta Shao,² the sweet strains of which so impressed Confucius sixteen hundred years later that for three months he thought of nothing else.³ Shun is also said to have been the inventor of the pan pipes, p'ai hsiao, a development of the lü. These legends may be the pure fabrication of later times made in the effort to glorify the early ages and hold them up as examples for future generations to follow. They are not mentioned in the earliest literature, the Classics,⁴ although Shun, to be sure, is there represented as a singer and composer, having amazing ideas as to the use of music in government and appointing a Director of Music who instructed the noble

¹ Van Aalst, *Chinese Music*. Shanghai, 1884, p. 6.

² *Annals of the Bamboo Books*, Pt. II, Chap. II, which Legge translates, "In his first year . . . when he came to the throne he dwelt in K'e and made the music called Ta Shaou." See Legge's *Translation of the Chinese Classics*, Vol. III, Pt. I, p. 115 of the prolegomena.

³ The literal translation is, "For three months he did not know the taste of flesh. 'I did not think,' he said, 'that music could have been made so excellent as this.'" *Analects*, Book VII, Chap. XIII, Legge's *Translation of the Chinese Classics*, Vol. I, p. 63.

⁴ The "Five Classics" are *The I Ching*, Book of Changes; the *Shu Ching*, Book of History; the *Shih Ching*, Book of Odes; the *Li Chi*, Record of Rites; the *Ch'un Ch'iu*, Spring and Autumn Annals. The last is the only one actually written by Confucius, the others are compilations and collections of older documents which left the finishing hand of Confucius some in their original state, others probably somewhat changed. The *Li Chi* as we have it now includes much that was added in the 1st century B.C.

youth and gave concerts at the court.¹ Whether the historical accuracy of those parts of the classics which deal with such remote periods as the era of Shun is to be trusted is a question. It is generally agreed, however, that in the case of the poetry we have not only the oldest texts but those the least tampered with. The Book of Odes is really an anthology of verse comprising the songs and ballads of the various states. Some of the odes were written as early as Shang, 1766-1122 B.C., a great many are of early Chou, 1122-770 B.C. the latest belonging to about 585 B.C. Confucius, 551-497 B.C., first gathered and edited these poems, but scholars believe now that he did not alter the texts. Thus the internal evidence of this poetry is of the first rank. The references in the Odes leave us in no doubt as to the importance of music in the life of ancient China. The great antiquity of certain songs, musical instruments, and theories of music stands revealed, whoever may have been later credited with the invention of them.

It has been declared that the ancient music of China was hopelessly lost at the time of the Burning of the Books, 212 B.C. However, we know the names of many of the most famous of the songs and a number have been identified among the poems of the Book of Odes so that the words of those have survived. One of the later odes, a poem assigned to the time of King Yu, c. 775 B.C., mentions two songs, or groups of songs, that must have been well known then in the early 8th century B.C. The last verse is translated as follows:

"K'in, k'in the bells peal on
And the lutes in the concert we hear.
Deep breathes the organ tone
Sounding stones join their notes rich and clear
The while through the vessel there ring
The Ya and the Nan which they sing
And the dancers with flutes now appear."²

The Nan, it seems, is no other than that collection of the odes of Chou-nan and Chao-nan which comprises the first of part I of the Book of Odes, while the Ya was probably made up of the older poems of parts II and III, one section of which is still called the Ya. Other apparently famous songs mentioned in the early literature

¹ Shu Ching, Pt. II, Book I, Chap. V, No. 24, and Pt. II, Book IV, Chap. II, No. 9. See Legge's Trans. of the C. C., Vol. III, Pt. I, pp. 47, 87.

² Shih Ching, Pt. II, Book VI, Ode IV. See Legge's Metrical Translation of "The She King," London, 1876, p. 251. The characters which he translates as lutes are "ch'in" and "sê."

are the Yung,¹ the Wu and the Shao.² The Ta Shao we have already spoken of as the music composed by the Emperor Shun. It was evidently performed with the accompaniment of dancers as in the case of the Ya and the Nan, for Confucius says in the Analects, "Let the music be the Shao with its pantomimes."³ The Li Chi says in the chapter on music (which is a very ancient document incorporated into the book) that "In antiquity the Emperor Shun made a ch'in with five strings of silk for singing the ode to the south wind."⁴ That the tunes of some of these songs still survive, as is claimed by two tune books published in the 16th century, is quite possible. Books can be burned and words forgotten but ancient and popular tunes are not so easily erased from a people's mind. Though the books on music were destroyed by Shih Huang Ti, the chances are that the songs and melodies lived on through the period of suppression. The claims of the 16th century tune books may be true in at least some cases. What tunes have been lost have been lost through gradual disuse rather than any sudden wholesale destruction. Once forgotten, an ancient tune could not be revived because it had never been recorded by a proper system of notation. (The same reason why the tunes of Greece, Egypt, and mediaeval Europe have been lost.) The Kung Cheh system of notation came into popular use only in the Sung dynasty.⁵

In the Odes we have a picture of a China emerging from the mists of antiquity already endowed with a rich heritage of national ballads and popular songs which are evidently accompanied by instruments that are by no means primitive. Music was not only the spontaneous expression of the common people but an elegant accomplishment that was praised in Emperors. One of the earliest of the poems in the Shih Ching, a sacrificial ode of Shang called the *Na* and written at least before 1122 B.C., shows that music had a most prominent place in the sacrificial rites and incidentally gives us a picture of an orchestra highly organized. Five different musical instruments are mentioned which must be among the most ancient in China. Four of them are common to most ancient civilizations but the use of musical stones is unique.

¹ Analects, Book III, Chap. II. Legge's Trans. of the C. C., Vol. I, p. 19.

² Analects, Book III, Chap. XXV. Ibid., p. 28.

³ Analects, Book XV, Chap. X. Ibid., p. 162.

⁴ Li Chi, Chap. XVI (the Lo Chi). See M. Callery's "Li-Ki," French translation, 1853, p. 91. Many other songs also are named in this chapter.

⁵ Mrs. Richard, A Paper on Chinese Music, p. 6.

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"O grand! The drums, both large and for the hand,
Complete in number, here in order stand.
Their tones, though loud, harmoniously are blent,
And rise to greet our ancestor's descent.

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Deep are the sounds the drums emit,
And now we hear the flutes, which shrilly fit
Into the diapason:—concord great,
Which the sonorous gem doth regulate!
Majestic is our king of T'ang's great line,
Whose instruments such qualities combine.
Large bells we hear, which with the drums have place,
While in the court the dancers move with grace."¹

Therefore in the twelfth century B.C., or earlier, the Chinese had flutes, two kinds of drums, bells and musical stones, and had a definite orchestral arrangement for them. Another poem of slightly later date, between 1114 and 1076 B.C., mentions several other instruments. The literal translation of the poem is rather quaint, so I give it here.

"There are the blind musicians; there are the blind musicians;
In the court of (the temple of) Chow.
There are the (music frames) with their face boards and posts,
The high tooth edge (of the former) and the feathers stuck (in the latter);
With the drums, large (t'ien) and small (ying), suspended from them;
And the hand drums (t'ao ku) and sounding stones (ch'ing) the chu and the yu.
These being all complete, the music is struck up.
The pan-pipe (hsiao) and the double flute (kuan) begin at the same time.
Harmoniously blend their sounds;
In solemn unison they give forth their notes.
Our ancestors will give ear;
Our visitors will be there;—
Long to witness the complete performance."²

The t'ien was a huge drum; the character really means "field." Compared with it the ying-ku was small, about the size and shape of a flour barrel. We are interested in the ying-ku because it appears on so many of the Han bas reliefs. The t'ao-ku was a small hand drum twirled on a handle so as to make balls on the ends of strings strike against the heads. Ku by itself means merely large drum. The hsiao, or Pan pipes, was a set of tubes of different lengths tied

¹ Shih Ching, Pt. IV, Book III, Ode I. Legge's Metrical Translation, p. 385.

² Shih Ching, Pt. IV, Book I, [ii], Ode V, Legge's Trans. of the C. C., Vol. IV, Pt. II, p. 587. I have taken the liberty of inserting the Chinese names of the instruments.

together and giving notes corresponding to the lüs. It was used only in ritual music. The same was true of the chu and the yu, two peculiar instruments which gave the signals for starting and stopping. The chu was a square box with a hammer inside which was struck against the interior by an operator who reached through a hole in the side. The yu was a wooden tiger with teeth along the ridge of its back, down which the attendant drew a stick rapidly to make a rasping noise.

For the ceremonial music there were professional musicians, blind men in many cases evidently, as was true in other countries, such as ancient Egypt. Professionals would also seem to have been employed upon festive occasions such as that described in the poem which contains the reference to the singing of the Ya and the Nan. But that music was a part of the education of every noble youth the Book of History certainly gives us to understand, and the Odes bear out the impression that many amateur musicians could play the ch'in or the sê or the shêng¹ and that these instruments were as popular as our guitars and ukuleles. One of the Odes says

"Why not at the feast your sê gaily play
To add to your joy and lengthen the day?"²

Thus we find again and again, in the Odes, in the Book of History, in the music chapter of the Li Chi, evidence that at the time the Classics were written (during the Shang and Chou dynasties, from before 1122 B.C. up to the middle of the sixth century B.C.) there were many popular as well as ritual songs and many instruments in use which were even then considered very ancient. And this brings us to remark upon a phenomenon that does not appear to have occurred anywhere else in the world save in China, the spectacle of a people rising out of barbarism into civilization who were so intensely interested in the process of their own intellectual evolution that they kept voluminous records of every step. It is seldom that a child is so interested in the development of his own mind that he watches and records its growth himself. Few babies keep their own baby books. Neither has any nation of antiquity so far as we know, except China, described itself, its geography, its government, its institutions, its rites, its own manners and customs

¹ Shih Ching, Pt. I, Bk. VI, Ode III, Legge's Trans. of the C. C., Vol. IV, Pt. I, p. 113.

² Shih Ching, Pt. I, Bk. X, Ode II, Legge's Metrical Translation, p. 148. The word sê has been substituted for the translator's term lute.

and knowledge. Usually our information on these subjects has to be gained indirectly from other sources, from religious texts, from paintings and sculptures and objects from tombs. In the field of music, for instance, what we know about ancient musical instruments of the Egyptians we have had to learn from paintings on the walls of tombs, mention in the religious texts in the tombs, and fragments of originals found occasionally. There are no ancient Egyptian essays on the subject of music; we have no means of finding out what the Egyptians thought about music. The same is true of other nations. Among the Babylonian clay tablets are hymns to Ishtar, and to Nin-ib, and bas reliefs of the Assyrians show harpists and other musicians, so that we know that those nations had music but we have few clues to what it was like or to whether there were other instruments, of which no pictures have been discovered. Even in the case of the Greeks, the lyre is familiar to us only because so frequently represented in sculptures and vase paintings. Many of the other musical instruments mentioned in Greek literature are known to us by name only, even the nature of them being a matter of conjecture. The same is true even of the middle ages in Europe. We must learn what we can from manuscript illuminations such as one showing David playing an 11th century harp,¹ or from capitals and choir stalls carved with figures of angels performing on harps and lutes of mediaeval type.² In China one has similar material plus Chinese treatises on the subject, literature that begins with the music chapter of the Li Chi already mentioned, and includes a section in each of the Twenty four Dynastic Histories, besides numerous books and essays on music. From the early days of the Chou dynasty then, the 11th century B.C., until the time of the Republic, 1912 A.D., the Chinese have been writing about their music, its place in ceremonies and rites, its uses in forming character, its psychological influence on the minds of listeners, the symbolism of the scale, and describing the various instruments in use. Much of the earlier literature has been lost beyond recall, and little of what there is has yet been translated into any European tongue. What is available is often vague and anything but scientific, but it does corroborate or explain much that would otherwise be an eternal enigma to us, and above all it reveals the reason why Chinese music never progressed to the glorious heights which its early and brilliant beginnings had seemed to

¹ Engel, *Musical Instruments*, Handbook of the South Kensington Museum, p. 89.

