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THE VOLUMES OF THE
NEW OXFORD HISTORY OF MUSIC

I. Ancient and Oriental Music
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III. Ars Nova and the Renaissance (c. 1300-1540)
IV. The Age of Humanism (1540-1630)
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VIII. The Age of Beethoven (1790-1830)
IX. Romanticism (1830-1890)
X. Modern Music (1890-1950)
XI. Chronological Tables and General Index
KRISHNA PLAYING A FLUTE
Relief from a temple at Belur (Deccan). Hoysala Dynasty, 12th century
ANCIENT AND ORIENTAL MUSIC

EDITED BY
EGON WELLESZ

16178

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NEW YORK TORONTO
1957
GENERAL INTRODUCTION

The present work is designed to replace the *Oxford History of Music*, first published in six volumes under the general editorship of Sir Henry Hadow between 1901 and 1905. Five authors contributed to that ambitious publication—the first of its kind to appear in English. The first two volumes, dealing with the Middle Ages and the sixteenth century, were the work of H. E. Wooldridge. In the third Sir Hubert Parry examined the music of the seventeenth century. The fourth, by J. A. Fuller Maitland, was devoted to the age of Bach and Handel; the fifth, by Hadow himself, to the period bounded by C. P. E. Bach and Schubert. In the final volume Edward Dannreuther discussed the Romantic period, with which, in the editor’s words, it was ‘thought advisable to stop’. The importance of the work—particularly of the first two volumes—was widely recognized, and it became an indispensable part of a musician’s library. The scheme was further extended in the new edition issued under the editorship of Sir Percy Buck between 1929 and 1938. An introductory volume, the work of several hands, was designed to supplement the story of music in the ancient world and the Middle Ages. New material, including two complete chapters, was added to volumes i and ii, while the third volume was reissued with minor corrections and a number of supplementary notes by Edward J. Dent. The history was also brought nearer to the twentieth century by the addition of a seventh volume, by H. C. Colles, entitled *Symphony and Drama, 1850–1900*.

Revision of an historical work is always difficult. If it is to be fully effective, it may well involve changes so comprehensive that very little of the original remains. Such radical revision was not the purpose of the second edition of the *Oxford History of Music*. To have attempted it in a third edition would have been impossible. During the first half of the present century an enormous amount of detailed work has been done on every period covered by the original volumes. New materials have been discovered, new relationships revealed, new interpretations made possible. Perhaps the most valuable achievement has been the publication in reliable modern editions of a mass of music which was previously available only in manuscript or in rare printed copies. These developments have immeasurably increased the historian’s opportunities, but they have also added heavily to his responsibilities. To attempt a detailed survey of the whole history of
music is no longer within the power of a single writer. It may even be doubted whether the burden can be adequately shouldered by a team of five.

The New Oxford History of Music is therefore not a revision of the older work, nor is it the product of a small group of writers. It has been planned as an entirely new survey of music from the earliest times down to comparatively recent years, including not only the achievements of the Western world but also the contributions made by eastern civilizations and primitive societies. The examination of this immense field is the work of a large number of contributors, English and foreign. The attempt has been made to achieve uniformity without any loss of individuality. If this attempt has been successful, the result is due largely to the patience and co-operation shown by the contributors themselves. Overlapping has to some extent been avoided by the use of frequent cross-references; but we have not thought it proper to prevent different authors from expressing different views about the same subject, where it could legitimately be regarded as falling into more than one category.

The scope of the work is sufficiently indicated by the titles of the several volumes. Our object throughout has been to present music not as an isolated phenomenon or the work of a few outstanding composers, but as an art developing in constant association with every form of human culture and activity. The biographies of individuals are therefore merely incidental to the main plan of the history, and those who want detailed information of this kind must seek it elsewhere. No hard and fast system of division into chapters has been attempted. The treatment is sometimes by forms, sometimes by periods, sometimes also by countries, according to the importance which one element or another may assume. The division into volumes has to some extent been determined by practical considerations; but pains have been taken to ensure that the breaks occur at points which are logically and historically justifiable. The result may be that the work of a single composer who lived to a ripe age is divided between two volumes. The later operas of Monteverdi, for example, belong to the history of Venetian opera and hence find their natural place in volume v, not with the discussion of his earlier operas to be found in volume iv. On the other hand, we have not insisted on a rigid chronological division where the result would be illogical or confusing. If a subject finds its natural conclusion some ten years after the date assigned for the end of a period, it is obviously preferable to complete it within the limits of one volume rather than to
allow it to overflow into a second. An exception to the general scheme of continuous chronology is to be found in volumes v and vi, which deal with different aspects of the same period and so are complementary to each other.

The history as a whole is intended to be useful to the professed student of music, for whom the documentation of sources and the bibliographies are particularly designed. But the growing interest in the music of all periods shown by music-lovers in general has encouraged us to bear their interests also in mind. It is inevitable that a work of this kind should employ a large number of technical terms and deal with highly specialized matters. We have, however, tried to ensure that the technical terms are intelligible to the ordinary reader and that what is specialized is not necessarily wrapped in obscurity. Finally, since music must be heard to be fully appreciated, we have given references throughout to the records issued by His Master's Voice (R. C. A. Victor) under the general title The History of Music in Sound. These records are collected in a series of albums which correspond to the volumes of the present work, and have been designed to be used with it.

J. A. WESTRUP
GERALD ABRAHAM
EDWARD J. DENT
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EGON WELLESZ
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ILLUSTRATIONS

KRISHNA PLAYING A FLUTE

Relief from a temple at Belur (Deccan). Hoysala Dynasty, twelfth century.
Reproduced by courtesy of the Bollingen Foundation.

I. PRIMITIVE INSTRUMENTS

(a) Xylophone. Ten flat wooden keys with gourd resonators, two strikers, and fibre cord for hanging. Baluba of Lake Moero, Congo.

(b) Slit drum, hollowed from one piece of wood, terminating at each end with a woman's head showing artificial cranial deformation. Struck with a wooden stick. Made by the Mangbetu of East Sudan.

(c) Zither made from bamboo, with eight strips slit away from the surface and bridged to form strings, the hollow bamboo acting as a resonator. Dyak, Borneo.

(d) Wooden rattle, enclosing small stones, representing the raven, sparrow-hawk, and a demon absorbing through his tongue from the frog the power of working spells. Painted blue, red, and black. Haida Indians, North-West America.

(e) Zansa with eight iron keys and gourd resonator. The hands are put through the slots and the keys plucked by the thumbs. Ibo of Onitsha Province, Nigeria.

Reproduced by courtesy of the Curator of the Pitt Rivers Museum, Oxford.

II. PRIMITIVE WIND INSTRUMENTS

(a) Side-blown trumpet carved from elephant tusk. West Africa.

(b) Bone vertical flute with three finger-stops and one thumb-stop drilled by stone borer. Ancient Peruvian, Chancay.

(c) Conch-shell trumpet, side-blown (Triton giganteus variegatus). Nares Bay, Admiralty Islands, Pacific.

(d) Whistle made of a reindeer phalanx. One blows between the two nearer articular condyles against the edge of the hole. Upper Palaeolithic, about 20,000 years old, from the cave of La Madeleine, Dordogne, France.

(e) Globular gourd flute with two stops. Jarawa, Northern Nigeria.

Reproduced by courtesy of the Curator of the Pitt Rivers Museum, Oxford.

III. CHINESE INSTRUMENTS

(a) Seven-stringed zither (gouchyn); dorsal aspect, showing the seven silk-gut strings and the thirteen mother-of-pearl studs marking the nodes. The tassels are decorative extensions of the looped silk cords which pass through the tuning pegs to secure the strings.

(b) The same; ventral aspect, showing the seven tuning pegs, the two knobs round which the ends of the strings are tightly twisted, the two sound holes ('Dragon Pool' and 'Roc Lake'), the personal name of the instrument: 'The Dragon's Purr', and the seal of the engraver.

(c) Globular flute (shien). Three finger-holes are visible; two thumb-holes are present on the side away from the camera. This is a modern replica made to the specifications of the present Bureau of Rites and Music.
ILLUSTRATIONS

(d) Two globular flutes of Tarng date in the form of human heads. The eyes are the finger-holes.

(e) Mouth-organ (sheng). The apparent length of the pipes is not in every case the effective length; holes on the inner face of the pipes may shorten the length of the air column. The pipes speak only when the finger-holes visible near the base are closed. The instrument is held with the pipes almost horizontal. This is a Japanese instrument.

(f) Detail of the same. This shows the ends of two bamboo pipes removed from the wind chest; one still carries a thin sheet of copper (white with verdigris) in which a rectangular free reed has been cut. The frequency of vibration has been adjusted by means of the small blob of wax near the free end.

(g) Vertical six-holed flute (shiau). One of a pair of instruments from Yuhbiing, a famous centre for flutes.

(h) Detail of the same. The blow-hole is cut in the nodal diaphragm, and the wall bounding its outer rim is trimmed to a sharp edge. The embouchure is not fixed (as in a Western recorder, for example), and practice is required to make the shiau speak.

(i) Clay whistle flute in the form of a bear, from Shandong. The blow-hole is in the forehead. The stream of air strikes a sharp edge bounding the lower margin of the air-exit on the dorsal side.

(j) Bamboo ‘whistle’ from Shandong. Two bamboo free reeds are let into the wall of each of two short bamboo tubes, closed at both ends. On the side away from the camera, two small mouth-pieces are let into the larger tubes. The reeds are tuned about a semitone apart and are set in motion simultaneously by blowing into the mouth-pieces.

IV. (a) CHINESE PLAYERS OF MOUTH-ORGAN, SHENG, AND PERCUSSION-CLAPPER, CHONGDWU. facing p. 94

From Prince Ju Tzayyuh, The Handbook of Music (1596).

(b) CHINESE SONOROUS STONES, CHINQ, ASSOCIATED WITH LAUDATORY DECLAMATION, TOGETHER WITH THE HAND-DRUM, TAUR.

From Prince Ju Tzayyuh, op. cit.

V. (a) CHINESE ROC-HEADED VERTICAL HARP WITH EIGHTEEN STRINGS

From Chern Yang, Yueh Shu (13th-14th century).

(b) CHINESE SEVEN-STRINGED ZITHER TABLATURE

From the end of the twelfth century. This is a song with zither accompaniment and an interlude for zither alone. Reading from right to left the columns are: first the title, and then alternately tablature and text. The tablature is described on page 99 and transcribed as example 186. The interlude extends from the sixth to the eighth column. From the Syhbuh Tsongkan edition.

VI. CHINESE AND OTHER FAR-EASTERN INSTRUMENTS facing p. 136

(a) Two-stringed Manchurian fiddle.

(b) Mouth-organ in use among the Chingmiaw near Anshuenn, Guyejou Province, China. The free reeds of the six pipes are of copper and are lancet-shaped. They are tuned with blobs of wax. In this instrument the wind chest is of wood.
ILLUSTRATIONS

(c) Jew's harp of three tuned elements in use among the Libjiang I olo in Yunnan Province, China. The three elements are gripped between thumb and closed fingers of the left hand and set in motion by plucking the projecting 'keys' with the fingers of the right hand.

(d) Toy Jew's harp played by Minjia children in Shijiou, near Dahlai, Yunnan Province, China. The vibrating tongue is much thicker below the forked tip than elsewhere. It is set in motion by jerking a silk-gut cord attached to the lower end in the photograph.

(e) Three-stringed idiochordic bamboo tube-zither from Borneo. The strings are slivers of bamboo raised from the surface of the tube.

(f) Mouth-organ from Borneo. The wind-chest is a gourd.

(g) Detail of the same. Two of the free reeds are shown in pipes removed from the wind chest. Each reed is a rectangular tongue cut in a thin sheet of bamboo let into the wall of the pipe. Near the free end of each there is a thickening, comparable to that on the tongues of Minjia and Lolo Jew's harps (figures (c) and (d)). This figure should be compared with Plate III, figures (f) and (j).

Figures (a), (e), (f), and (g) are reproduced by courtesy of the Curator of the Cambridge University Museum of Archaeology and Anthropology.

VII. (a) INDIAN VĪṆĀ PLAYER facing p. 214

A representation of the Rāgīṇī Syāma Gārjarī. This rāgīṇī is said to belong to the rainy season and should be sung in the early hours of the morning, expressing a mood of sadness and melancholy. See page 214. (Bodleian Library MS. Laud. Or. 149 fo. 33v.)

(b) A BURMESE ORCHESTRA, SAING TYPE

For theatrical and other performances on a large scale. Melodic instruments: oboes with detachable brass bell-mouts; a graduated scale of drums played with the hands; a graduated scale of brass gongs played with wooden strikers tipped with disks of buffalo hide. Instruments for rhythm and emphasis: a bass drum struck with the fist, and four drums played by the hands; drums beaten with sticks; cymbals; wooden spring clappers. Pictures copied from E. J. Colston, 'A Monograph on Tanning and Working Leather in the Province of Burma' (Rangoon, 1903), by courtesy of the Curator of the Pitt Rivers Museum, Oxford.

VIII. MESOPOTAMIAN INSTRUMENTS facing p. 240


(b) Harp from Ur (twenty-fifth century B.C.). Reproduced by courtesy of the Trustees of the British Museum.


IX. EGYPTIAN INSTRUMENTS facing p. 274

(a) Lower-chested harp and flute (Eighteenth Dynasty, c. 1570–1310 B.C.). Reproduced by courtesy of the Director of the Rijksmuseum, Leiden.

(b) Harp, lute, and double reed-pipe (c. 1475 B.C.). From the tomb of Amenemhet, Thebes. Reproduced by courtesy of the Trustees of the British Museum.
X. GREEK INSTRUMENTS  
(a) A kithara player singing.  
An Athenian vase c. 480 B.C. Reproduced by courtesy of the Museum of Fine Arts, Boston.

(b) A Greek Music School.  
The instructor is playing on a lyre and singing; about him are youths playing double aulos, and holding flutes and lyres. Athenian vase of the early fifth century B.C. Reproduced by courtesy of the Trustees of the British Museum.

XI. ROMAN INSTRUMENTS  
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(b) Psalter of thirty-two strings (from the same MS., fo. 158).

(c) Harp of thirty-four strings (Cairo MS. f. j., 428. A.D. 1326–7).

The Arabic in figure (a) gives the names of the parts of the instrument, whilst that in figures (b) and (c) indicates the tuning. See pages 462–3.

XIV. ARABIC MUSIC MANUSCRIPTS

(a) British Museum MS. Or. 2361, fo. 32. Late thirteenth century.

(b) British Museum MS. Or. 136, fo. 38v. Late thirteenth century.

For a transcription of these see pages 454–5.

Reproduced by courtesy of the Trustees of the British Museum.
INTRODUCTION TO VOLUME I

The second edition of the *Oxford History of Music* had an Introductory Volume edited by Percy C. Buck which dealt primarily with those facts and forms which preceded the rise of polyphony, and included other subjects which had been omitted in the first edition. Explaining the scope and content of the volume, Buck stated 'that the understanding of any subject can only be derived from the study of how it came to be what it is'. This aim was not fully realized in the Introductory Volume, because its chapters were not designed to form a unity, but to fill the gaps in the main body of the work. It has needed the replanning and rewriting of the whole history of music as delineated in the 'General Introduction' to make it possible to approach Buck's far-sighted postulate.

During the two decades that separate the publication of the Introductory Volume and the planning of the *New Oxford History of Music* musicological research has made great progress in the field covered by the present volume. Phonograph and gramophone have made it possible to study the music of remote and primitive peoples. The methods of transcribing the music have improved. Comparative musicology, that new branch of musical research, regarded in its beginnings some fifty years ago as a side-line, has enlarged its scope and developed its methods. Orientalists have taken an ever-increasing interest in writings about music and passages in historical works referring to it. Students of comparative liturgiology have given the initiative to an investigation of the relationship between Jewish and Christian chant, and their work has led to the examination of the passages on music in the Holy Scriptures in a new light.

The present volume takes into account this widening of the field of musicological studies, which has created a new outlook. The first chapter gives an introduction to the essentials of all kinds of primitive music. The main part of the volume, Chapters II–VIII, gives a historical survey of the music of the East. The next section, Chapters IX–X, contains a survey of Greek and Roman music, and the last, Chapter XI, deals with the music of the Islamic world.

It has been clear to the Editor from the beginning that the treatment of such vast and divergent material in a single volume must be carried out on different principles from those applied to the other volumes of the *History*. There, as pointed out in the General
Introduction, music is seen as an art, closely connected with various trends of our Western civilization. Such treatment not only permits but enforces the application of the so-called ‘historical method’ which aims at describing the single work of art as a product of the creative mind of a composer; or, where this is impossible, at description of the creative tendencies of a group or school of composers who remain anonymous.

When we come to deal with non-European music, however, we cannot apply the same criteria as we use in studying and appreciating the music of the West. In the East music has—or at any rate had until recently, when social changes, the wireless and the gramophone have so much altered the whole outlook—still preserved its ritual, even its magic character. The factor of time which governs the structure of Western music plays hardly any part in Oriental music. An Arabic song may last more than an hour, the performance of a Chinese opera stretch out over several days. To the Western musician conciseness of expression, clearly shaped form, and individuality are the highest criteria by which a work of art is judged; the attitude of the listener is an active one: he listens to what the composer has to say. The Eastern musician likes to improvise on given patterns, he favours repetition, his music does not develop, does not aim at producing climaxes, but it flows; and the listener becomes entranced by the voice of the singers, by the sound of the instruments, and by the drumming rhythms.

All this makes it difficult to apply our critical values to music which is so essentially different from our own. For example, in judging Chinese music, we are in the same position as the Chinese listeners to whom, as Amiot relates in his Mémoire sur la musique des Chinois (Paris, 1779), French missionaries played music of Rameau: it meant nothing to them. We have also a report from the nineteenth century of the effect of songs by Schubert on a Chinese audience; they liked the music as a play of notes, but objected that it did not move the heart.

How, one may ask, can one hope to acquire any knowledge of Oriental music, if such a cleavage exists in structure and expression between the music of the East and that of the West? And one may add, that objection applies to an even higher degree to our understanding and appreciation of primitive music, with which the present volume opens.

It is here that the work of the comparative musicologist begins. The student of this most recent branch of our studies will not confine
himself to describing the peculiarities of each tribe whose music has been recorded. That kind of research precedes his work which, in the same way as the ethnologist's, must consist in showing the function of music in primitive life. Such studies must remain within the scope of general statement, derived from the material which precedes historical research.

A similar though more specialized approach must be applied to Oriental music. Here one must rely to a great extent on the judgement of those experts who have devoted themselves to the study of the music of a particular part of the civilized world from enthusiasm and a peculiar inclination, fully equipped with the knowledge of the language, the customs, rites, and ceremonies of the people whose music they investigate, and the experience of having heard the music performed in the surroundings in which it was created and to which it belongs. Some of the music, like that of India, Java, Bali, Laos, and Indochina, for example, appeals to the Western mind directly; that of China and Japan, however, needs a more thorough acquaintance before it is appreciated and before it is possible to distinguish between old and modern instrumental music; folk-songs on the one hand, and ceremonial and ritual music on the other. The main obstacle for the European listener in appreciating Far Eastern music comes in the beginning from the different method of voice-production. For the European, singing is a kind of elated speech; for the Far Eastern musician singing is opposed to speech: the voice is used like a highly strung instrument.

For the study of the Ancient Orient, of which no music has survived, we must turn to the visual arts to learn which instruments were used, and to literary sources to discover what those who wrote about their national music thought of it. In this case the task of the scholar will be similar to that of the historian: to state what he has read about the music, and to convey to the reader the impression that he has gathered from his sources.

To deal with Jewish and Islamic music and that of Greece and Rome a different approach has been felt to be necessary. Systematic studies in Jewish music are of recent date and are based upon the methods of comparative musicology. It has been necessary to determine how far the oral tradition can be traced back, and to what extent time and cultural changes have altered the character of the music. The result of these studies has been more positive perhaps than one dared to expect. For example, recordings of the religious music of Jewish communities who have lived for centuries separated from their neighbours have shown that they are still related to the
common source and, furthermore, that their psalm-tunes and many other liturgical chants are closely related to, if not identical with, those of the Christian churches, both Eastern and Western, who took them over in the early days of Christianity. Thus a new basis for the study of Christian chant has been established.

The approach to the music of Islam and the methods employed in investigating its character and history have been the same. Here again the integration of these studies into the history of Western music will shed new light on some problems which are still under discussion. With the chapter on Greek music we enter a field of studies which, since the days of Humanism, has been favoured by classical scholars. We need only recall Meursius’s edition of the theoretical treatises of Aristoxenus, Nicomachus, and Alypius, printed in Amsterdam in 1616, followed by the more comprehensive edition of Meibom in 1652 and of Ptolemy’s Harmonicorum libri tres, printed at Oxford in 1682. Bellermann’s edition of Die Hymnen des Dionysius und Mesomedes in 1840 aroused the interest of musicologists in Greek music, and from that time its investigation has been an important subject of musicological research.