² Kelley, *Musical Instruments*, p. 67.

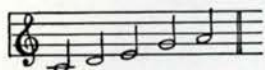
promise. It was largely the symbolic and philosophic meanings attached to music in the early days of China that restricted its development and kept it unprogressingly true to its ancient traditions. As a matter of fact, it was not only a scholarly interest in the details of his civilization that was at the root of the essays of the ancient Chinese author, but also the very definite aim of extolling the customs and accomplishments as well as the virtues of the Ancestors, and so preaching the doctrine of ultra conservatism which meant "no change from the ancient, and therefore best, order of things," a feature of ancestor worship which accounts for the innate resistance of the Chinese to everything in the line of an innovation.

In the earliest days that we know of in China music had already become bound up with symbolism. The Shu Ching attributes to the Emperor Shun many statements that prove at least that certain philosophical theories were well established by the early Chou dynasty. For instance, he is quoted as saying, "K'uei, I appoint you to be Director of Music, and to teach our sons, so that the straightforward may yet be mild, the gentle may yet be dignified, the strong not tyrannical, and the impetuous not arrogant. Poetry is the expression of earnest thought, singing is the prolonged utterance of that expression. The notes accompany that utterance, and they are harmonized themselves by the pitch pipes. In this way the eight different kinds of instruments can all be adjusted so that one shall not take from or interfere with another, and spirits and men will thereby be brought into harmony."¹ The reason why spirits and men would be brought into harmony with each other by the tuning of the various instruments to the lüs was this: Heaven and Earth, the Chinese said, were in perfect harmony.² The number 3 was the symbol of Heaven, 2 of Earth. If two sounds therefore were in ratio of 3 to 2 their harmony would be as perfect as that of Heaven and Earth. Thus the pitch pipes, or lüs, were cut so that the length of the second tube was two thirds of the first, and the third tube was two thirds of the second (only it was doubled to give the octave lower), and so on. Thus a series of perfect fifths was obtained. Any two notes given by tubes whose lengths were in such relative proportions must in the nature of things harmonize as did Heaven and Earth, and instruments tuned to them would produce music which could not but bring Heavenly spirits and Earthly men

¹ Shu Ching, Pt. II, Bk. I, Chap. V, No. 24, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 47.

² Li Chi, Chap. XVI, p. 90 of Callery's translation.

together in harmony. There seem to have been only six tubes at first and only five of them were used. Shun is reported as saying, in the Shu Ching, "I wish to hear the six pitch pipes, the five notes determined by them, and the eight kinds of musical instruments regulated again by these."¹ We know that the first five lüs gave notes corresponding to our C, G, D, A, E, except that D, A, and E were not quite true to our notes, which belong to a tempered scale.² However, generally speaking, the early five note scale of the Chinese established by the lüs was very nearly this:



Shun used this scale even in his governing. His ideas (if they really are as early as his time) are ingenious if not wholly practical. He continues the discourse quoted above: "Examining thereby the virtues and defects of my government according as the odes that go from the court and the ballads that come in from the people are ordered by those 5 notes." Whether his viceroys were governing poorly or well, he believed he could tell from the tone of the music produced during their rule and it was firmly believed that to teach the people the odes which had been carefully set to music regulated by the lüs was to make them peaceful and happy, amenable to rule. The chapter on music in the Li Chi observes, "Every musical air has its source in the heart of man," when he is angry and sullen his songs are rude and violent, when he is in love they are soft and full of tenderness, but many of these feelings which are expressed in musical airs can also be induced in men by musical airs; therefore the emperors of ancient times taught men ceremonies as a means of directing their wills, and instituted music for controlling their emotions and conduct, and thus they found the secret of ruling in peace. In times of peace, the Li Chi continues, when the tunes breathe calmness and joy, the government is good. In times of revolt, when the tunes breathe reproach and anger, the government is in disorder. This proves that between the nature of musical airs and the state of government there is an intimate relationship.³ That Confucius firmly believed in this influence of music for evil

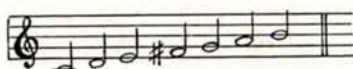
¹ Shu Ching, Pt. II, Bk. IV, Chap. I, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 81.

² Van Aalst explains, Chinese Music, p. 13, that the whole scale is really pitched a little higher than this, at least in the present day. Huang-chung, which he has called C for clearness, is more exactly our D.

³ Li Chi, Chap. XVI. See Callery's translation.

or for good is seen in his remark about the Ta Shao and the Wu. "The Master said of the Shao that it was perfectly beautiful and also perfectly good. He said of the Wu that it was perfectly beautiful but not perfectly good."¹ Both were fine in melody but the Wu breathed a martial spirit that aroused men to violence.

The five notes of the ancient scale were compared to the five virtues, benevolence, righteousness, propriety, knowledge, and faith.² That was one reason why the use of music regulated by the lüs was supposed to transform the people. Sometime still in antiquity the number of tubes of the lüs was increased to twelve and a complicated system of philosophy grew up around them. They became involved in the yang and yin philosophy, the oldest in China, according to which everything in the universe belonged either to the yang or the yin principle, the yang being male energy, strong, positive, superior, the yin being female energy, weak, negative, dependent. Everything that happens is the result of the combination or interaction of these two principles. Six of the tubes of the lüs were considered yang and the other six yin. The twelve lüs were compared to the twelve signs of the zodiac, the twelve moons and the twelve hours. Huang-chung, "yellow cup," the first of the tubes and the basis upon which all the others were built, was furthermore used as a standard of length and capacity, being 9 inches (some say a foot) long and holding 1200 grains of millet.³ Early in the Chou dynasty two more notes were added to the scale, nearly corresponding in tone to our F sharp and B.



These notes, according to a historian of the Yüan dynasty, were called the "seven beginnings" and were in Han times compared to Heaven, Earth, Man, and the Four Seasons.⁴ It must be remembered that the notes of the scales indicated here give only an approximate idea of the Chinese notes. Their music cannot be recorded in terms of ours, for the relationships between the notes they use are different. Wherever we might start the scale in unison the rest of their notes would sound sharper or flatter than ours. "The intervals of the lüs have all been accurately measured, none is in tune with our

¹ Analects, Book III, Chap. XXV, Legge's Trans. of the C. C., Vol. I, p. 28.

² Shu Ching, Pt. II, Bk. IV, Chap. I, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 81, notes.

³ Shu Ching, Pt. II, Bk. I, Chap. III, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 36, notes.

⁴ Wu Ch'ing. See Legge's Trans. of the C. C., Vol. III, Pt. I, p. 81, notes.

western scale whether pure or tempered."¹ The only way for us to write Chinese music with scientific accuracy would be to indicate the number of vibrations per second for each note, or to use a staff whose lines and spaces would represent their intervals, not those we use. To the western ear many of the Chinese intervals seem discordant beyond endurance, because some notes seem too sharp, others too flat, "but to the Chinese this is no objection, their aim being to prove the irrefutable connection of their music with astronomy and nature."²

Doubtless in China music began, as among all primitive peoples, as a perfectly natural and spontaneous expression. As the Chinese say themselves, "Every musical air has its origin in the heart of man."³ But enough has been said to show how very early it became tied by those philosophic theories and symbolic comparisons so dear to the hearts of the Chinese. They did not philosophize about their music but could almost be said to have built up a musical system to illustrate their philosophy, and thus made it impossible for music to develop except within a very narrow field of thought. The "Burning of the Books" in 212 B.C. destroyed philosophical writings on music, records of musical airs and the instruments themselves, but the philosophy and tunes were remembered and revived and instruments were soon reinvented exactly like the old. In Han times along the trade routes from Central Asia came instruments unknown before to the Chinese and the introduction of Buddhism brought with it new instruments, but they were soon adopted and made to fit into the old theories and symbolic meanings were attached to their different parts.⁴ When the Mongols invaded China they brought with them a different scale in which F natural occurred instead of F sharp and during the Yuan dynasty both were used. Much confusion resulted and today the scale actually in use is the ancient pentatonic one, in which the two notes causing half tones in the seven note scale (F and B) exist only in theory. Besides, the five note scale fits the philosophy better, for are not the five notes like the five planets, Mercury, Jupiter, Saturn, Venus, Mars? Can they not be compared with the five points of the compass, north, east, center, west, south? They correspond to the five colours,

¹ Stanford and Forsyth, *A History of Music*, 1920.

² Van Aalst, *Chinese Music*, p. 23.

³ Li Chi, Chap. XVI, where this statement is repeated many times.

⁴ For instance, the P'i-p'a. The four strings and the Four Seasons.

black, violet, yellow, white, red, and the five elements, wood, water, earth, metal, and fire. They even have affinity with the five relationships; the note Kung (C) corresponds to the Emperor, Shang (D) to the minister, Chiao (E) to the people of the nation, Chih (G) to the affairs of state, and Yu (A) represents material objects!¹

This love of the Chinese for putting everything in numerical categories may be seen well illustrated in the *Shu Ching*. We are especially interested in the "eight kinds of musical instruments" mentioned so many times, literally the "eight sounds."² This refers to the material of which the instruments were made, metal, stone, silk, bamboo, gourd, earth, leather, and wood. In the concert given by K'uei described in the *Shu Ching*,³ each kind is represented except earth, bells (metal), musical jades (stone), ch'ins and sês (silk), flutes (bamboo), the shêng (gourd), drums (leather), and the chu and yu (wood). Wu Ch'ing thinks the yu was at that time an earthen ocarina such as was later called "hsuan,"⁴ a theory by which all eight kinds of instrument would be accounted for here. Chinese writers on music still classify the instruments according to the eight materials, which represent the Earth or Nature and correspond to the eight symbols, called pa-kua, of Fu-hsi, symbols made up of combinations of straight and broken lines representing the yang and yin principles. It is thus seen that the development of the instruments themselves and their use in the orchestra was so restricted by the symbolism in regard to their dimensions, number of strings, and material of which each detail must be made that as a result some of them are good examples of "arrested development," being practically identical today with their prototypes of four thousand years ago.

Of the instruments represented on the stelae and other objects in the University Museum, some are still in use in China as they were in the days of Chou, 1122-255 B.C. Others have today no counterpart. We are fortunate in having many aids to identification besides the Chinese writings on music. Most important are the rather recent discoveries of Sir Aurel Stein at Tun Huang, the Caves of the Thousand Buddhas, where a hoard of manuscripts and paintings was uncovered which had been sealed up since about the end

¹ Van Aalst, p. 17.

² *Shu Ching*, Pt. II, Bk. I, Chaps. IV and V; Pt. II, Bk. IV, Chap. I, Legge's Trans. of the C. C., Vol. III, Pt. I, pp. 41, 48, 81.

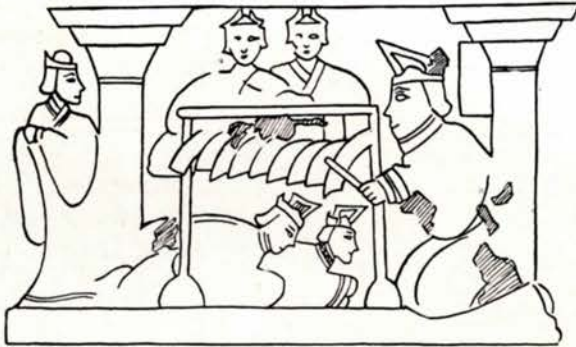
³ *Shu Ching*, Pt. II, Bk. IV, Chap. II, No. 9, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 87.