However, the study of Greek music has shown also the difficulties with which one is faced in studying the music of a period from which only a limited number of musical documents have survived. From the writings of Greek poets, philosophers, and theorists Greek music seems familiar to us. In fact, the music itself, when we read or hear it, seems to offer no problems to our understanding from the formal or aesthetic point of view. We find in it those qualities which appeal directly to our mind: clarity of shape and conciseness of expression. But how can we attempt to comprehend Greek music as a whole from the few fragments which have come down to us?

Hermann Abert, a musicologist of the former generation, whose book on the ethos of Greek music has become a classic, discussed this question in a lecture on Greek music, given to the Prussian Academy in 1923. He asked his audience to visualize the position of a musicologist who, 2,000 years from now, would try to give a picture of our music with the following documents as the only material from which to draw his conclusions: three bars from the St. Matthew Passion, a drinking-song from the eighteenth century, a Mass by Bruckner, half a dozen modern pieces for the piano; but, in addition, a great many theoretical works from J. J. Fux’s Gradus ad Parnassum to a modern textbook on harmony. Would he be able to give an adequate picture of our music from these sources?
Such is our position in relation to the material of Greek music at our disposal. But we may ask further: even if we had enough documents to enable us to make an historical approach, should we be any nearer to a real understanding of its aesthetics or to a knowledge of the effect it had on the audience for which it was written?

This question may well be asked about Oriental music also. We must face the fact that the music which we read, or even hear on records, can give us only a faint idea of what it means to the people who live with it. This may be illustrated by a few examples, taken from personal experience.

During the concerts given for the members of the first Congress of Arabic Music at Cairo in 1932 we heard a Persian singer who sang of his sorrow at leaving his friends. The audience, which consisted mostly of Egyptians, became so excited that they forgot they were listening to a song and shouted: ‘Stay with us, do not leave us.’ One felt at once that the artificial barriers which in the modern concert hall separate the singer from his audience had been broken down. For his audience the plaintive song of the singer had become reality. I was reminded of the Greek classical play in which the personae dramatis were for the audience not the actors in the role of the heroes of the past, but actually the shadows of the dead heroes, conjured up from Hades by the priest of Dionysus to perform their deeds once more.

On another occasion we saw the solemn ritual of the ‘dancing dervishes’. It was impossible to believe that old men who had performed the whirling movement for more than an hour could sit down when the dance came to an end without breathing more heavily, if one did not assume that the music had produced a state of trance in which the normal physical reactions were suspended. One was reminded of the writings of the Platonists and Gnostics which describe the sacred dances as the symbols of the movements of the moon, the sun, and the stars, and music as a supernatural power, as an ἐναυρ-θωσις τῶν ἑθῶν, as a means to improve the character.

Finally we saw the dance of Egyptian sorceresses, who danced to an exciting music of flutes, fiddles, and drums round the imaginary body of a sick man. Here one felt at once: such was the kind of music to which Plato refers in his Laws (790 d) when he speaks of the ‘female healers of Corybantic troubles’.

These examples, taken from the music of the Islamic world, could easily be supplemented by a great number of others, all demonstrating the magic effect of music. They would lead from travellers’
descriptions of the rituals of primitive tribes to the writings of the sages of Ancient China about the power of music to organize or disrupt the order of the State.

This brings us to an explanation of the plan of the present volume. The reader may object to the separation of the chapters on Hebrew and Jewish music in this volume from those on ‘Early Christian Chant’ in Volume II; with our growing knowledge of the development of Christian from Jewish liturgy, one might have expected to find both sections side by side. For similar reasons one might object to the placing of Greek and Roman music in the first volume, because both belong to European civilization and particularly because Greek and Roman musical theory had a decisive influence upon medieval theorists.

There is, however, a unifying idea in the volume. It deals with the music of the non-Christian world: a world in which music is regarded as a power creating a magic effect upon the listener. This magic character of music ranges, according to the state of civilization of the people who produce it, from totemistic connotations to music which represents a certain rite or a certain ceremony and creates in the listener the proper mood to participate in it. Considering the emotional character of such music, one may well understand the many warnings of the Fathers of the Church in the early days of Christianity against any kind of singing which creates such an effect. Even St. Augustine, brought up in the classical tradition and, as one knows from the famous passage in his Confessions, enjoying music ‘which is pleasing to the ear’, advises that the chanting of the psalms should be nearer to recitation than to singing—pronuncianti vicinior esset quam canenti—and says in another place: ‘We sing with our voice to be excited, we sing with our heart to please God’ (Enarratio in Ps. 147, 5).

This rigid attitude of the Church in its first centuries shows that she was aware of the magic power of music in the surrounding pagan world. When the Christian faith was established as the acknowledged religion all over the Roman Empire, it was no longer necessary; the magic spell was broken. Music could now be used primarily as laus Dei, to heighten the splendour of the service, and, in our Western civilization, the way was opened for its development as an art.

Various circumstances, unavoidable with a composite work of this kind, have caused delay in bringing out the present volume and
have necessitated continuous revision. The Editor wishes to express his own and the Editorial Board’s thanks for the indefatigable efforts of the contributors to keep their work up to date.

EGON WELLESZ

Lincoln College, Oxford
January 1957

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I

PRIMITIVE MUSIC

By Marius Schneider

COMPARATIVE MUSICOLOGY

Until a few decades ago the term 'history of music' meant merely the 'history of European art music'. It was only by degrees that the scope of music was extended to include the indispensable foundation of non-European and, finally, primitive music. Since only a few relics of primitive music survive in European folk-music, to get any idea at all of primitive music scholars had to turn first to the primitive tribes still living in the Stone Age. At the same time the study of more highly developed non-European cultures, which had begun much earlier, was revived and a new branch of musicology concerned exclusively with non-European music came into being. This new discipline was called 'comparative musicology', its primary aim being the comparative study of all the characteristics, normal or otherwise, of non-European art. This study led to the establishment of connexions between European and non-European music.

It must be emphasized that the methods of the musical ethnologist are entirely different from those of the historian. For the student of primitive music Europe has played only a very small part in the total framework of human history. But he has to attempt to rediscover the bridges between European and non-European music which certainly once existed and to reconstruct them, theoretically at least, by means of comparative ethnology. The aim of the present chapter is to describe the music of the hunting, pastoral, and peasant peoples whose historical position is bounded at one end by the earliest primitive cultures and at the other by the beginnings of more advanced cultures. At the extreme end are those pastoral and peasant peoples, for example the Caucasians, who already show the marked influence of a highly developed culture and must be included because their tradition, still alive today, provides the key to the understanding of those ancient civilizations which can now be investigated only by purely archaeological methods.

Although all the material dealt with here is of recent origin, we shall use the term 'historical development' as understood by the
ethnologist who attempts to bring into historical order the medley of primitive, transitional, and advanced cultures which still exist side by side in the world today. 'Higher development' simply means a general historical process and is in no way intended as a criterion of musical value.

MELODY AND MANKIND

Primitive music is a separate field of its own, but to a much greater extent than art music it is bound up with everyday life and with many special factors: psychological, sociological, religious, symbolic, and linguistic. Some songs must be performed only by a certain individual; others must be sung only by men or women. The same melodies may have a quite different psychological meaning, according to whether they are sung falsetto, or with a nasal or chest voice. For a proper understanding of any given musical phenomenon direct contact with the singers and their surroundings is therefore indispensable. The conception that we can get from the written version of a simple melody is quite inadequate (and may even be entirely misleading) unless we have this practical experience. In particular we need to be acquainted with the method of performance of the people concerned and the tone quality they produce, in order to hear the song correctly. It is a simple matter of experience that the actual transcription of a melody will vary essentially according to whether it is made from a direct hearing and seeing of the singer or only indirectly from a gramophone record. In the first instance the rhythm of the song as a whole will be more accurately transcribed; in the second the melodic details will be better reproduced. A primitive melody is always the musical expression of an idea. Primitive man sings only when he has something definite to express. Since his singing is the spontaneous expression of his thought, song and speech are often mingled in the course of his performance. If one tries to introduce a primitive man to a new tune (without the foreign words which he cannot understand) he will never stop asking what the song is about. For him the thoughts expressed in the song are at least as important as the melody itself. But if he hears a melody that pleases him, the words of which he does not understand, he will at once add words of his own. Even his instrumental melody and his whistling are the expression of definite ideas. Thus the roots of programme-music reach down into the earliest strata of instrumental music. Whether the simple sing-song of certain kinds of children's songs and lullabies is entirely bereft of ideas has still to be proved. The idea need not be clearly formulated in words;
it may consist of a vaguely defined thought, felt rather than conceived, expressed directly in sound without the mediation of an intelligible sequence of words. It may also happen that the logical thought and the musical motive pass little by little from the indefinite to the definite in the course of the song, as if the initial dream-state were gradually yielding to waking consciousness. Many of the supposedly nonsensical syllables to which a melody is sung also have a magic significance. Thus the syllable *hee* often serves to express the shooting of an arrow and *hoo* has a medical value. Such syllables serve to evoke a spirit or frighten it away. Just as one cannot sound a medicine-rattle heedlessly or merely for fun without falling ill, so one must not sing thoughtlessly to oneself, for every note summons up a spirit. Melody has a great significance for primitive man, a magic power which must not be squandered or abused. The agreement of sounds is always a symbol of identity or at least of mutual understanding. In the Solomon Islands, when an invitation is sent to a neighbouring tribe it is customary to send the measurements of the tribal panpipes so that the guests can tune theirs beforehand, thus ensuring the greatest agreement in the mutual musical greeting. When young men are singing, and it suddenly occurs to one of them to strike up so high a melody that the other singers cannot follow him, sometimes a young girl will take up the melody in this high register and continue it. When this happens, it means that the two young people are in love.\(^1\)

A melody is not a chance combination of notes but an organic and dynamic whole, a form which is more than the simple sum of the notes of which it consists. A succession of single notes artificially put together is ineffectual because it is a synthetic product, not a living one. The aboriginal describes a melody of that kind as ‘powerless’ because it is not in a position to offer a dwelling-place to a spirit. Primitive melody, which is scarcely more than a continually repeated and varied motive, is regulated essentially by the tension between the beginning of the motive and its final note. All the notes between are determined by conscious striving towards the last note. Both the motive and the series of its repetitions grow according to definite patterns which can assume the most varied forms according to the particular culture or the ideas and feelings expressed.\(^2\)

This growth of melody is undoubtedly one of the main reasons why music is so significant in the life of primitive peoples. Music and dancing create a movement which generates something that is more

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\(^2\) See infra, p. 24.
than the original movement itself. As he sings and dances, man discovers in himself an all-pervading element whose intensifying, liberating, or healing power is unknown to him in everyday life. Music which has such an intensifying effect grows to the point of ecstasy. The quietly and regularly flowing rhythms lead to a great inward release. I have myself observed the liberating and healing power of music in the case of a native of Uganda who, at the funeral of a brother (killed by a spirit), at first broke into a terrible howl of rage and then, beginning to sing, gradually defeated the black demon of despair by the soothing power of song.

The effects of musical rhythm are especially strong when singing is accompanied by dance movements or by the singer's own playing on an instrument. Of course this purely instinctive, primitive music-making has at this stage nothing to do with art. Nevertheless, even in the oldest cultures we find the preconditions of art: the mastery and more or less conscious shaping of the medium of expression. Where the singer who is at the same time dancing tries to achieve a certain regularity in his movements, his singing takes on regular musical forms. The pure play-instinct certainly has a great part in this shaping of the melody into regular phrases. On the other hand it must be noted that even ecstatic songs and dances often exhibit very rigid phrase-structure.

This regularity of tectonic structure is even more striking when the community takes part as a choir. But the participation of a choir not only helps the regularity of the rhythmic movement: it also contributes materially to the unification of the melodic line. The African pygmy dances in Father P. Schiebesta's collection¹ usually begin with a wild cry for all the singers out of which a comparative unison gradually emerges. The melodic lines and the various rhythms of the opening gradually adjust themselves to one another and in the end there emerges a completely regular community chant.

The powerful influence of collective performance on the development of primitive music can be seen from the fact that even funeral music and love-songs are also very largely choral. The life of the individual is so strongly bound up with the community that the latter will not relax its guardianship even during the short hours of the wedding night, which it celebrates with continual singing.

The collective consciousness, however, does not lead at all to a musical 'levelling'. The distinction between soloist and chorus is always maintained. This hierarchy is expressed both by different

¹ In the Phonogramm-Archiv of the Berlin Museum für Völkerkunde.
MELODY AND MANKIND

methods of performance and by the degree of ecstasy to which the singers gradually abandon themselves in the ritual songs. The soloist is the master, the choir are his ‘assistants’. Even when both sing the same song the soloist performs it sharply and abruptly, the choir in a more cantabile (arioso) manner. The soloist dances; the choir forms a magic protective circle around him. The soloist intensifies his rhythms more and more in order to penetrate into the land of spirits. But this he can do only with the help of the chorus, whose singing and hand-clapping set him in motion and lead him to a state of ecstasy. When the movement is in full swing, the relation between singer and song seems to be completely reversed, for the dancing soloist, who is the initiator of the melody, is now borne along by the song. The music is a vehicle, a ship or a road, transporting the mortal to another land. All movements become reflexes. While the dancer adorned with dangling rattles abandons himself to the mysterious powers of the rhythmic sounds, he senses that out of this game that he himself has created something is growing that is greater than he. He grows with the song and entwines himself about it until the moment when he identifies himself with it and becomes a human rattle. Then his soul ascends into the land of the spirits, while the chorus guard his body until the soul returns to it.

THE ORIGIN OF MUSIC

According to the old European theory, music begins at the point where clearly distinguishable intervals appear. In contrast, speech is regarded as a succession of variations of pitch. This distinction is not applicable to primitive music, however, or to non-European art music, because these involve the use of all the vocal resources, including whispering, speaking, humming, singing, and even yelling. In the same way, at some time or other any implement capable of producing a rhythm becomes a ‘musical instrument’ in the hands of a savage.

It is very difficult to say anything definite about the origin of music, because the phenomenon is quite outside the range of our observation. Even in those primitive civilizations that still exist there is no race so primitive that it can be considered a relic of the very beginning of human culture. Naturally there is no lack of theories about the origin of music. Charles Darwin attributed song to the imitation of animal cries in the mating season. Against this, it is to be noted that while it is true the imitation of animal cries plays a big part in the oldest civilizations known to us, love-songs are very rare and usually
mythological rather than erotic in character. Rousseau, Herder, and Spencer argued that speaking with a raised voice was the beginning of song; and a kind of ‘speech song’ or chant-like recitative is indeed to be found in many primitive cultures. Whether this style is derived from speech seems very doubtful, however, in view of the many nonsense syllables (without verbal significance) which form the ‘text’ of these songs. Wallaschek stresses the importance of rhythm in the origin of music. Buecher even traces its beginnings to occupational rhythms, overlooking the fact that occupational songs belong to a very late stage of cultural history.

According to Father W. Schmidt and Carl Stumpf music arose, like speech, from the need to give signals by sound. A loud cry led to lingering on a note of definite pitch. With this basic idea Stumpf linked his theory of consonance: if the cry was uttered simultaneously by men and women so that it sounded in two different pitches at once ditones resulted, preference being necessarily given to octaves, fifths and fourths owing to their high degree of blending. If such sounds were then sung successively, instead of together, an interval resulted and its progressive breaking up into smaller parts led to the formation of melody. In Stumpf’s view, the real step towards the development of music was the breaking up of the original ditone into successive notes and the transposition of ‘cry’ notes and musical motives. This theory conflicts, however, with the fact that in many primitive cultures the motives are often made up of very small intervals and motive-transpositions usually occur at very close intervals.

Although we must reject the hypothesis that speech is protomorph music, it is still possible to speculate whether the very ancient ‘sound-languages’ may not represent the common source of both speech and music. In these languages, which will be dealt with more fully later, the meaning of a syllable depends on the pitch at which it is uttered. Thus such a language is itself musical. If it is sung, music merely gives a more arioso effect to the melodic speech-curve already determined by etymology; it merely strengthens the existing musical element. It is, of course, possible that the whole

1 The theories of Darwin and Spencer, no longer tenable today, are discussed in detail by Stumpf in ‘Musikpsychologie in England’, Vierteljahrsschrift für Musikwissenschaft, i (1885), pp. 261–349.
3 Arbeit und Rhythmus (Leipzig, 1924).
4 ‘Über Musik und Gesange der Karesau-Papuas’, Kongressbericht der internationalen Musikgesellschaft (Vienna, 1910).
5 Die Anfänge der Musik (Leipzig, 1911).
6 See infra, p. 32.
language is merely a sort of levelled-down music; but it is more likely that the sound-language is the older element from which developed both speech and song, speech striving towards free rhythm and music towards a more regulated one. The greatest difficulty in the way of this new theory is that at present we know too little about the languages of the so-called primitive cultures. It is true that various pygmy races display the elements of ‘sound-languages’ but so far only a small number of examples have been collected. For this reason my own researches have so far been confined to the African Ewe languages and to Chinese songs. Some songs of the pygmy Batswa, of the Congo, recently recorded by the Rev. Father Hulstaert and discussed by F. Tegethoff in a still unpublished Cologne dissertation, however, show such marked agreement of musical and speech sounds as to appear to support the theory of the common origin of music and speech.

It is idle to discuss the relative merits of these theories because the primitive material available exhibits features which support one as much as another. In the primitive cultures known to us speaking, shouting, imitation of animals, and the rhythms of movement all tend to musical forms whenever man feels the need of a more beautiful or more effective means of communicating his impressions or wishes. By so communicating them man frees himself from the impressions which accumulate in his inner consciousness. Even a simple shout—to a fellow human or to a higher being—expressing a desire for action, betokens a liberation. The way it is used in war shows, however, that it also serves to dispense strength. If the shout is followed by additional sounds which are not strictly necessary, the psychic relief is even greater; for by such growth the song not only releases but actually unfolds the emotion which has hitherto been confined or seeking expression.

In music there emerge very quickly hard-and-fast, conventional melodic forms which by reason of their indeterminate significance can easily become vehicles of the most varied subjective feelings; so the objective formula, generally recognized and accepted, combines quickly and easily with the subjective feelings of the singer. In this way music has a unifying effect in human society. Melody liberates and gives objective form to feelings that to begin with were amorphous, ultra-subjective, or exaggerated.

Singing allows innumerable repetitions of the same words, repetitions which, apart from magical utterances, seem meaningless or clumsy in ordinary speech; it also enables things to be said or hinted
at which it would be difficult to express in sober speech. To the uninitiated the words of such songs are for the most part completely unintelligible; but the aboriginal knows exactly what the few, apparently quite disconnected words mean in association with a particular melody. In some way or other music throws a neutralizing veil over that which is individual and realistic, giving it the appearance of something objective and universally valid or typical, without prejudicing its subjective emotional value. It is easier to sing a love-song than to speak a declaration of love. A musical motive, which when performed in a certain way is regarded as a formula of scorn, seems more indirect than plainly spoken abuse. An idea set to music is more formal, more general, or more ambiguous than the same idea expressed in words alone because it is subject to a regular rhythm. In language something of the same kind occurs in the proverbs which, for the same reason, are so popular with primitive peoples.

Besides this spontaneous musical invention—of which sing-song, as an expression of the simple play-instinct, is another example—the imitation of natural sounds plays an important part. Admittedly Schaeffner, disinclined as he is to generalize, is perfectly correct in saying: "Toute une fausse optique de l’art musical découle d’une idée abusive de l’imitation."¹ When a savage beats a piece of wood it is a spontaneous act not necessarily originating in any intention of imitation, and although many songs and dances do imitate animal noises, it is unnecessary to trace particular forms, such as the dialogue or the alternation of solo and chorus, back to similar phenomena in the animal world, since human society arrives at such forms unaided. In any case there is no reason why animals should have ‘invented’ such forms more easily than human beings.

Nevertheless, the purely realistic (and also the approximately musical) imitation of natural sounds forms an important constituent of the music of the oldest primitive hunting and food-gathering peoples among whom totemism is an individual affair, that is, not yet the basis of society.