⁴ But the ocarina is called "hsuan" in the *Li Chi*.

of the T'ang dynasty. Many of the paintings, which are now in the British Museum, represent the Buddhist Paradises of Amitabha, Sakyamuni, or Bhaisajyaguri. In them all the Buddhas appear enthroned in the center surrounded by adoring Bodhisattvas, while before them dancers and musicians perform. The number of musicians varies from four to twelve; usually there are eight, four on each side. In many cases the instruments can be clearly made out. There are flutes, both transverse and vertical, ch'ins and sês, harps, castanets, drums, and cymbals. And there is always the Chinese mouth organ, the shêng. Frescoes analogous to these paintings are seen on the walls of the Tun Huang caves, but I have seen only M. Pelliot's plates of them, from which it is hard to make out any details of the instruments. Many of these paintings are dated, and belong to the same general period as the stelae and clay mortuary sculpture in this Museum. Then there are the precious instruments preserved in that most fascinating of museums, the Shosoin at Nara, Japan, established in 749 A.D. by order of the Emperor Shomu to contain all the contents of his palace. Among the personal belongings of this Japanese ruler of the middle eighth century were exquisite examples of a Chinese shêng, several ch'ins, and a number of p'i-p'as both of the four and of the five stringed type. In no other country in the world is there a collection of mediaeval musical instruments that can compare with this. Probably the only reason we do not find in the Shosoin examples of stone chimes, bell chimes, etc. is that they were used in ritual music only. The ch'in, p'i-p'a and shêng, being more popular instruments, as well as recognized marks of the gentleman of culture, were the ones which had found their way into the Emperor's palace.

The earliest known representations of musical instruments in China are to be found on the carved stone slabs from funeral chambers and vaults of the Han period, made accessible through the plates of Chavannes' "Mission Archéologique" and other works. On one of the slabs from the well known Wu tombs in Shantung province may be seen a stone chime pictured. The sonorous stone, or musical jade, has already been mentioned several times in quotations from the Shih Ching and Shu Ching, a fact which points to its very early origin. It is one of the instruments of greatest antiquity in China and peculiar to that country, moreover. There were single sonorous stones and there were sets or chimes. The "Na" mentions "the sonorous gem." It was a flat jade stone cut in the shape of a car-

penter's square, with one arm longer than the other, called the drum. It was pierced with a hole at the apex and a cord run through for suspension to a wooden frame. It was played by tapping it on the "drum" with a hammer, causing a clear ringing sound of definite tone. In the Shu Ching, K'uei speaks of two ways of striking the stones. "When the sounding stone is tapped or strongly struck."¹ Sometimes the single sonorous stones were carved in the shape of fantastic beasts, dragons, fish, or lions. The representation on this Wu slab shows the set, or stone chime, which, according to literature, consisted of sixteen musical stones hung in two rows in a frame.



Confucius Playing the Stone Chime.
Scene on a Stone Slab from the Wu Tombs.
Han Period.
Chavannes, Mission, No. 143.

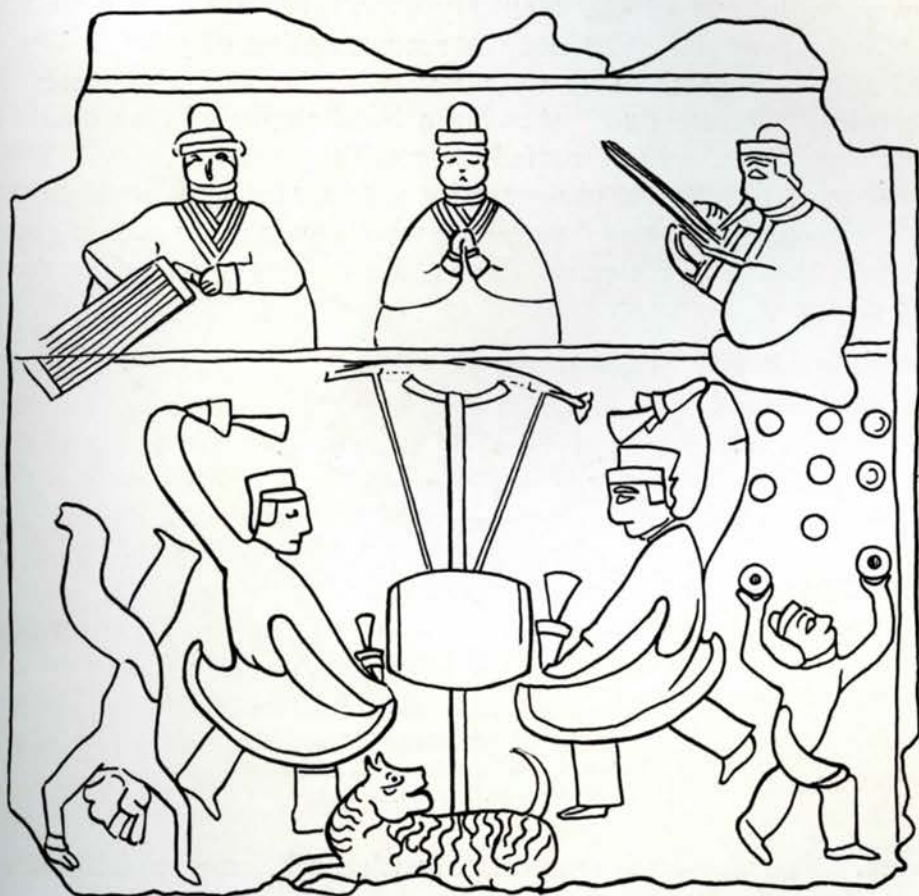
This shows only one row, of nine. The stones of a chime were supposed to be of the carpenter's square shape, all of the same size but varying in thickness to give the different notes of the lüs. Again, in this scene we see that the shape represented is not that of a carpenter's square but a single curved section of a circle. The stones are suspended from a very plain framework and the performer, at the right, is tapping them lightly with a hammer. The scene illustrated is that related in the Analects. "The Master was playing one day on a musical stone in Wei when a man, carrying a straw basket, passed the door of the house where Confucius was and said, 'His heart is full who so beats the musical stone.'"² Musical stones were often cut in the shape of bells. Such a flat bell dating from the Chou dynasty is in the Eumorfopoulos Collection.³

¹ Shu Ching, Pt. II, Bk. IV, Chap. II, 9, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 87.

² Analects, Bk. XIV, Chap. XLII, Legge's Trans. of the C. C., Vol. I, pp. 154-55.

³ Pope-Hennessy, Early Chinese Jades, Plate 38.

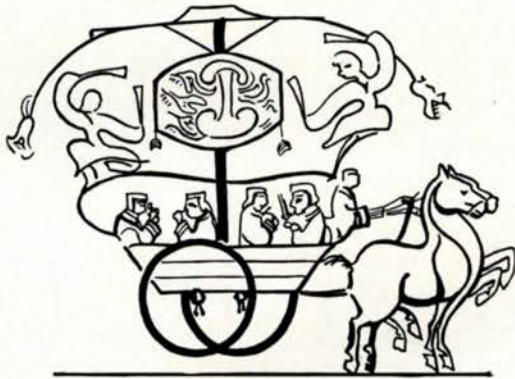
A number of Han slabs depict musicians, dancers, and jugglers according to a fairly definite scheme of arrangement. A very good example of such a relief is a slab from Chiao Ch'eng Ts'un in Shantung. Conspicuous in the center of the composition is a great



Ying-Ku Performance, with Ch'in and Shêng.
Stone Slab from Chiao Ch'eng Ts'un, Shantung.
Chavannes, Mission, No. 151.

"Ying-ku" or barrel drum suspended by two straps from a cross bar which rests on a pole. The pole appears to pass through the barrel of the drum and is supported on the back of a carved lion. On each side a man is applying the drum sticks vigorously, his arms swinging, his body fairly leaping in the air. On the right is a juggler, on the left a man walking on his hands. Above are three seated musicians, one playing the ch'in, another clapping his hands, and the third performing on the shêng. Other slabs show variations on this theme.

Nearly always there is the great "ying-ku" with its vehement performers. Chavannes illustrates five other slabs depicting it.¹ A Han relief in the Baron Von der Heydt Collection at The Hague repeats the scene,² and the slab illustrated in Dr. Laufer's "Chinese Grave Sculptures of the Han Dynasty," Plate VI, is doubtless another repetition. The clearest representation of the ying-ku is probably that of the slab from Hsiao T'ang Shan reproduced in Bushell's "Chinese Art,"³ showing a band wagon of Han times, a large two horse chariot roofed over with a wide canopy. Four musicians sit under the canopy, with a driver in front, while on the roof is mounted a great "ying-ku" with a pair of drummers going through their wild gestures. Here again the heavy pole rising from the center of the chariot seems to pass through the barrel of the



Chariot with a Ying-Ku and Musicians.
Detail of Slab from Hsiao T'ang Shan.
Chavannes, Mission, No. 45.

drum. The ying-ku is ornamented with scroll forms, which lead us to believe that the barrel was of painted wood. The heads were doubtless covered with leather. Two small metal bells hang from the lower edge of the drum. From the framework above float out long ribbons or streamers with bells or tassels on the ends. The Von der Heydt slab and the one published by Dr. Laufer also show these streamers and in the last case they seem to be held by men standing a little distance away. Was the ying-ku sometimes made to revolve on the pole by means of these ribbons and is that why the drummers appear to be performing a wild dance before the drum?

¹ Chavannes, Mission, Nos. 149, 158, 160, 162, 1265.

² With, *Bildwerke ost-u-sudasiens aus der Sammlung Yi Yuan*, Plate I.

³ Chavannes, Mission, No. 45. Bushell, *Chinese Art*, Vol. I, Fig. 9.

That the playing of the ying-ku was a spectacular performance we cannot doubt, especially when we see from a stone published by Father Volpert as well as from the Von der Heydt slab that the drummers were sometimes mounted on horseback.¹

The ying-ku seems to have gone out of style after Han, at least it is no longer popular on the monuments. But the instruments played by the little seated musicians on these stones have lasted throughout the history of China and we shall refer to the Han slabs again as we consider the musical instruments represented on the Wei and T'ang monuments.

There are in the University Museum two fine votive stelae of the Wei dynasty. The one bears a date corresponding to 551 A.D.,² the other was set up during the reign of Wu Ping, about 575 A.D.³ Over the main niche of the former is a row of six musicians and two dancers.⁴ The instruments depicted are the ch'in, the shêng or reed mouth organ, the four stringed p'i-p'a, the vertical flute, the five stringed p'i-p'a, and the harp. On the other stela, that of Wu Ping, five tiny musicians are seated in the trees above the lowest niche or fly through the foliage as they play. The instruments they carry are the same as those just mentioned, with the exception of the ch'in. Among the T'ang grave figurines are the three charming seated girl musicians belonging to the set of Princess and dancers.⁵ They play the shêng, the p'i-p'a and the harp. In another set of standing female figures are seen a harp player and a performer on the five stringed p'i-p'a.⁶ A seated figure covered with the green and amber glazes of the period plays small cymbals. There is also a set of four male musicians represented with drum, clarionet, shêng and gong, but these belong to a considerably later time and shall be mentioned only briefly at the end of the article together with the Ming and Ch'ing representations on textiles, porcelains, and screen.

On the stela of 551 A.D., in the University Museum, the musician at the extreme right is playing a ch'in. The *Ch'in* 琴, almost always translated "lute," was actually a kind of psaltery. It was the instrument said to have been invented by Fu-hsi at the very

¹ Anthropos, Vol. III, 1908, p. 14.

² Published in the MUSEUM JOURNAL, March, 1923.

³ Published in the MUSEUM JOURNAL, December, 1924.

⁴ See illustration on page 326 of this article.

⁵ Published in the MUSEUM JOURNAL, December, 1924.

⁶ These and the following ones mentioned have been published in the MUSEUM JOURNAL for March, 1926.



Ch'in Player.
From the Stela of 551 A.D.
In the University
Museum.

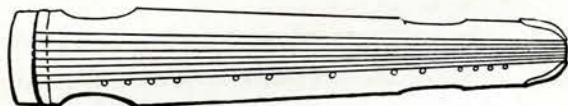
beginnings of Chinese history and we find the character over and over again in the pages of the classics, where it is usually associated with sê 瑟, a similar instrument of more strings. The earliest mention of it is probably that passage in the Book of History in which K'uei, the Director of Music under the Emperor Shun, describes a concert at the court, "When the ch'ins and sês are swept or gently touched to accompany the singing."¹ References to the ch'in occur often in the Book of Odes.