**TOTEMISTIC MUSIC**

To grasp the significance of totemistic cultures in the history of music it must be remembered that the totemistic conception of the world is anthropomorphic. The natural world is animated by a variety of good and evil spirits, more or less endowed with voices, whose continual interaction determines the course of the world. The sounds

of nature are the voices of the spirits who dwell in natural objects. All objects and living things in the world were created by the totem gods (the mythical ancestors of mankind), created, moreover, in such a way that every totem-god during his sojourn on earth called into being only one particular kind of object or creature, i.e. one definite totem, by means of songs and war-dances: the kangaroo-god, the kangaroo; the cloud-god, the cloud; the flute-god, the flute. In Australian mythology these mythical ancestors, having finished their work and taught men the rites and songs necessary for the maintenance of Creation, sank down exhausted in a cave, died, and became petrified or turned into bull-roarers. Their ‘mystical’ bodies survive in their totems but they left to man the actual care of maintaining things. In view of this fact men began to divide the task between them, in each tribe entrusting one person or group with the care of a particular totem and the worship of the corresponding god (or ancestor). As each object (each kind of stone, plant, animal, wind, musical instrument, &c.) represents a particular totem, in theory the totemistic order of society constitutes a complete reflection of the world. In practice, however, and possibly as a later development, the animal totem predominates.

The connexion with the totem or the mystic ancestor is established by the person concerned imitating the particular object which it is his duty to maintain, that is, his own totem. If the totem is a tiger or a snake, he must behave like a tiger or a snake and if need be even have direct intercourse with one of the creatures. For example, if the tiger-man has a drum he must not play it in the usual way, but must bite and scratch it as would his totem animal. If, to take another example, he has been assigned to the wind or storm, he will fulfil his task by means of a corresponding pantomime, like influencing like. But the essential part of the imitation is the simulating of sounds, for of all the available means of imitation the human voice is far and away the best. The form and movements of the human body can be brought to resemble the outward appearance of the totem only to a limited degree with the aid of dancing, masks, and other adornments. The voice, on the other hand, can imitate so well as really to deceive. One must have heard them to realize how extremely realistically aboriginals are able to imitate animal noises and the sounds of nature. They even hold ‘nature concerts’ in which each singer imitates a particular sound (waves, wind, groaning trees, cries of frightened animals), ‘concerts’ of surprising magnificence and beauty.

In totemism the voice has much the same significance as, on a
smaller scale, numbers had for the Pythagoreans. It is a mysterious bond uniting all things in the universe. If a man is capable of reproducing exactly the croaking of the frog or the hissing of the snake, it is because his mystic ancestor was the totem-god of the frog or the snake. When he imitates the voice of his totem with the greatest realism, he imagines he is obliterating the boundary between subject and object and identifying himself with his totem. Whoever croaks like a frog, is a frog. By vocal assimilation he 'recognizes' the object and in that moment becomes the thing recognized. He becomes in fact a sound-symbol. This symbol, perhaps the oldest in the history of human culture, which presupposes no technical or material skill, is the voice of a dead ancestor, whose mystic body survives in the totem. The song represents the dwelling of the dead ancestor, or itself the dead ancestor, who, together with all the other ancestors, forms the substance of the world. Vocal imitation is the strongest form of mystic participation in the surrounding world.

Here we come upon one of the oldest forms of magic. By singing the name, or the song, the acoustic substance of the totem-god, or by playing his flute in the presence of the corresponding mask, one recognizes him and forces him to sound in the singer's breath, in the mask or in the flute, that is, to become substantially (acoustically) present. Just as one can make an open string vibrate by sounding its own note on another nearby instrument, so one can conjure up a spirit by providing it with its mystic station. Evidently the voice or the sound ranks as the ultimate indestructible substance of each object. This substance leaves the body of a man at death by escaping through his mouth in the form of the death-rattle, or through his nose as the sound of his breathing, and carries his soul away. 'You are blind but your ears are not deaf! Listen to me!' said a Bakango chieftain, rattle in hand, at the grave of a famous hunter. The idea of the acoustic nature of the soul, which survived into the Middle Ages in Europe (symphonalis est anima, said Hildegard von Bingen) and was taken up again by the German Romantics (notably by Friedrich Schlegel), is manifest among primitive peoples particularly in the belief that, even after the disappearance of the last mortal remains, the soul of a dead man (that is, the substance of the human being) survives as an essence (spirit) which is perceptible only in sound.

Every human being has his own sound or is a particular melody. To stop a magician (magicians are capable of imitating the otherwise inimitable) from imitating this melody and so getting its bearer

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1 See infra, p. 43.
into his power, primitive man thinks it necessary to keep his own melody as secret from sorcerers as his 'real' name. (The intonation of the name is closely related to that of the melody.) Among the Gogodara each clan has its own death-songs which must be kept secret even from the other clans, because they contain the names of the ancestors. The assumption that sound forms the mystic substance of the human being explains the belief that two people having the same name represent merely the dual expression of the same individual.

This leads to the question of the widespread 'personal song' which is often identical with an individual's medicine-song or totem-song. It may be sung only by the person to whom it belongs. Only after its owner's death may a friend or relative venture to sing the dead person's song at the funeral. This song honours the deceased but it has real magic power only when sung by the 'song-father'. The melody of a personal song need not be an original composition but may well belong to the current repertory of the tribe. What makes the melody a personal song is the individual manner of performance. The term 'personal song' refers not to the melody as such but to something almost inimitable in the method of performance, the timbre of the voice, the particular rhythm the singer gives to the song. The concept of the 'personal sound' seems to lie still deeper. It is to some extent the primary substance out of which the 'personal song' is formed and it seems specially closely connected with the timbre of the voice.

As the substance of every being is revealed in rhythmic sound, it is obvious why the timbre of the voice plays such a crucial part in the individual totem system in deciding a man's mystic descent. Similarity of voice betokens a fundamental relationship. From this it follows that it is only at puberty, that is, when his voice breaks, that a young man is finally named, assigned to the totem, and introduced to his ritual duties. At this time, too, his real musical education begins; he learns the ritual songs and the use of the sacred musical instruments.

The idea of sound as the substance of things may derive from the daily experience of the primitive huntsman as he tries to get animals in his power by imitating their cries and by the use of magic words of terror. But here too, perhaps, age-old mystical traditions regarding the true essence of the natural world are at work. At any rate imitation among primitive peoples is a form of mystic participation which enables a man in everyday life to 'invoke' and entice a natural object

\[1\] i.e. the name which best reflects phonetically the essence of the human being. Primitive peoples usually give their children a great number of names. The name by which the child is normally called is unimportant.
and, by adapting himself to it, to subjugate it or assimilate it to himself—an end unattainable by force.

**CULTURE AND RACE**

To obtain a reasonably comprehensive picture of the various peoples and cultures of the world, ethnologists have adopted a classification of races according to the predominant forms of their economy and the state of their culture (which probably corresponds to these forms). They distinguish between primitive food-gathering, hunting, pastoral, and agricultural peoples, although there are many races which do not clearly belong to any one of these groups, either because they are culturally or economically in a state of transition, preserving many archaic elements from lower stages of civilization, or because they have been subject to cultural influences which (theoretically) do not correspond to their normal way of life. Thus totemism appears to belong to the early hunting stage, although there are strong traces of it in the middle farmers' cultures and a particular late form has developed among some cattle-breeding tribes.

The primitive food-gatherers include in particular the pygmies and pygmean races. Hunting, pastoral, and agricultural races are usually divided into lower, middle, and higher groups. The lower groups comprise the totemistic patriarchal hunters, the agricultural and patriarchal civilization based on two classes, and the patriarchal nomadic shepherds. A late stage of hunting civilization is found among former cultivators who have been forced out of their domiciles and have turned to hunting from necessity. The middle pastoral peoples develop cultures dependent on saddle-animals. The middle farmers use a more developed form of hoeing, while the late farmers use the plough and, like the shepherd-warrior group, show very many megalithic and even later influences from high cultures. This theoretical order, which is mainly due to the Vienna school,¹ may be represented by the so-called inverted pyramid of civilization:

¹ The reader will find a concise summary in O. Menghin, *Geschichte der Steinzeit* (Vienna, 1931).
To this ethnographic classification there is a corresponding musical one. If one considers the material so far available the three main groups (hunters, shepherds, and cultivators) may be distinguished, theoretically, as follows. Among the hunters, musical performance is interspersed with much shouting, is formed from free speech-rhythms, and has little tonal definition. Among the cultivators, however, an *arioso* style of performance prevails; the style is tonally regulated and the form is rounded off. The pastoral cultures occupy a middle position. With the hunters, metre is the strongest factor in determining form and is the expression of a very individual kind of music-making, while with the cultivators the collective note and the balance between metre and melody are more important.

This scheme which can be no more than a first attempt to organize the wealth of material, is naturally to be taken *cum grano salis*, since over each of these theoretical strata (based on the ‘pure’ cultures) are laid others which do not always agree with the first and may even be of quite a different nature, in fact with no cultural connexions at all. Thus, for example, within the same culture, historically considered, the singing of the woman is naturally more *cantabile* than that of the man. Very often we find coexistent modern, archaic, and foreign styles reflecting the historical development. The hunting songs of farmers who have been formerly hunters are always more authentic than those sung on the hunting expeditions of farmers pure and simple. The true hunting song is rooted in the mystique of the hunt, whereas the late hunting song is merely for entertainment.

If one considers the predominant cultural role of the man in hunting and pastoral societies and that of the woman in agricultural societies the following scheme results:

<table>
<thead>
<tr>
<th>Hunters</th>
<th>Shepherds</th>
<th>Cultivators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man</td>
<td>Woman</td>
<td></td>
</tr>
<tr>
<td>Predominance of Metre</td>
<td>Predominance of Melody</td>
<td>Harmony</td>
</tr>
</tbody>
</table>

The concepts of polyphony and harmony naturally apply only to the narrowly bounded regions in which part-singing occurs.

Racial characteristics in music are easily detected when one actually hears a singer, but they cannot be described in words. Race shows itself by timbre, by the general rhythm of movement, and by types of melody, in so far as these exhibit particularly individual forms. Deliberate screaming or abrupt transition from high falsetto

1 To which the present writer would add his unpublished transcriptions from the Phonogramm-Archiv of the Berlin Museum für Völkerkunde.
2 See infra, p. 24.
to chest and abdominal voices do not enter the category of racial characteristics, however, because they represent ideals of performance belonging to specific cultures and are acquired by conscious effort.

**THE FORMATION OF SCALES**

Up to now the question of the formation of a tonal system has been answered, notably by Hornbostel and Robert Lachmann, by the assertion that a fixed scale was impossible without instruments giving clearly defined intervals. As such instrumental tunings are a product of late civilizations, a real tonal system could not be produced by primitive races. Strangely enough these two scholars, to whom comparative musicology owes such a great debt, hardly took any account of the fact that the very oldest instrumental tonal systems (which led Hornbostel to the ‘blown fifths’ theory now refuted by Bukofzer and others) do not use the natural (pure) fifths, although in the vocal music of primitive peoples these intervals not only frequently determine the tonal framework of the individual motives but are everywhere found to have the greatest influence in the formation of scales. In fact tonal systems are formed without the help of instrumental tunings. They grow progressively in primitive vocal music out of fanfare-like formations or out of the elementary fourth and fifth relationships which are found above or below a melody of narrowly restricted range (Exs. 10, 14, 53, 61, 67, 68, 79, and 80). These intervals are even all the clearer and more definite for being free from any influence of instrumental music. The natural tone-system is built up entirely of consonances, the only exception—especially in primitive and middle cultures—being those notes which are derived from the harmonic division of a consonant melodic interval. Where, however, rows of overtones (Ex. 63) or slightly flattened fifths or widened seconds are sung, we may take this as evidence of the direct influence of instrumental tunings (musical bow or panpipes). When the same song is performed simultaneously

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4. The musical examples to this chapter are grouped on pp. 61–82.
or alternatively by voices and instruments, the melody proceeds in two different tunings. The instruments perform it in their own scale, the voices in theirs (built from natural fifths).

As songs with or without a definite tonal organization are often found side by side in the same culture, we must distinguish two kinds of primitive vocal music. The first, which is perhaps the older, is closely related to speech, to the realistic imitation of natural sounds, and to emotional outbursts of only slight musical form. It is manifest not only in recitative, tonally very free recitative (Exs. 5 and 6), but also in songs of abuse and laments. In religious songs it may even be traced well into the late cultures. These songs are by no means limited to a narrow compass; among the American Indians they even extend to an astonishing range (up to 2½ octaves), particularly when motives are freely transposed.

Nevertheless, even in these freely intoned songs there is a recognizable tendency to use a clearly defined fourth or fifth as the basic melodic formula and to group the other tonally indefinite notes more or less freely around it. If these formulae are transposed, at least one of the two basic notes is generally found to have a consonant relationship to the first exposition of the motive. In Exs. 18, 19, 22, and 25 this transposition and consonant relationship have a direct influence on the development of the tonal system for, although the motives are only small, and only their basic notes are tonally definite, yet by reason of the transposition of the basic intervals the whole song already displays in its broad outlines a succinct tonal order. Yet, in view of the fact that transpositions of the smallest motives are to be found in very early stages of cultural history at distances of a second or third (Exs. 17 and 20), neither the pentatonic scale consisting of seconds and thirds nor the form interspersed with semitones can be considered older than the six- or seven-degree scale.

With the extension of the consonant relations there emerges a tone-structure which may be traced back in the field of primitive music as a rule to a more or less large extract from the series of fifths (B flat) F, C, G, D, A, E, B (F sharp). The fact that the keys formed from the series of fifths are so much closer than most of the primitive instrumental tunings to our European musical sense can probably be explained only by supposing that the vocal tone-system has been evolved in a natural and specifically musical fashion, whereas in the tuning of instruments (which are an artificial product) quite different principles were applied—such as, for example, the breadth of the thumb as the standard for the space between flute-holes. It is true
that there are frequent departures from the system of natural fifths but in many cases the significance of such notes may have been overestimated. It seems very doubtful whether the measurement of vocal pitches will ever lead to useful results, unless account is taken of the difference between what the singer intends and what he actually achieves. Measurements taken by the writer from a native of Uganda showed that a high note which seemed diatonically too low became quite pure in a second recording in which the song was pitched lower. Moreover, such departures are sometimes quite deliberate. For example, from the above-mentioned measurements it became clear that a note was intentionally taken too low in order to represent the 'weeping note'.

The essence of musical functions is probably best grasped by considering in the first place not the individual modes, but the whole system of relations of the fifths to one another and by regarding different 'keys' only as specific extracts from the series of fifths. In a melody the functional tension (which can, of course, be essentially increased or diminished by the metre) is intensified by increasing the relative distance of the individual notes within the series F, C, G, D, A, E, B. Moreover, the notes F, C, G, and D appear the strongest, probably because they are the most fundamental. (We are assuming that the corresponding melodies are all transposed to a pitch involving the least possible use of accidentals.) In fact it appears that the tonal relationships in the F or C mode are much less complex than in the G, D, A, or E mode. If we take for the primitive motive, in so far as it has a tonal character, F as the fundamental note and F–A or D–F as the germ cell, we find apart from the second above or below the tonic, the fourth below (Exs. 61 and 86) or the harmonically or diatonically divided fifth above (Exs. 80, 82, 83, and 84) as the main function. The augmented fourth above (tritone melodies: Exs. 85, 87, and 113) is probably a late phenomenon.¹ On the other hand, melodies in the C mode (Exs. 10, 13, 22, 26, 37, and 52), in addition to the tonic and its neighbours, stress particularly the fourth, that is the 'subdominant' F. Songs in the G mode (Exs. 15, 32, and 49) emphasize both the subdominant C and the double subdominant F. Songs in the D mode lay stress on G, C, and F (Exs. 19, 33, and 48). The A and E modes are even richer in relationships (Ex. 21). In other words, the number of functional relationships grows as the fundamental note of the mode advances from F through C and G to D, A or E, for these relationships seem to grow not out of the brilliance

¹ J. Kunst, Music in Nias (Leiden, 1939), p. 7; Music in Flores (Leiden, 1942), p. 35.
of the dominants but out of the dark depths of the subdominants F, C, G, and D. This is, naturally, not to say that in the last-named modes one cannot have a phrase of the greatest functional simplicity; but in these modes the functional possibilities are far greater than in the simple ones of F and C. The scales of all modes can also have seven degrees but the number of notes of real functional importance is limited in the F and C modes to a few notes, while the more highly developed modes (G, D, A, and E) include all the functions of the modes preceding them. This may be expressed in the following table in which the vertical lines represent the progressive increase in functions of subdominant origin:

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<td>e</td>
<td>f</td>
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\[ \text{\langle \rangle Tonic; || Subdominant; -- Dominant; [ ] Note next to tonic} \]

This theory, put forward by the writer in 1934, is confirmed in vocal polyphony in which the tonal relations sketched above—according to mode—are apparent in the selection and nature of the concords.

**STRUCTURE OF THE MELODIC AMBIT**

The tonal functions discussed above are expressed within a given ambit. The number of patterns which determine the main outlines of a composition is very great and it would be a hopeless undertaking to attempt to enumerate and describe them all here. We will therefore confine ourselves to mentioning the normal patterns which have been most important in the historical development of music. In considering the structure of the ambit we shall take the motive or theme as the given point from which the development of the ambit proceeds. It must be admitted that the separation of the theme from its continuation is in many cases very problematical, but the mass of available musical material enables us to discern definite norms. Apart from this, the musical structure can often be determined from the words. Owing to lack of space, however, it is possible to include the words in the musical examples only in the most important cases.

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1 M. Schneider, *Geschichte der Mehrstimmmkeit*, i (Berlin, 1934).
The main principle in the continuation of a given theme consists of varied repetition. In this repetition many melodies remain persistently within the tonal ambit given by the motive in the first place. This applies not only to narrow two- or three-note melodies but also to more broadly constructed ones (Exs. 1, 2, 3, 7–9, 75–84, and 87–93).

There is a very common tendency gradually to diminish the compass with which a melody has begun. Some songs consist merely of a short introductory motive whose final notes are repeated at such lengths that they represent the greatest part of the piece (Exs. 10 and 14). With themes of wider range one would be inclined to attribute the progressive lowering of the top notes to fatigue. But it occurs just as much with quite short motives of limited compass as with longer songs (Exs. 11–13, 15, 16, 52, 72–74). Often at the end only the rhythm of the theme, instead of the melodic line, is repeated in the cadence notes (Ex. 21). In Ex. 71 the first note of bars 2, 4, and 6 is lowered each time.

An essential part in the determination of ambit is played by the attack of the first note and by the form of cadence. Sometimes a song is introduced by a long high note giving the effect of a shout (Ex. 86). Very often the singer's voice is heard sliding down glissando-fashion from a high note, musically almost indefinable, to the first tonally defined note of his song (Ex. 4). On the other hand, the end of a song may also consist of a loud cry (Ex. 12) or a short high motive. An upward swing is rare at the beginning of songs of narrow compass, but quite common when the motive is based on a fourth or fifth, although it is much commoner in later cultures than in early (Exs. 45, 49, 51, 58, and 66).

Simple transpositions of motive occur even in quite primitive cultures. They are often simple displacements of the tonal centre within the same melody (Ex. 27). The Australians, the Marind-anim of New Guinea, and the inhabitants of the Torres Straits use a model in which a short motive descends stepwise at each repetition. By this means the motives are joined to form a unified line (Ex. 17). Where the motives are longer or the transposition intervals wider, the repetitions are more clearly separated. At the same time, the motive can be repeated exactly or freely (Exs. 18 and 19), with smaller (Exs. 21 and 22) or wider (Exs. 25–26) intervals. If the motive is transposed only once, the 'two-zone song' results; this is found in its simplest form among the Copper Eskimos (Ex. 53). In the later development of this pattern, the repetition of the theme either merely
follows the shape of the original statement or answers the exposition. The answer is often only metrically related to the theme, while the melodic line goes its own way. Instead of varied repetition, the theme is 'developed' (Ex. 108).

The tonal ambit can also be extended by giving more emphasis to the lower notes of the motive in the second exposition or by stretching the melodic material so that in the repetition the closing note is lower than it was in the original statement (Exs. 27–29, and 32). The extended form of the motive obtained by the lowering of the cadence (Ex. 30–48) can then be carried further by transposition (Exs. 31, 38, and 39). Often a progressive breaking away from the motive sets in, so that the last repetition may contain a completely new component phrase (Exs. 32, 35, 40, and 42). The arrangement of Exs. 30–51 shows the increasing intervals between the cadence notes.