"I have here admirable guests
For whom are struck the ch'ins and sês.
The ch'ins and sês are struck
And our harmonious joy is long continued."²

and

"The grove would yield ere long
Abundant wood for ch'ins and sês
To aid the voice of song."³

besides the quotation already given on page 327. The Li Chi mentions the ch'in and sê and gives Shun the honor of inventing the five stringed ch'in.⁴ There is no doubt that it was an instrument known long before the beginnings of authentic history.



Modern Ch'in.

The ch'in had a sounding board 3.66 Chinese feet long and about 6.6 Chinese inches wide. (In our measurements it would be approximately 4 feet by 8 inches.) These numbers were divisible by 3 and thus were symbolic of Heaven, Earth, and Man. The top of the ch'in was slightly rounded to represent Heaven, the bottom, Earth, was flat with two round or oblong sounding holes. Five silk strings representing the five elements and giving the five notes of the early pentatonic scale were stretched the length of this board. The num-

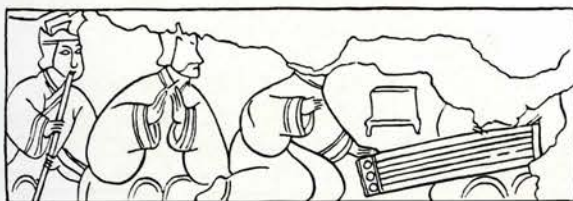
¹ Shu Ching, Pt. II, Bk. IV, Chap. II, 9, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 87.

² Shih Ching, Pt. II, Bk. I, Ode I. A poem of the 12th century B.C. See Legge's Trans. of the C. C., Vol. IV, Pt. II, p. 247. Terms ch'ins and sês substituted for lutes.

³ Shih Ching, Pt. I, Bk. IV, Ode VI, Legge's Metrical Translation, p. 97.

⁴ See page 328.

ber of strings was later increased to seven. At the wider end the strings were held by nuts on the under side and carried through holes in the board to the upper surface. There they passed over a bridge and extended the length of the board, being carried over the narrow end and fastened on jade or wooden pegs below, by means of which they could be tightened. There were usually four small feet which raised the ch'in above the surface of the table upon which it might be placed when played, although early pictures often show it being held on the lap of a person seated on the floor. This position is seen on the figure from the stele of 551 A.D. and in the fragment of painting from Tun Huang illustrated on page 345. The wider end, where the bridge was, was placed under the right elbow with the instrument lying across the lap and the narrow end extending beyond



Scene on a Slab from the Wu Tombs, Shantung.
Flute, clapping, singing(?) ch'in player.
Chavannes, Mission, No. 117.

the left knee. Thirteen studs inlaid in the surface of the board were supposed to be made of gold from Li Shui but were often actually of mother of pearl. They indicated the position of the fingers when playing the notes of the scale. They represented the 12 moons and the intercalary moon. The strings were tuned as follows.

1st	2nd	3rd	4th	5th	6th	7th
C	D	E	G	A	C	D

The 6th and 7th were the octaves above 1st and 2nd. A special and very complicated system of notation had to be mastered by players on the ch'in. The directions are so difficult to learn that few persons can play this instrument. The strings are plucked with the fingers, sometimes beaten, sometimes pushed inward or outward. The fingering is most complicated. No wonder that the ch'in was considered the instrument of the educated classes. Laying claim to such extreme antiquity as would in itself demand veneration, surrounded by an atmosphere of mysterious symbolism which bound it with the occult arts, having a sweet poetic tone, and requiring a

high degree of intelligence and much leisure to master it, it was bound to stand for the acme of elegance, culture and refinement. It is represented on Chinese porcelains among the objects of a scholar, and often appears in paintings of sages and philosophers in landscapes. Gorgeous brocade bags or cases were made for the ch'ins. In the painting No. 21 in this Museum the philosopher walking along the path by the lake is followed by a servant carrying a ch'in in a case.

The earliest known representations of the ch'in appear on some of the Han stone slabs. A slab from the famous Wu Tombs pictures clearly a ch'in of five strings. (See Chavannes, *Mission Archéologique*, No. 117.) There are three round holes or discs at the bridge end, but what their function was we do not know. Probably they were



Detail of a Slab from the Wu Tombs, Shantung.
 Three men on left: pan pipes, flute, singing.
 Three women on right: ch'in, clapping, clapping.
 Chavannes, *Mission*, No. 122.

merely for ornament. They appear again on the instrument depicted on another Wu Tomb bas relief (Chavannes No. 122). The scene is similar, but the ch'in certainly has seven strings. Ch'ins, or perhaps sês, appear on many of the stones from other funeral chambers or vaults of the period, but in some cases, such as Chavannes' No. 182, only the shape of the instrument is indicated. The position in which the ch'in is held in these Han reliefs is apparently different from that of the representations of later times, although this is not always the case, as may be seen from the group on the pillar of Nan Wu Yang. Here we see four musicians. One of the musicians plays a ch'in of five strings. The ch'in depicted on the stone from Chiao Ch'êng Ts'un has seven strings.¹ Of representations belonging to the Wei period the ch'in on the stela of 551 A.D. in the University Museum seems to have nine strings, but two of the lines may be meant to represent the thickness of the board or perhaps the artist was not careful to draw the correct number.

¹ Illustrated on page 339.

In the paintings from Tun Huang there is a ch'in or sê in practically every orchestra. In most cases it is impossible to make out the details, but a few of the fragments are clear enough for us to count the strings and examine the framework of the instrument. We reproduce here a drawing made to show a detail from a fragment of a large Paradise painting. Three members of the orchestra appear playing on the ch'in, harp, and p'i-p'a respectively. The ch'in is of elegant form, slender and of great refinement of line like a piece of Sheron. The edge of the board appears to be of a dark

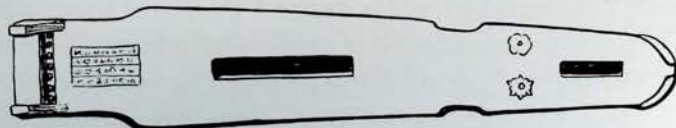


From the Pillar of Nan Wu Yang.
Flute, ch'in, clapping, shêng.
Chavannes, Mission, No. 156.



Detail of a Painting Found at Tun Huang.
Representing the Paradise of Amitabha.
T'ang Dynasty.
Ch'in, harp, p'i-p'a.
Stein, The Thousand Buddhas, Pl. XXX.

wood and is carried down at the corners into box feet. One can make out seven strings, but they do not seem to go over either end. Other plates in The Thousand Buddhas show ch'ins, however, whose strings do round over the end held furthest away.



Under side of a ch'in in the Shosoin showing sound holes, pegs and holes for the seven strings and the two large rosette pegs to which strings were fastened after passing around the narrow end of the board.

T'ang Dynasty.
Drawn from the Toyei Shuko.

None of these representations show the notches in the side which are so characteristic of the shape of the ch'in as we know it today, but the beautiful T'ang ch'in of the Shosoin at Nara has a notch on each side toward the narrow end like the modern ch'in shown. This example is priceless, not only because it is an exquisite piece of work in gold and silver inlay but also because it is the only really authentic example known of a T'ang ch'in. There is an inscription in Chinese on the under side just below the seven string pegs. On the coromandel screen in the University Museum are a number of instruments of the Ming Dynasty depicted. One of the scenes shows three ladies seated in a small room, one of them playing



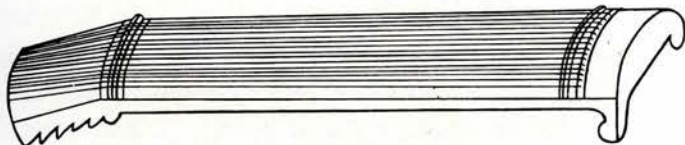
Lady Playing a Ch'in.
From the Ming Coromandel Screen.
In the University Museum.

a ch'in which rests on the table before her. This later ch'in has two notches or indentations in the outer side. The seven strings are indicated in white paint.

The numerous representations on the Han reliefs and in the T'ang paintings from Tun Huang (and the frescoes of the caves themselves) all point to a more popular use of the ch'in than prevailed in later days. The word ch'in meant to "prohibit," the ancient idea being that its sounds restrained and checked evil passions. But the term is otherwise singularly *à propos*, for the difficulties which confront the beginner on the ch'in are such as to turn many from this to more easily mastered instruments. The expert performer was and is rare. The strings are not now tuned in accordance with the ancient order, but are G A C D E G A. Neither are the dimen-

sions adhered to as strictly as in the olden times. But no radical improvements can be made in an instrument so rigidly set in symbolism. During the late Empire the ch'in was heard only at court ceremonies, and in connection with the Confucian rites in which six of these instruments take part. It is almost never played now.

The *Sê* 瑟 was an instrument very much like the ch'in, the main difference being the number of strings. It also was reputed to be of great antiquity and is almost always mentioned in the classics together with the ch'in. Dr. Legge usually translates the two characters "lutes, large and small,"¹ or sometimes just "lutes."² Some European books call them "lute and lyre." But the *sê* is neither a lute nor a lyre but a kind of psaltery, as is the ch'in. There are several sizes of *sê*, the largest being nearly seven feet long. A very ancient legend says that the *sê* had originally fifty strings but that "when a certain Miss Su was one day performing on the *sê*



Drawing of a *Sê*.
From Van Aalst, p. 63.

in the presence of the Emperor Huang Ti (2698 B.C.) the strains of the instrument impressed him so deeply and rendered him so sorrowful that he forthwith ordered the number of strings to be reduced by one half."³ The *sê* is built on the same principle as the ch'in, that of a sounding board slightly rounded on top and flat below, with silken strings stretched the length of it and fastened underneath with pegs. There are two round sounding holes in the under side. The tail of the instrument slants downward somewhat from the body, a feature which is not paralleled in the ch'in. At each end is a ridge, perhaps an inch high, over which the strings pass before descending to the under side, each through its small hole. There are twenty five silken strings, each formerly raised on a movable bridge and the five groups of five bridges were said to represent the five colors, red, yellow, white, blue, and black. The *sê* is now tuned to the pentatonic scale and only the first ten strings

¹ Shih Ching, Pt. II, Bk. VI, Ode IV, Legge's Translation of the Chinese Classics, Vol. IV, Pt. II, p. 367.

² Shu Ching, Pt. II, Bk. IV, Chap. II, 9. Ibid., Vol. III, Pt. I, p. 87.

³ Van Aalst, p. 62, quoting from the Erh Ya, a dictionary written by a disciple of Confucius.

have bridges. The old method of stringing at the tail end is uncertain. The strings seem to have been carried over the end of the board, but to have been brought up to the top of the board again through the holes and tied at the ridge.

The *sê* is of just as venerable antiquity as the *ch'in*, and associated with it from earliest times, yet it seems to be not so completely hedged about with allegory as is its companion. The present number of strings is the same as the instrument had in Huang Ti's time, twenty-five. But there have been at various times twenty seven, nineteen, or twenty three. A small variety of the *sê*, called the *Tsêng*, 絳 has only fourteen strings. The notation for the *sê* is much the same as for the *ch'in*, but the *sê* is always played in octaves, two notes at a time. It is supposed to have a range of five octaves.



Shêng Player.
From the Stela of 551 A.D.
In the University
Museum.

The *sê* may not have been considered quite as classic as the *ch'in*, but it was a very poetic instrument, was much used to accompany singing (see the poem quoted on page 330) and had a place in court and religious ceremonies. The volume of tone it gives is not great, but the quality is very sweet.

The second figure from the right on the stela of 551 A.D. is playing a *shêng*, another extremely ancient Chinese musical instrument. The *Shêng* 笙 or Chinese mouth organ, looks something like a teapot with bamboo pipes of various lengths sticking out of it. The performer puts the spout of the teapot to his mouth while his fingers play on holes in the pipes which are close along the rim of the bowl. A great deal has been written about this very interesting and unique instrument,¹ but only a short description can be given here.

Its invention, as has already been stated, was ascribed to Nü Wa, who was said by some to have been the sister of Fu-hsi. The earliest writings refer to it as ancient. It is mentioned many times in the Odes and in the Book of History. These are lines from an Ode written in the 12th century B.C.:

I have here admirable guests;
The *sês* are struck, the *shêng* is blown.
The *shêng* is blown till its tongues are all moving.²

¹ See Eastlake, *China Review*, August, 1882, and Hermann Smith, *The World's Earliest Music*.

² *Shih Ching*, Pt. II, Bk. I, Ode I, Legge's Trans. of the C. C., Vol. IV, Pt. II, p. 245.

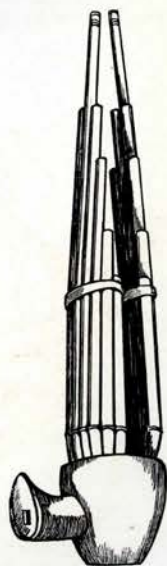
And from a poem probably of the 8th century B.C.:

When we have seen our prince
We sit together with him and organs are played.¹

Also:

"My husband looks full of satisfaction
In his left hand he holds his reed organ."²

besides the quotation already given on page 327. The shêng is mentioned in the Book of History among the instruments used by K'uei in his concert,³ and in the Music Chapter of the Li Chi several times. Originally the windchest, or "teapot" part, was a calabash, for which wood later became a substitute. Dr. Eastlake says that in ancient times there were, according to the Erh Ya, "two distinct forms of the shêng; the largest and probably more ancient known as the ch'ao, or 'bird's nest,' the smaller known as the ho, or 'concord.' . . . The scale of these two instruments must have been different, as the one had nineteen, the other thirteen reeds."⁴ It is impossible to make out from the early sculptures just how many reeds are represented. They were very evidently arranged in the two groups in Han times as now, however, as the two sections are clearly indicated in some of the Han reliefs. The popularity of the shêng is attested to not only by the ancient literature but by the Han, Wei, and T'ang sculptures and paintings. Wherever there are musicians there is a shêng player. The instrument is so peculiar in shape that there is no difficulty in recognizing it. The musician on the right in the scene from the Pillar of Nan Wu Yang (see page 345) is playing a shêng. Another appears on the stone from Chiao Ch'êng Ts'un (page 339) and again on the slab, Chavannes No. 160. It is frequently represented on Wei sculptures such as the two stelae in this Museum. The delightful little player on the tablet of 551 A.D. has already been mentioned. The other stela, of the time of Wu Ping, shows a tiny performer on the shêng



Drawing of a
Shêng.

Showing the
present shape of
mouthpiece.
From Eastlake.

¹ Shih Ching, Pt. I, Bk. XI, Ode I. Ibid., Vol. IV, Pt. I, p. 191. Instead of shêng the character *huang* was used, a term for the little metal tongues inside the reeds of the shêng.

² Shih Ching, Pt. I, Bk. VI, Ode III. Ibid., Vol. IV, Pt. I, p. 113.

³ Shu Ching, Pt. II, Bk. IV, Chap. II, 9. Ibid., Vol. III, Pt. I, p. 87.

⁴ Eastlake, *China Review*, August, 1882, quoted by Van Aalst, p. 81.



Shêng Player.
From the Stela of the Time of
Wu Ping, c. 575 A.D.
In the University Museum.

floating through tree tops, blowing away as if totally oblivious to his surroundings. Blowing is not the correct term, however, for the shêng was played by suction. The sucking in of the air by the performer is said to be very bad for the health, bringing on lung troubles of various kinds. No performer is known to live longer than forty years. Perhaps this is why few musicians can be found today who can play this instrument. Among the most beautiful examples of musicians playing the shêng should be mentioned the little figure engraved on a panel of the small sarcophagus for the ashes of a Buddhist priest of the Sui dynasty. This is in the Boston Museum of Fine Arts. The Wei stela of 534 A.D. in the Metropolitan Museum shows another exquisite example.

Shêng players are often found among the grave figurines of the T'ang dynasty. One of the finest of these is of the set of three belonging to the group of Princess with dancers and musicians. This dainty little lady is seated on the ground, clad in a long high waisted robe and wearing her hair in two large knobs. She has the mouthpiece of the shêng to her lips and the instrument tipped slightly toward the left shoulder. The attitude of the performer is not correct and details are not shown; in fact, the shêng is represented as a mere cone rising out of a bowl like form, without delicacy or grace. While the general shape of the shêng is in all these early representations unmistakable, it is hard to judge of the shape of mouthpiece or number of reeds. The mouthpiece in them all, however, appears to be long and slender, not short and stubby as in the shêng illustrated on page 349. The Boston Museum example mentioned, the beautiful specimen in the Shosoin, and the paintings found at Tun Huang, however, all show the shêng with a long, slender, curved mouthpiece like a tea or coffee pot spout. This must have been the early type. Moule says that the shêngs used by the Lamas from Peking seemed larger than the common type and also had the



Shêng Player.
Grave Figurine of the T'ang
Dynasty.
In the University Museum.

"old fashioned coffee pot spout mouthpiece, perhaps made of pewter, which is now rarely seen." We show here a detail from one of the Tun Huang paintings. The exact number of reeds can not be determined; perhaps the accuracy of the artist in that respect should not be too far trusted anyway where such a large number of pipes is involved. This detail agrees, however, in every way with the T'ang example in the Shosoin, except perhaps for the variety in the lengths of the reeds.

The character shêng is made up of the radicals bamboo and to produce, in other words, "music made by reeds." The ancient shêng, like the modern, was composed of the three parts, air chamber, mouthpiece, and reeds or pipes. The air chamber was rounded like a bowl and made of wu t'ung wood, or sometimes polished redwood. At the bottom a small round piece of ivory pierced with five holes let in the air. The mouthpiece has already been discussed. It was usually tipped with ivory. In examples that exist today the seventeen reeds stand in holes around the rim of the bowl, packed closely side by side except on the right hand side of the instrument, where a small gap may be left. They are arranged symmetrically according to height, the two longest being in the middle, front and back, and the others descending like steps to the short ones at the sides. A metal band binds them all together at the level of the shortest ones or just below. Each pipe goes down over half an inch inside the rim of the air chamber and at the lower end has fastened in it with wax a thin metal reed, the huang or tongue referred to in the classics. Four of the seventeen pipes are mute, contributing only to appearance, and these of course do not have either the tongues or the finger holes. The finger holes are small circular openings near the rim of the air chamber. Each sounding pipe has also an oblong slit on the side. The performer when playing the shêng holds it inclined to the right, but according to the early sculptures and paintings this was not the case in Han, Wei or T'ang times, for it is always represented as held directly in front of the player and with the pipes standing up vertically. There is no evidence of the horizontal position in which Moule says it was held when played. The scale Moule has ascertained to be G, A, B \flat , C, D, E, F, G, A, B \sharp , C.



Shêng Player.
Detail of a Painting
Found at Tun
Huang.
Stein, *The Thousand Buddhas*,
Pl. VI.

The finger hole must be stopped in order to get the note from a reed.

The beautiful Chinese shêng in the Shosoin at Nara holds first place in the world as the most superb example of any time. The grace and delicacy of the instrument, its beauty of proportion and finish are unsurpassed. The air chamber and mouthpiece are of very dark wood inlaid with silver and the bamboos are beautifully selected, with joints exactly matching. We are glad to say that



The T'ang Dynasty Shêng in the Shosoin at Nara.
From the Toyei Shuko.

the sounds made by this instrument are in keeping with its appearance. Dr. Eastlake says, "No other instrument is nearly so perfect either for sweetness of tone or delicacy of construction." (He is speaking of Chinese instruments.) He goes on to say, "The principles embodied in it are substantially the same as those of our grand organs. Indeed, according to various writers, the introduction of the shêng into Europe led to the invention of the accordion and the harmonium. Kratzenstein, an organ builder of St. Petersburg, having become the possessor of a shêng, conceived the idea of applying the principle to organ stops."¹

When the Stearns Collection of Musical Instruments at Ann Arbor, Michigan, was catalogued in 1918 a modern shêng was taken apart and exhibited to show details of the construction.

Of flutes the Chinese had many different kinds. Usually drums and flutes are the first musical instruments invented by any race and the Chinese were no exception. A number of types are mentioned in the earliest writings, but no one seems to have survived sufficiently unchanged for us to be sure of the details of its construction, unless it be the p'ai hsiao or pan pipes. Early descriptions are very vague and later the names became much confused, so that the exact identification of the various kinds of flutes represented on the early monuments seems impossible, at least at present.

It would seem that the Chinese invented first the six lüs, each pipe giving one note, and that then the P'ai Hsiao 排簫 or syrinx was developed from it, a series of ten of these pipes fastened together with a silk cord (an invention attributed to Shun). The whistle pipe

¹ Eastlake quoted by Van Aalst, p. 82.

or vertical flute followed, for it was discovered that by piercing holes at various places in a reed and stopping these holes one by one with the fingers the same pipe could be made to produce many different notes. The *lūs* developed into the twelve standard pitch pipes while the *p'ai hsiao* grew to a series of twelve to correspond, then became enlarged to sixteen, then twenty four. (It has at present sixteen and is used only in ritual music). The tiny *p'ai hsiao* player on the Wei stela in the Metropolitan Museum is playing on a syrinx made up, apparently, of twelve pipes. Except for the addition of an ornamental wooden case, the *P'ai Hsiao* of today is practically the same as the ancient one. The pipes are tuned to the twelve notes of the *lūs* and the four upper notes of the octave below.

In the case of the single pipe pierced with holes, endless experimentation followed until many varieties of flute were developed. Some were long and some short, some were held vertically and blown at the end, others were held transversely and blown in the middle or near one end. Most of them were originally of bamboo, as is shown by the bamboo radical in the characters.

The flute mentioned in the oldest poems of the Book of Odes is the *Kuan* 管. This is named in the *Na*, the sacrificial ode of Shang quoted on page 329. Again it appears, in company with the *P'ai Hsiao*, as the flute in the Early Chou poem of the Blind Musicians (see page 329). The character is found in the Book of History in the list given by K'uei of the instruments in his concert,¹ the *Li Chi* contains it many times, and it is mentioned in the *Chou Li*. According to Dr. Legge, the *Kuan* was in some way double, but he says he does not understand just how² and I have discovered no evidence to show that it was double originally. The character itself means pipe or pipes and is made up of the radicals for bamboo and official, which suggests that this particular flute was the officially recognized form in the earliest days. *Kuan* may have been merely a general term for flute. The *Kuan* today is a pipe of wood fitted with a double reed at one end to form a head and having seven finger holes



Player on the Pan Pipes.
From a Stela of 534 A.D.
In the Metropolitan Museum.

¹ *Shu Ching*, Pt. II, Bk. IV, Chap. II, 9, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 87.

² Dr. Legge's Translation of the Chinese Classics, Vol. III, Pt. I, p. 88, note.

above, with, Giles records in his Dictionary, either one or two below. The instrument is only about 8 inches long. According to Tsai Yü of the 16th century, two slightly shorter flutes ($7\frac{1}{4}$ inches) were joined together to form a double pipe called Shuang Kuan. Ma Tuan-lin of the 14th century describes the Shuang Fêng Kuan as being a double pipe, each member of which had a double reed and four finger holes, the left pipe giving the bass notes, the right the treble. Notes to the Chou Li explain Kuan as "like the Ti but smaller, two are joined together and so blown."¹ But we suspect that originally the Kuan was a little whistle pipe, a primitive fife. Whether at the time the classics were written it had already developed



Flute Player.
From the Stela of Wu Ping Period.
c. 575 A.D.
In the University Museum.

into the reed instrument of double form we do not know,² but it is certain that a whistle pipe about 8 inches long continued in popular use far into the T'ang period, for there are plenty of them represented in the Tun Huang paintings.³ Whether double or single we cannot tell, but it is evidently a small 8 inch pipe of some kind upon which the little piper of the Wu Ping stela, in this Museum, is playing with such absorption. Certainly of all representations of flute players in art this is one of the

most beautiful known, the very line design being music itself, an exquisite bar of sweet notes.