In another pattern the voice, while repeating motives of narrow compass, takes a sudden upward or downward leap (Exs. 54–56). These newly acquired notes lead in some cultures to forms of yodelling (Exs. 62 and 134), in others they are linked with the melodic basis in a more continuous fashion (Exs. 57–60). Such patterns may in many cases have led to the songs constructed on the triad. That such forms can also originate independently, however, is shown by the occurrence of fanfare-melodies in cultures in which this pattern does not exist (Exs. 63–65). Here too we find transpositions (Ex. 66) and repetitions within diminished compass (Exs. 72–74). Exs. 67–70 also use motives in contrary movement which divide the song into two parts within the narrowest range. In general these patterns, like the 'triad' forms (Exs. 75–82), are not very favourable to a concentration of functions. In these structures based on thirds, fourths, or fifths there is a tendency to utilize the functions contained in the limits imposed by the motive only when the wide-leaping movement becomes somewhat more restricted. Exs. 75, 83, and 84 introduce the upper fifth by a stressed second above it. In fourth-motives the relation between the third and fourth is emphasized (Exs. 92 and 93). In fifth-motives the relation between fourth and fifth, or third and fourth, becomes structurally important (Exs. 88–91). This structural wealth within a constant compass seems to represent the highest development of these limited melodies.

Apart from the upward transpositions of motive and the rising curves at the beginning of the 'triad' forms, both comparatively rare, upward extension of compass is an historically late product (Exs. 95–97). In early cultures such upward extension is generally very
small. But it increases when it is introduced by means of a new phrase, i.e. a new motive (Ex. 94). If this second phrase is followed by the repetition of the first we have the ternary form ABA. Rising melody is generally richer in functions than falling. Some patterns are arch-shaped (Exs. 98–102); others widen their compass by exceptionally wide leaps (Exs. 103–7).

The last phrase of a song often has a special significance in the structure. Besides the elastic repetition of the final notes or the transformation of the last exposition of the theme into a free phrase, a concentric condensation of the thematic substance is common (Exs. 36 and 37). Of particular importance is the cadence in form of an ostinato motive (Exs. 8, 15, 51, 65, 88, and 145–9), which, unlike the other sections, is not varied when the stanza is repeated, is often sung polyphonically, and sometimes slows up the tempo by a third (Exs. 65 and 147).

**ORIGIN OF POLYPHONY**

All these patterns which develop the compass by progressive variants lead to polyphonic forms when they occur simultaneously with the theme. Polyphony originates when two singers—consciously or not—perform the same theme in different forms (within a given pattern). In many cases the varying of the theme is paralleled by a variation of the words¹ (Ex. 147). Primitive melody does not grow out of harmony; harmony is rather the product of melodic variants. The attempt to trace the origin of vocal polyphony to chance observation of consonant intervals emitted by sounding objects must be rejected for three reasons. First, consonances occur in a perfectly natural way when the same melody is sung simultaneously by men and women or children. The frequent alternation of unison with octave, fifth and fourth, is due to the extent to which these intervals blend. It seems very doubtful whether an organic polyphony could develop from these forms, because its geographical distribution suggests that it cannot be any older than canon and the heterophonic variation (Ex. 110) which exhibits a great number of dissonant intervals. It would seem that strict parallel motion is devoid of all possibility of development. For this reason it is found quite unchanged in primitive and late cultures alike. Secondly, even if consonance were a necessary precondition for the creation of polyphony, its discovery could not have been due to musical instruments, since melodic instruments are historically far younger than vocal polyphony.

The distribution of polyphonic singing also shows that (apart from chance parallelism and the musically undeveloped drone) the 'chance discovery' of consonance must have been confined to the white and black races, while it is just in those regions where gongs originated—to whose simultaneous sounding the beginnings of harmony have often been traced—that no vocal polyphony exists. Thirdly, such an organic structure as canon could never have arisen from the chance observation of consonance; yet canon is one of the most primitive forms of polyphony. These things arose spontaneously and cannot be explained in a mechanical fashion. Canon, which develops from the idea of following and hunting, was still called chasse or caccia in medieval Europe. Song and bodily movement are so closely related among primitive peoples that it seems completely misguided to attempt to explain their spontaneous musical creation by speculative methods.

Ex. 110, belonging as it does to a very primitive cultural stratum, proves that the oldest polyphony occurs without the use of consonant intervals at all. This kind of polyphony exhibits a special development, springing from strong emphasis on the individual. Acoustically it aims rather at the fusion of noises than at the pure concord of definite notes. In the concerted imitation of natural sounds (see p. 9) each singer adopts the voice of his own totem quite independently of the other performers, yet the total impression is entirely pleasing to the ear and just as 'harmonious' as when we hear simultaneously the song of birds, the buzz of insects, and the rippling of a stream. Atonal polyphony achieves a special form in concerted instrumental music.

Canon is one of the oldest patterns of vocal polyphony. Among the Kenta (pygmies of the Malay Peninsula, cf. Ex. 112) the imitation is usually very strict. The same applies to their neighbours, the Sakai. The African pygmies and bushmen use a more or less free imitation (Exs. 111 and 114). On the island of Flores, where many remnants of ancient Papuan tribes survive, the canons is sometimes worked out over a third free part or over a drone (Ex. 113)—the pes of the canonic forms of medieval Europe. In contrast with the small intervals before the imitative entries in these examples, among the Badiki of the primeval African forest (Ex. 115), in the head-hunting songs of the Naga (Ex. 117), in the Congo, in the Solomons and in Samoa (Ex. 116) we find forms in which the voices enter at longer distances.

If the theme is repeated simultaneously (instead of canonically) and strictly, parallel parts result (Exs. 118–20). Often two voices first proceed in unison until they separate through each placing a different
functional interpretation on a certain note. The extremely wide geographical distribution of parallelism in fourths and fifths may go back to the ancient Negroid patriarchal (old Sudanese) cultures. Among the pygmy and hunting tribes and in the Solomons it is usually mixed with elements of descant (Exs. 124, 127, and 128–30). Parallelism asserts itself throughout history with the utmost tenacity and we still find it in the Caucasus and in Europe (Exs. 121, 122, and 127). It may be doubted whether parallelism in thirds is really so recent as is generally supposed, since it occurs in the middle cultures (Exs. 126 and 133). Parallelism in seconds possibly represents the debased product of a highly developed culture\(^1\) (Ex. 125). The alternation of fourths and thirds (Exs. 131–3) is extraordinarily widespread, as is also parallelism within tonal limits, i.e. a vocal parallelism interrupted at the points where its bitonal implication would disturb the unity of the phrase by introducing notes foreign to the tonal system. The harmonic system which has developed particularly strongly in Africa is closely connected with the development of the tonal system. The new notes which are added by polyphony to the *canto fermo* represent functional variants of the melodic notes within the given key; and just as every mode contains in itself the melodic functions of the preceding ‘key’ (see p. 17), so also every ‘key’ comprises the harmonic possibilities of the preceding scale.\(^2\)

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If the simultaneous repetition of the melody is varied by contrary motion, a kind of descant appears (Exs. 134 and 135) which gradually develops into higher forms (Exs. 136–9). According to whether the linear or the harmonic element is predominant, polyphonic or chordal forms arise. In the Caucasus a choir is often contrasted with a solo yodeller. Broad series of triads are found in Indo-China, in the Caucasus, and in Europe (Exs. 140–3). In the primitive and middle cultures the endings of the songs often show a striking consistency, while the other sections vary greatly in each verse. These closes—

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1 M. Schneider, *El origen musical de los animales símbolos* (Barcelona, 1946), p. 239.
2 The bracketed intervals are found less often.
ostinato-like in effect—are very often accompanied by the choir (Exs. 144, 145, and 148) or left to it entirely. If this ostinato overlaps with the solo voices a special form of polyphony results, as seen in Ex. 146. A further development, suggesting a primitive form of chaconne, is shown in Exs. 150–2 which are taken from the shepherds of Ruanda, the Ossetes of the Caucasus, and from medieval polyphony (Côdex de Las Huelgas).¹

The very ancient drone form (Exs. 153–9) is as persistent as parallel harmony but with greater possibilities of development. To this too, an element of descent is very soon added. The long note held by the choir (Exs. 160 and 161), as well as the short, repeated motive, appears also in instrumental music (Ex. 162). The drone of the bagpipe, however, belongs to the higher civilizations.

VARIATION AND TYPES OF MELODY

The patterns described above appear in different forms according to the musical energies which pervade them. These different aspects must now be described in greater detail from the point of view of variation and types of melody. The term ‘variation’ will be used to cover all methods of continuing a given theme, although in later cultures a kind of thematic development is already found alongside the original variation form. By using the term ‘variation’ in this wider sense we shall absolve ourselves from a hopeless attempt to establish the extremely fluid boundary beyond which a given phrase can no longer be regarded as a mere variant (a¹) of a theme (a) but must be interpreted as a new phrase (b). It is particularly difficult to define this boundary in primitive music because the purely rhythmic element is so much more important than the specifically melodic. What is really repeated or developed in the continuation is the rhythm of the motive. In early and middle cultures the simple repetition of the metric pattern takes second place and that of the melodic line third. Therefore in analysing primitive melodies the varied repetition (a¹) of the motive (a) must be interpreted more freely than in many songs found in highly developed cultures. A motive, the rhythm or melodic line of which is considerably modified in the repetition, must not be interpreted too hastily as a really new phrase (b) since the essence of continuation in primitive music consists in variation and in progressive breaking away from the given motive rather than in the thematic contrast of the phrases.

¹ The examples are published in full in M. Schneider, ‘A propósito del influjo árabe’, Anuario musical del Instituto Español de Musicología, i (1946), exs. 61 and 61a.
The melodic type is determined by the dynamic expressed in the subject and its continuation. The variation reinforces and develops in the continuation the thought presented by the theme; how this is done depends on the particular type of melody. Although some types of melody are very closely connected with certain forms of movement (time) or patterns (space) (Exs. 46 and 47), the metrical or linear aspects of a theme do not determine the type of melody to which it belongs, nor does the ambit. The typological affinity of two melodies often becomes more apparent only when similar metrical patterns and melodic curves join the same dynamic (Exs. 99 and 100). But the type is revealed above all in performance and in the particular way in which metre and melodic line coalesce in the rhythm. On paper it can be grasped only incompletely, but the ear detects it immediately. The same melodic idea, appearing simultaneously in the music of two different peoples, can be used by each of them in a different type (Exs. 148 and 149). On the other hand, the same type may appear in two different melodies although the actual notes may have little in common. Just as, for example, pastorales, gigues, or spiritually kindred human beings emit the same kind of atmosphere, so typological affinity between different melodies is based on a common atmosphere which cannot be defined by the actual notes or by weight or measurement, but which any musician should be able to recognize.