The Kuan, or Kuan Tzu as it is now often called, is still a feature of wedding and funeral processions.

Two most interesting ancient flutes were the *Yo* 箎 and the *Ti* 笛. The *Yo* was a short vertical flute with three (some authorities say six) holes, and was carried by dancers. It is still used by them to accompany their movements, but since the Sung dynasty, and perhaps much earlier, it has been a mere wand or stick and not a

¹ Moule, Jour. of the N. China Br. of the R. A. S., Vol. 39, 1908. But the notes to the Chou Li are of much later date than the Chou Li itself.

² Perhaps after the *Yo* and *Ti* became separated.

³ Miss Schesinger's article in "Serindia," Appendix H, p. 1467.

playable flute. Reference to it in the Book of Odes would seem to indicate that it was played during the dance in the earlier days.

“The Ya and the Nan which they sing
Dancing to their flutes (yo) without error.”¹

And again in an Ode of the seventh century B.C. a Yo is carried in the dance:

“With my large figure
I dance in the ducal courtyard.
.
.
.
.
.
.
In my left hand I grasp a flute (yo)
In my right I hold a pheasant’s feather.”²

Dr. Giles says that the Yo originally formed part of the double flute, being the treble of which the Ti was the bass, and that it was held in the left hand, while the Ti was held in the right.³ Doubtless it had then only the three finger holes (as the character would seem to indicate). And probably it remained much the same for several hundreds of years after it became separated from its other half. Tsai Yü, a writer of the late sixteenth century, saw a genuine specimen of the ancient Yo and described it as being 20 inches long and having three finger holes, 3, 5, and 7 inches respectively from the lower end of the pipe. It would appear, from the fact that the Yo is mentioned without the Ti in the Odes, that it had become separated from its companion before the eighth century B.C. Perhaps the dancers had found it difficult to handle the double form during their evolutions. Yüeh is another name for the Yo.

The question of the development and fate of the ancient Ti is much involved, vagueness of description and confusion of names here reaching an extreme. Two facts seem to stand out of the general chaos, however. The first is that “the ancient Ti was certainly a vertical flute,”⁴ and the second is that the modern Ti is certainly a transverse one. Did the Ti actually undergo such a drastic change or was, as Moule suggests, the name revived at some time and applied to the wrong instrument? Involved in this question is that of the origin of the *Hsiao* 簫, a vertical flute intimately connected

¹ A more correct translation than the metrical one given on page 327, see Legge’s Translation of the Chinese Classics, Vol. IV, Pt. II, Bk. VI, p. 367.

² Shih Ching, Pt. I, Bk. III, Ode XIII, Legge’s Trans. of the C. C., Vol. IV, Pt. I, p. 61.

³ Giles, Dictionary, see Yo and Ti.

⁴ Moule, Journal of the N. China Br. of the R. A. S., Vol. 39, 1908, p. 65, note.

with ritual and a favorite with the educated classes. Its length is ordinarily about 22 inches and it has five finger holes above and one below. According to tradition it was invented by Yeh Chung¹ of the Han dynasty, but the general opinion among Chinese has been that the Hsiao is the ancient Ti. Hsiao, of course, originally meant merely flute and referred to the pan pipes. The full name of this flute is Fêng Huang Hsiao, though it is called simply Hsiao in ritual. Tsai Yü believed that the Hsiao was a descendant of the Yo, taking its place when the Yo became a mere wand. In regard to the transverse Ti, it, he says, was a foreign instrument, derived from the Ch'iang tribe on the western border of China, and used, from the Han dynasty on, only by popular bands.



Flute Player.
From a Painting found
at Tun Huang.
Stein, *The Thousand
Buddhas*, Pl. XXX.

It seems best to cast names aside for the present and see what sort of flutes were represented on the monuments. The chances are that when the double flute became separated and the dancers carried and played the Yo, that the Ti was taken over into the orchestra. Later, when the Yo became a mere stick, some flute had to play the treble and so the orchestra acquired something to play the parts the Yo had played. We would thus expect to find two vertical flutes in the orchestra more or less like the Yo and the Ti. We do. On the Han bas reliefs a long, vertical flute is conspicuous (see pages 343 and 344). It may be the Hsiao or it may not. Some specimens of the Hsiao have been known to be 27 inches long. Among the orchestras of the Tun Huang paintings and frescoes are many performers on a whistle pipe that appears to be about 16 inches long. Unfortunately, we cannot make out the number or position of the finger holes in these representations. Otherwise the identification might easily be made.

We suspect that the flute played by the third musician from the left on the stela of 551 A.D. is not one of the old classical instruments just mentioned but a then rather new importation, an instrument destined to become a great favorite in China, the *So Na* 鎖呐 or Chinese clarionet. It was a wooden pipe fitted, in modern examples, with a copper bell at the end, the total length being 18 or 20 inches. The mouthpiece is a small reed fixed in the upper end, oboe fashion. There are seven holes on the upper side and one for the

¹ Van Aalst, p. 70. Giles, Dictionary, see Hsiao.

thumb on the lower. It is much used at weddings and funerals and the noise it produces has been described as "shrieking and horrible." The name in Chinese is meaningless, So Na being merely a transliteration of the Persian name for the instrument, Zourna. It was probably introduced into China some time early in the Christian era. It is represented again in the hands of one of the four men musicians, grave figures of the Ming dynasty, a set which was published in the MUSEUM JOURNAL, December, 1925.

No discussion of flutes is complete without mention of the *Ch'ih* 篳. It was a bamboo flute about 18 inches long and played transversely. There were right handed and left handed ones. The blow hole was $5\frac{1}{2}$ inches from one end and there were six finger holes, five on the outer side and the sixth on the inner. The *Ch'ih* is mentioned several times in the classics.

The elder brother blows the *hsüan* (ocarina).
The younger blows the *ch'ih* (flute).¹

"Heaven enlightens the people
As the bamboo flute (*ch'ih*) responds to the
porcelain whistle (*hsüan*)."²



Flute Player.

From the Votive Stela, of 551 A.D.
In the University Museum.

Moule seems to think that the ancient *Ch'ih* was a different sort of flute, however, for he says, "The use of a flute of this nature under the name of *Ch'ih* seems to date at least from Sung." The *Ch'ih* seen and described by Tsai Yü in the 16th century was 16 inches long. "Blowing it produced a sobbing sound, its notes were harmonious and refined, a veritable relic of the Three Dynasties, rare and invaluable."³ It seems, at any rate, to have been a transverse flute. The *Erh Ya* (c. 400 B.C.) says the *ch'ih* was made of bamboo, its length was 16 inches, one hole opened upwards, and it was blown transversely. It was said to be, as one might guess from the Odes quoted, in tune with the *hsüan*. This latter instrument was a peculiar thing of the ocarina type. It was one of the most ancient of the Chinese musical instruments. The *Hsüan* 埙 was a cone of baked clay (later porcelain), with a

¹ Shih Ching, Pt. II, Bk. V, Ode V. Legge's Trans. of the C. C., Vol. IV, Pt. II, p. 346.

² Shih Ching, Pt. III, Bk. II, Ode X. Ibid., Vol. IV, Pt. II, p. 502.

³ Moule, Jour. of the N. China Br. of the R. A. S., Vol. 39, 1908.



P'i-P'a Player.
From the Stela of 551 A.D.
In the University Museum.

blow hole at the apex, and five finger holes (later a sixth was added). It represented one of the Eight Sounds (see page 336). There are no representations of either of these ancient instruments, ch'ih, or hsüan, on any of the early monuments in the Museum. Transverse flutes appear on the Ming screen, the Ming embroidered hanging and some of the porcelains, however.

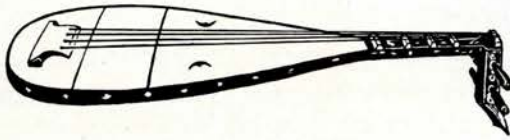
The musical instrument most frequently depicted on the early stelae and in the hands of grave figurines of the T'ang dynasty was the *P'i-P'a* 琵琶. This is shown as a kind of lute, or, more properly, a balloon guitar, since the back is flat, not convex. There are two such instruments on the Wei stela of 551 A.D. and two on the stela of Wu Ping. Two distinct types can be distinguished, both of which exist in much the same form today and are as popular as apparently they were fifteen hundred years ago! The four stringed type is perhaps the better known and probably the older, so that will be discussed first.

The p'i-p'a seems to have been unknown in China in the earliest times; at least, there is no mention of it in the classics. One of the earliest references to it in literature is in the Fêng Su T'ung, written in the second century A.D., which tells us that the ancient p'i-p'a was 15 inches long and had four silk strings which represented the four seasons, a bit of allegory which points to an ancient origin. Just how ancient the p'i-p'a was at that time, however, we are not told. The T'ang History states that its origin was not known. There are legends to account for it though. One has it that the p'i-p'a was invented in the third century B.C. after the disappearance of the ancient music (in the Burning of the Books, 212 B.C.) and Yüan Hsien, one of the Seven Sages of the Bamboo Grove, was sup-



P'i-p'a Player.
From the Stela of the Wu Ping Period.
c. 575 A.D.
In the University Museum.

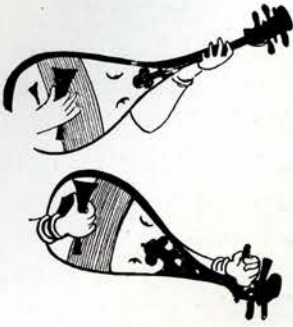
posed to have been an excellent performer on it. Another story says that the p'i-p'a was introduced into China from Central Asia by the Chinese Princess Wu-sun Kung Chu, who had married a prince of the Turkic state of Wu-sun, and returned to China in 51 B.C., many years after her husband's death. Certainly the popularity of the instrument in far western China is attested to by the numerous representations of it in the paintings from Tun Huang and the frescoes on the walls of the caves there, a fact which at least does not weaken the theory of a western origin. That the p'i-p'a does not appear on the Han sculpture so far known, while the flute, shêng, and ch'in do, would go to argue the theory of an introduction later than the third century B.C. By the Wei period, however, it had won its prominent place in the popular orchestra, which position of importance it held all through the T'ang dynasty, if we may judge from the frequency of its appearance on the monuments. It was no



A P'i-P'a of the T'ang Dynasty.
Specimen in the Shosoin, Nara.
Drawn from the Toyei Shuko.

longer the small instrument mentioned by the Fêng Su T'ung, but had increased in size to about three feet in length and one foot in width. Again we are most fortunate in having an original T'ang example in the Shosoin, in fact, five beautiful specimens there of the four stringed type and one of the five stringed type.

The p'i-p'a had a shallow, pear shaped body with a flat sounding board, across which was stretched a wide plectrum band. The Shosoin examples have plectrum bands of leather most skillfully painted. In front of this band, between it and the neck, were two crescent shaped sounding holes. The neck was rather short and the head containing the pegs or screws was bent far back, almost at right angles to the neck. The four silken strings were attached to a prominent bridge, stretched across the plectrum band, passed over four frets, were carried over the end and tightened in the usual way by means of the pegs. Literature informs us that there were eleven or twelve frets, the lower ones being on the sounding board itself. This is the case with the modern p'i-p'a, but the probability is that the Shosoin examples and the Japanese biwa, which was copied



Two P'i-p'as.
From a Painting from Tun
Huang.
Stein, *The Thousand Buddhas*,
Pl. II.

from T'ang specimens, represent the more ancient instrument, to which the frets on the body are a recent addition, comparatively.

The biwa also has the sound holes which are so prominent in the Shosoin examples and in the Tun Huang paintings and so rare in the modern Chinese instrument. The p'i-p'a was played with a large fan shaped plectrum, nearly all the notes produced in tremolo. The plectrum was introduced in the T'ang dynasty. The Tsou P-i-p'a ("twanged by hand" p'i-p'a), of earlier times was, we are told, played on horseback. The strings, according to Van Aalst, were tuned to C, F, G, C.¹

The p'i-p'a was a most artistic and decorative instrument. The narrow band of dark wood forming the curved sides of the sound box is much made of by the painters who produced the Tun Huang paradise scenes. The two p'i-p'as illustrated here are details from a fragment secured by Stein. The instrument below is probably a tenor, the other a bass; they seem to differ mainly in length of neck. The general shape of the p'i-p'a, its curving lines, its proportions, the piquant throwing back of its head,² with the ornamental pegs suggesting hair pins, all appealed to the artist. The artist not only emphasized the beauty of it in his paintings but lavished his talents upon the instrument itself. The Shosoin examples are all of dark wood on sides and back, beautifully inlaid with mother of pearl, and the plectrum bands are elaborately painted. Such minute details would hardly be indicated in the paintings, but the instruments represented in the fragments from Tun Huang give evidence of exquisite decoration. Often the dark wood (?) of the neck is carried down onto the sound board in a scroll form suggestive of the brass bindings of a mediaeval chest.

The diminutive grave figurine of a young girl playing a p'i-p'a is a companion to the shêng



P'i-p'a Player.
Grave Figurine of the
T'ang Dynasty.
In the University
Museum.

¹ Or probably they correspond more nearly to our D, G, A, D.

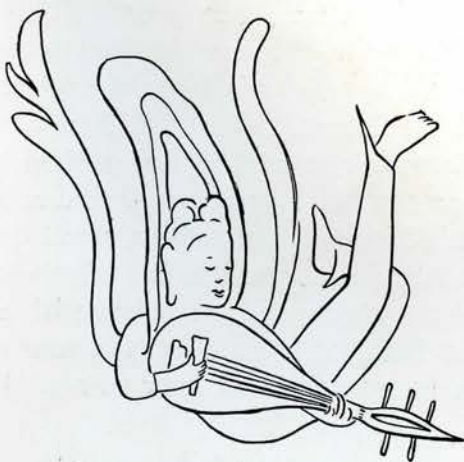
² There are some examples illustrated in the Tun Huang paintings which show the head not bent back.

player already described and has the same charm and beauty of pose and poise. The four strings of the p'i-p'a are indicated by grooves in the clay. There is another T'ang grave figurine carrying a p'i-p'a, a standing figure, and in that case also the head of the instrument has been broken off, but the five holes plainly indicated on the bridge show that it was intended to represent the five stringed type.

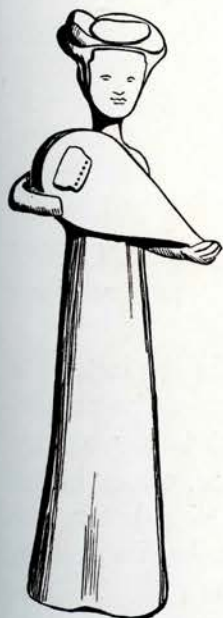
It would appear that the five stringed p'i-p'a was almost, if not quite, as popular in Wei and T'ang times as was its four stringed brother.

It is represented in the University Museum by a figure on the stela of 551 A.D., on the Wu Ping stela, and the T'ang figurine already mentioned. The main differences are brought out clearly on the stela of the Wu Ping period. The body of the five stringed instrument was of a more slender, elongated pear shape and the head, or peg box, was not bent back at all, although it doubtless was curved gracefully at the end, as we see in the specimen in the Shosoin. The shape of this peg box is so very distinctive, like an open, very acute angled triangle, that there is no mistaking it when it is met with upon any of the monuments. The example in the Shosoin gives us a chance to examine it in profile as well as in front view. It is about half a foot longer than the four stringed p'i-p'as and, like them, is beautifully decorated with inlay of mother of pearl (and tortoise shell in this case).

On the stela of 551 A.D. the head of the p'i-p'a represented on the left side is hidden behind the flute player, but the body of the instrument is large and there are five strings clearly indicated by grooves. The five stringed p'i-p'a was also played with a plectrum.

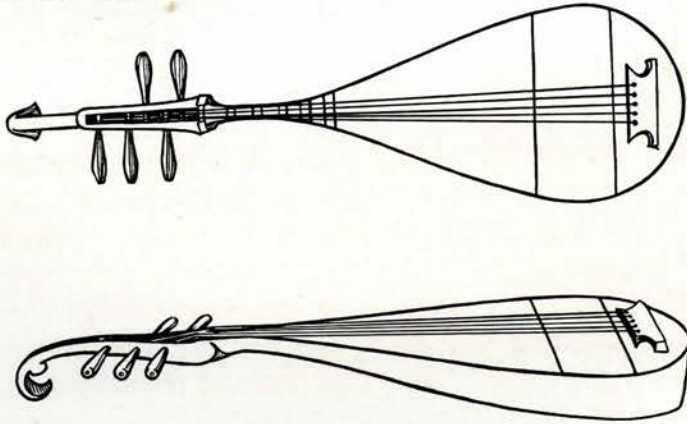


Player on Five Stringed P'i-p'a.
From the Stela of Wu Ping Period.
c. 575 A.D.
In the University Museum.



Player of Five Stringed
P'i-p'a.
T'ang Grave Figurine.
In the University
Museum.

Literature informs us that the p'i-p'a had four or six strings! Whether in the case of the six stringed instrument the shape was different or not it is hard to tell. A little T'ang figurine in the Rhode Island School of Design holds a p'i-p'a with a peg box characteristic of the five stringed type, but the lines painted to represent strings seem to indicate the presence of at least six. This Museum possesses a small T'ang painting representing monks and Bodhisattvas bearing offerings and one of the figures is carrying a huge eight stringed guitar with a circular plectrum band and a peg box bent far back, as in the four stringed p'i-p'as. Whether such an instrument was ever in actual use or not in China we have no



The Five Stringed P'i-p'a.
Specimen in the Shosoin, Nara.
Drawn from the Toyei Shuko.

further evidence. The painting may have been made in Central Asia and the instrument may be a western type, or even a religious extravaganza.

It has been said that the Chinese were unique in having never invented a *Harp* of their own. Probably they never felt the need of one, having such instruments as the ch'in and the sê to serve them in the accompaniment of song. There is no evidence, either in the language or in art, of any harp having existed in China before the Wei dynasty. But, in company with the p'i-p'a, it makes its appearance on the Wei sculpture and is represented so often in the Tun Huang paintings and with T'ang grave figurines that we conclude it had become a prime favorite in a short while. That it was introduced from the West with the advent of Buddhism seems probable and would account for its decline in favor after the T'ang dynasty.

Finally, it was so completely forgotten that later writers did not even mention it and Europeans did not know until recently that the Chinese had ever had a harp. Mrs. Richard, to be sure, reproduced in her paper a drawing of an "ancient harp" which has 12 strings, but she does not state from what source she obtained it. We do not even know what name the Chinese gave it. We only know that it appeared about the 6th century A.D., that it was depicted very often on monuments of the Wei and T'ang

periods, that its characteristics are so definite as to leave no doubt that it was a real and not an imaginary instrument, and finally that it disappeared again some time after the great religious age of T'ang. What we would know must at present be learned from the representations themselves.

One of the clearest pictures of the harp is that shown in the fragment of a painting found at Tun Huang, a detail of which is reproduced on page 345. The construction is very simple. There is a high curved sound box which ends below in a spike for supporting the instrument on the ground. At the lower end of the sound box, just above the spike, a horizontal bar is attached to which are fastened the strings. There is no vertical pillar. The number of strings cannot be exactly counted and could perhaps not be depended upon to be correct anyway, but there seem to be sixteen. The performer sits on the ground, holds the sound box against her body while the spike supports the weight, and extends an arm on each side of the strings just as a harp is played today. The Persians had an instrument constructed in the same way which in the 16th century they called "chang." Chang is hardly a Persian word; one is tempted to see a connection between this name and the Chinese word chang, which means "to sing or lead in singing." But the Persians had harps long before the Chinese, and the Babylonians before them. There is a famous bas relief



Player on the Five Stringed P'i-p'a.
From the Stela of 551 A.D.



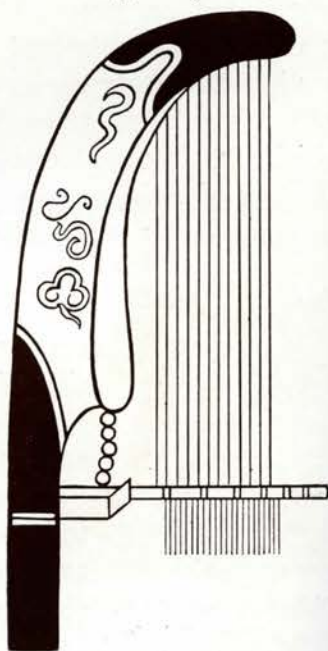
Eight Stringed P'i-p'a.
From a T'ang Painting.
In the University
Museum.



Harp Player.
From the Stela of 551 A.D.
In the University Museum.

dating from the time of Gudea (2350 B.C.), which was found at Telloh and upon which is represented an ancient Sumerian harp of eleven strings. It had a front pillar and was called balag. But this feature of a front pillar did not persist. The early world seems to have preferred the more primitive but perhaps less clumsy type.

There seem to have been several different sizes of harp. The one played by the musician on the left of those on the stela of 551 A.D. is a large harp, evidently of the same type as those prominent in the orchestras of the Paradise paintings from Tun Huang. The sculptor has indicated here by scratches that the sound box was of wood. The Tun Huang paintings show that often the wooden sound boxes were beautifully inlaid or otherwise decorated. On the stela carving a narrower piece of wood ran inside the sound board and received the strings stretched from the horizontal bar below, where we can see them fastened around the bar. There are sixteen strings represented. But a smaller size of harp seems also to have been very popular. It appears about one half the size of the other. The stela of the time of Wu Ping shows a celestial musician flying with a small harp. The spike for support is quite in evidence in this representation. Ten strings can be counted. Among the T'ang grave figurines in the Museum two carry these small harps. The seated figure belonging to the set of which we have already described the shêng and the p'i-p'a players is the more charming. She is represented as tightening a string (?), for which purpose she is holding the harp upside down in her lap. The spike has been broken off, if one was ever represented. Grooves in the horizontal bar, which is in this case very wide (as is true of an example in the



"Ancient Harp."
Mrs. Richard's Paper, p. 37.

Metropolitan Museum also), seem to indicate twelve or fourteen strings, but details are not clear. The standing figurine has only the sound box still remaining. Horizontal bar and spike are both missing.

There is one more representation of a musician among the collections of the Museum belonging to the Wei and T'ang dynasties, a small grave figurine of a Princess seated, playing a diminutive pair of cymbals. These probably represent the type known as *Ch'a Po* 鈸. These were small heavy cymbals about 4 inches in diameter and slightly bell shaped, rising to a knob which was held in the fingers and to which was attached a cord which connected the pair. They were struck together lightly but with a direct motion, not a "side swipe" as in the case of the larger, thinner, plate like cymbals which appear in later works of art and were, we should guess, comparatively recent importations. Both types are represented on the Ch'ing dynasty porcelains in the University Museum. One fine club shaped blue and white vase of the K'ang-hsi period (1662-1723) shows a princess entertained by a dancer, while seven ladies provide the music. Both types of cymbal are seen here, also a gong chime with five gongs, a whistle pipe, clapper with three leaves, a shêng with the pipes arranged in circular tiers, and a drum of the modern Ying Ku variety.



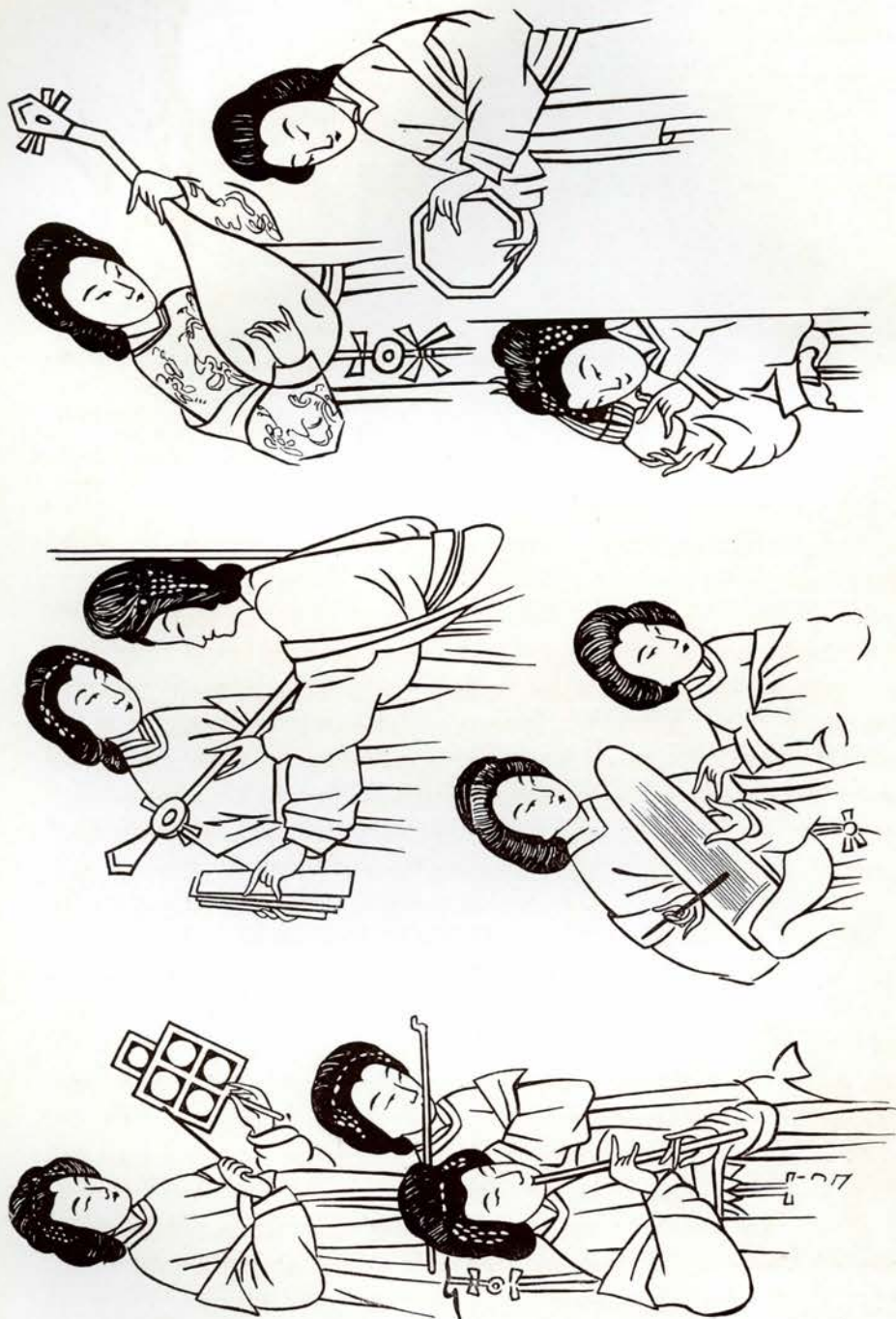
Harp Player.
From the Stela of the Wu Ping
Period, c. 575 A.D.
In the University Museum.



Musician Fixing the Strings of
her Harp.
T'ang Grave Figurine.
In the University Museum.

We cannot leave the subject without mentioning some of these later works of art in the Museum upon which are displayed musicians and musical instruments. Some of the instruments are the same as the early ones already described, others have not been mentioned. The Ming Coromandel Screen is most rich in this subject.

Upon this fine carved wooden screen, decorated with colours and lacquer, are depicted scenes of court life, all concerned with the doings of the ladies of the palace centering around the Empress. The playing of the *ch'in* 琴 in one of the side rooms has already been



Musicians Depicted on the Coromandel Screen.
Ming Dynasty, 1368-1644 A.D.
Five Gong Chime, Clappers, San Hsien, Four Stringed P'i-p'a, Transverse Flute, Vertical Flute, Tsêng, Shêng, Gong.
In the University Museum.

illustrated (page 346). The central scene shows the Empress enthroned in a large hall, while before her dancers perform to the accompaniment provided by ten female musicians. On the right of the dancers (the spectator's right) are five musicians playing the following instruments:

Clappers made of four flat slabs of wood about 4 x 14 inches, attached together at one end by a thong or silken cord which binds them like the leaves of a book. The outer slabs are held in the hands and pulled apart and then clashed together. They are a type of castanets and were used in the very early days. An ancient type consisted of twelve small slabs one foot long and one inch wide and called Ch'ung Tu. Some modern types have only two slabs. This four slab type was certainly in existence in the T'ang dynasty, as it is very popular in the paintings from Tun Huang, among which also appear many with more than four slabs.

The *San Hsien* 三絃, a three stringed guitar with small shallow cylindrical body and a very long thin neck without frets. It has three strings and the head with its three prominent pegs is the feature by which it is immediately recognized. There is no trace of it in early art. It was introduced in the Yüan dynasty. The Japanese "samisen" is no other than the San Hsien. The three strings are tuned to C, F, C or C, D, A, and it is usually, but not always, played with a plectrum. It is a favorite with ballad singers and musical entertainers, such as the geisha girls in Japan.

The *Shêng*. The specimen represented looks clumsy beside the graceful example of the Shosoin.

P'i-p'a. The bent back head seems to indicate that this is the regular four stringed variety.

Pa Fang Ku. Tambourine in an octagonal frame.

On the left side of the dancers are the other five musicians. These play the following instruments:

The *Yun Lo* 雲鑼 or gong chimes, five small round metal discs hung in a frame sup-



Detail of Standing Figure of a Harp Player.

T'ang Grave Figurine. In the University Museum.



Cymbal Player. Grave Figurine of T'ang. In the University Museum.

ported on a stick. This stick is held in one hand and the gongs are struck by a small mallet held in the other. There were usually ten gongs in the frame, as in the case of the instrument represented on the embroidered hanging to be described presently, but here only five are shown, as is also the case on the blue and white porcelain just mentioned. A chime with only four gongs is seen on the Palace Jar about to be noted.

Flute played transversely and having a dragon head represented at one end. This is a variety of the modern Ti called the Lung Ti, or Dragon Ti. A flute so ornamented was used only in ritual or at the court.

Whistle pipe. A vertical flute about 18 inches long.

A *Tsêng*, or small fourteen stringed sê, played by two ladies, one of whom holds it while the other taps the strings with a hammer. This small type of sê was used at imperial receptions (See page 348).

Among the Ming objects are the four grave figurines of male musicians. Of these the first plays a *shêng*, the second a *Gong* called



A San Hsien.
Drawing from Van Aalst.

Lo 鑼, which is suspended by a cord held in the hand, the third a *So-na*, and the fourth a drum.¹ There are also several Ming porcelains upon which are represented the Eight Immortals, for instance,

the blue and white gourd bottles formerly in the J. P. Morgan collection. Of the eight immortal merry gentlemen and ladies, three, it will be remembered, are musicians. One plays a long transverse flute, another clappers, the third a peculiar instrument said to be Taoistic and very ancient. It is a bamboo tube perhaps three feet long upon which the performer pounded with two rods. Its form reminds one of the primitive drums of some African and South American tribes. We should judge that by the Ming period its use had already been long suspended and the impression one gets from the drawing of it is that the artist did not know what it really looked like and merely drew it from some older design without being himself familiar with it. It appears thus on several examples in the Museum.

Many of the later porcelains in the Museum Collection display designs in which the Eight Immortals figure. The types of the later ones remain much the same, the instruments varying slightly. On

¹ Published in the MUSEUM JOURNAL for March, 1926.

one late textile the flute played by Han is of the whistle pipe type instead of the transverse. Sometimes the clappers have four slabs, but frequently only two or three.

Scenes of court life are popular on the later Ch'ing porcelains. There are several painted with scenes of dancing, for which lady musicians are playing. One of the most charming is to be found on a pair of large palace jars of the K'ang-hsi period painted just alike in the famille verte decoration. Here, most delicately outlined, are the figures of six graceful ladies playing for a dancer who is performing before the Empress or some royal princess. A drawing to show some of the details is reproduced here. It will be seen that there are two flutes represented, one played vertically, the other trans-



Three of the Eight Immortals.
From a Ming Jar in the University Museum.

versely. Cymbals of both types are depicted, the small, thick, flattened bell type and the large dinner plate variety called *Ta Po* 大鈸 and said to have been introduced originally from India. They are like our modern cymbals and are clashed together with a side swiping stroke. A gong chime with four gongs and a clapper with two slabs of wood make up the orchestra. The popular orchestra seems then, as now both in China and in the West, to have been made up chiefly of instruments that are noisy. The two flutes are the only ones of the six that could have been very sweet, and it is very likely that one of these, the whistle pipe, had a very shrill, unpleasant note. The elaborate borders represented around the scenes on these vases are filled with the objects of scholars and mandarins, the eight precious things, the hundred antiques, and other such details. Among them, and similarly on other vases, may be

seen the ch'in wrapped in its embroidered bag, and sometimes the shêng.

One of the recently acquired textiles, a very fine embroidered palace hanging probably of the Ming dynasty, displays a number of musicians among its scenes of palace rooms and gardens. It will be more fully described in a future article. But attention may be called to the figures of musicians on it. In a room on the left we see a lady playing a five stringed *Ch'in*. A group of four standing out on a terrace are playing the following instruments:

A *Ying Ku* 楹鼓, a large drum supported on a frame with the drum head uppermost. It is about two feet in diameter and stands



Musicians from a Palace Jar of the K'ang-hsi Period, 1662-1722 A.D.
Vertical Flute, Small Cymbals, Large Cymbals, Transverse Flute, Four gong Chime, Clappers.
In the University Museum.

three feet from the ground. The lower part of the drum is concealed by draperies hung from the frame, out of which the drum seems to rise like the head of a barrel. It is beaten by large malletlike drum sticks. We are told that this drum existed from very early times, at least from the Ch'in dynasty, when it was called Chien Ku. This character *Ying* is different from that in the name of the Han drum.

Cymbals of the large type called *Ta Po*.

Clappers with two leaves, properly castanets.

A *Mu-Yü* 木魚, wooden fish. This was a block of wood hollowed out and shaped more or less like a skull and painted a bright red. Some were as large as a skull, others much smaller. It was struck with a small mallet to mark time. It is an unusual instrument to find depicted on such an object as this hanging. The

mu-yü is used by priests when reciting prayers or begging. Perhaps, as we see it represented here among the musical instruments used at court, it had a more aristocratic beginning. Except that "a fish of T'ung wood is mentioned by Huai Nan Tzū of the 2nd century B.C. as used when praying for rain in the autumn,"¹ we know nothing of its history.

Three more musicians are standing at the corner of a building near an open pavilion in which is seated a royal lady surrounded by attendants before whom a dancer is performing. They are evidently providing the music for the dance. The instruments represented are the following:

A *Transverse Flute*. This one is played with the blow hole near the right end.

The *Shêng*.

A *gong chime* with ten gongs in the frame. This is the real Yün Lo.

Also standing not far from the group above are two musicians performing respectively upon—

Cymbals, the small bell shaped type, and a *San Hsien*.

The Chinese possessed many more musical instruments than have been mentioned in this paper. For a perfectly complete list other works should be consulted.² I have described the more famous and interesting and especially those which are represented in the collections of the University Museum among the objects of the earlier periods. The beauty of many of the representations of celestial musicians can hardly be overdrawn. Music was a theme which evidently the Chinese artist approached with delight, a theme wherein he was free to indulge his fancy and exercise his genius for rhythmic line design.

¹ Moule, Jour. of the N. China Br. of the R. A. S., Vol. 39.

² Moule, A. C.; A List of the Musical and other Sound Producing Instruments of the Chinese. Jour. of the N. China Branch of the R. A. S., Vol. 39, 1908.

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