The subject broached here offers one of the most important fields for future research in comparative musicology. Hitherto, melodic types have been defined according to 'the most obvious characteristics of the particular melody' (Hornbostel). The criteria employed have included that of compass ('narrow' melodies, melodies in fourths, 'triad' forms) or spatial concepts (steplike melodies, terraced melodies, leaping melodies). But these designations cover only part of what is understood by the whole complex of a melodic type. Thus Hornbostel by 'narrow melody' (enge Melodik) really meant only the narrowest primitive melodies performed in a fairly free rhythm. 'Fanfare melody' means a particular style found among pygmies, but it does not include by any means every kind of fanfare-like song. With a few exceptions (for example, in tritone melodies) interval-structure is a bad criterion for determining melodic type, because it is too general. In the present description of primitive music the concept of space has therefore been excluded in defining types of melody.

1 A few years after the publication of the essay on 'Wandernde Melodien' in Archiv für Musikforschung, iii (1938), p. 363, the author played the melody of Ex. 148 to a Ewe man on the gramophone. As soon as the Negro heard the song, he claimed to know it very well and sang Ex. 149.
Since metrical pattern is equally inadequate as a criterion, all we can do in the present stage of research is to collate melodies which appear to be related dynamically in some way or other and to abstain from a specific terminology. It might be useful, however, to revert to the Indian conception of rāgas, according to which a type of melody is defined not by technical criteria but by its locality and definite poetic mood-content. The criteria proposed by Dincser for the classification of variants:

Isomelodic—isorhythmic—isochronic—isometrical—or
heteromelodic—heterorhythmic—heterochronic—heterometrical
exclude any such fusion of musical and extra-musical elements. This attempt to establish a uniform terminology and an exhaustive classification of types of melody is to be welcomed. But the classification suggested is too formal: it separates things that essentially belong together. And its categories are too rudimentary for serious research. They cover only the external characteristics and omit the most important aspect of all: the dynamic nature, in other words, the quality of the melody.

Since acoustic feeling has no terminology of its own but has to borrow concepts usually applied to the other senses (we have to speak of sounds as being light or dark, hard or soft) this terminology is bound to encroach on non-musical fields. Taking fellah songs as an example, I have shown how in different melodic expressions of the same basic type the intensity may fluctuate or remain constant, how some variants may have strong or weak tonal relief, and how some parts may be constant in all versions and others continually varied; this was an attempt to work out the various forms of expression of a qualitative (dynamic) kind that are possible within a given type of melody, bearing in mind, however, that the growth of a melody is absolutely biological. It is only from such criteria that we can infer the nature of the type by which the variants are determined. By adopting this kind of terminology one is not escaping into a 'foreign range of ideas inapplicable to music' but merely accepting a makeshift which it is impossible to do without unless one is prepared to rest content with purely external, quantitative (and therefore, from a

1 Cf. W. Wiora, ‘Alpenländische Liedweisen der Frühzeit’ in Festschrift für John Meier (Lahr, 1949); and M. Schneider, ‘Lieder ägyptischer Bauern’, in Festschrift für Koddl (Budapest, 1942) and ‘A propósito del influjo árabe’ and ‘La canción de cuna’ in Anuario musical, i (1946) and iii (1948).

2 See Chap. IV.

3 O. Dincser, Die Probleme der Varianten in der Volksmusikforschung (Geneva, 1947).

typological standpoint, secondary) criteria of form. The term ‘iso-
melodic’ which Dincser suggests using for two similar (typologically
identical) melodies, the notes of which are different,¹ is misleading
since it ignores the most important thing of all: the existence of
characteristic turns of phrase (variants) which are different in two
songs although they belong to the same type. The great difficulty in
all typology is establishing the dividing-line beyond which the variant
of a melody deviates qualitatively so forcibly from the model that it
can no longer be assigned to the same type.

Although the all-important acoustic impression cannot be repro-
duced here, an attempt must be made to show by a few obvious
examples how the various types fashion the theme and its continua-
tion in their own particular way. (If in the following lines examples
of similar compass are grouped together, despite earlier insistence that
compass is inessential, this is done in order to show the great differences
that can exist within the same model.) Even in the most primitive cul-
tures two basic forms of melody are to be found. The one proceeds
from a clearly defined melodic idea which it varies in the course of the
song. In the second form it is impossible to separate the primary
idea from the variation since the entire song does not proceed from
an idea clearly expounded at the beginning but expresses in constantly
changing forms an idea that is never absolutely stable (Ex. 92). If
the idea is clearly and concisely formulated at all, this formulation
often occurs only during, or at the end of, the song.

The more primitive the models, the less differentiated they will be
in type and in the working out of the musical idea. Songs such as
Exs. 1, 2, and 27 occur very frequently in early cultures. In rather
more developed cultures they often take on a definite metrical form
(Exs. 3, 9, and 28), but both styles persist side by side right into
advanced cultures. The same is true of purely recitative ‘songs’
(Exs. 5 and 6).

If one studies how different principles of continuation are applied
in the various models, one often finds only a slight typological
relationship between melodies based on the same model. In the
examples where the compass is abbreviated (Exs. 10–16 and 72–74)
only Exs. 13 and 14 or 72 and 73 seem to be related typologically.
The songs of which the compass is formed by transposition or lower-
ing the cadence (Exs. 17–52) fall into various groups. There seems
to be a dynamic relationship between Exs. 17, 18, and 21; 30 and 31;
19, 32, 33, and (to some extent) 107. On the other hand Exs. 50 and

¹ Dincser, op. cit., p. 85.
51 differ completely in their rhythmic patterns although they follow
the same model so far as compass is concerned. Exs. 20, 34, and 58
are closely related although the last belongs to a different model.
Exs. 25, 26, 39, 40, and 47 also belong to each other so far as type is
concerned. Ex. 40 which, in pattern, is very much like Ex. 39, never-
theless belongs to the same type as Ex. 41. Exs. 23, 42, and 65 (which
last belongs to another ambit-group) form a separate dynamic group
of their own. Despite the very similar melodic outlines, Exs. 81 and
82, and 83 and 84, are not related dynamically. On the other hand,
there is a typological relationship between Exs. 78 and 79; 80 and 81;
59 and 88; 56 and 68; 69 and 70; 72 and 73. Despite the similarity of
the models on which Exs. 54, 55, 57, 59, and 60 are based, only the
first two seem to show some typological affinity. The dynamic
relationships are closer in the extended melodies of Exs. 92 and 93,
99 and 100, 103 and 104, 105 and 106.

It seems as if the more intensely specialized melodic types are bound
up with certain racial factors; otherwise it is difficult to explain the
coincidence of identical types found in America and Asia, Europe
or Australia, the relationships between Bushmen and Lapps or the
similarity between songs found in Indo-China and India proper,
Pamir, Afghanistan, and Central Asia and songs from Europe and
the Caucasus. It is difficult to accept the theory of cultural exchange
as an explanation, since the geographical distribution of these songs
coincides more with areas of similar race than with those of similar
culture. In fact, the innermost essence of the more intensely specialized
types of song cannot be transmitted at all, that is to say, cannot be
imitated, since the dynamic and the vocal timbre which is inseparably
bound up with it cannot be acquired by learning. However note-
perfectly a European may sing a Bedouin song, he will still be unable
to reproduce the essence of the type since the notation merely
represents the last and external result of the type. The European will
inevitably reproduce the song in one of the types with which he is
familiar. How deeply the type is rooted in men’s constitution can be
seen by the fact that even within the confines of the Iberian Peninsula
a Spaniard from the north is incapable of singing correctly the highly
specialized cante jondo of Andalusia. Admittedly there are particu-
larly gifted individuals of great adaptability who succeed, after year-
long contact with a foreign musical culture, in acquiring its songs
to a high degree. But the expert will never mistake such an outsider
for a native singer.

The virtuosity of a few foreign individuals exerts only a very small
influence on folk-music. Melodic types migrate only when the people themselves migrate. It is certainly a great error to imagine that, wherever some foreign utensil or cultural object has been introduced, the corresponding music must inevitably have been adopted as well. Songs do not travel as easily as carpets, vases, or ornaments, because they are bound up much more intensely with the ‘owner’.

The composition of a primitive song is also closely connected with the melodic type. There is no doubt that a song proceeds from a particular individual. Nevertheless almost every primitive composition is still in some way a collective work, since the folk-musician composes very much in accordance with definite moulds. In Exs. 92 and 93 it is the fourth and the strongly accented leading note, in Exs. 46 and 47 the metre which provides the model. The writer once observed three Duala Negroes composing a song together. One of them invented a short motive and also the words: ‘The stranger has invited us to drink.’ To begin with, the motive had a fixed metre but little melodic shape. Then all three sang the motive, each in a somewhat different melodic shape, and very gradually, after endless repetitions, a quite charming motive emerged. The three following phrases were then quickly added, since they merely varied the motive. When the song was finished it represented no more than a fresh melodic expression of a familiar metrical formula. In his book on the Andaman Islanders, A. R. Brown writes: ‘A man composes his song as he cuts a canoe or a bow or as he paddles a canoe, singing it over softly to himself, until he is satisfied with it.’

**HISTORICAL DEVELOPMENT**

It is very difficult to discern a historical process at work in any given primitive race; at best one can do so only for a comparatively short period. A song considered ‘as old as the world’ often turns out to be no more than two generations old. If the whole range of primitive music is studied in the context of the early cultural development of mankind, however, the results are more promising. In any given people there is hardly ever a straightforward process of development, with primitive forms being displaced by higher ones. In the ‘pyramid of civilization’ the various elements are superimposed on one another rather than progressively displaced. Admittedly, a particular stratum can become completely forgotten but normally what happens is that as the variety of musical forms and styles increases each layer is allotted a certain place where it can continue to thrive. In the middle

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cultures where the new forms are usually secular songs, the old songs pass into the religious field or become children’s or women’s songs.

Native elements and those borrowed from other cultures often exist side by side within one tribe. Nevertheless, foreign forms are not adopted so much as is generally supposed. Even when two races of different culture are in constant economic or military contact there is little evidence that they adopt each other’s musical forms. It is true that a tribe that is stronger economically or militarily often uses musicians from subject tribes for its festivities (for example, the pastoral tribes of Ruanda make use of pygmies), but the degree of reciprocal influence appears to be relatively small. Even when foreign musical instruments are adopted, the relevant literature seems to be taken over only to a small extent or in mutilated form.

If the whole complex of primitive music is surveyed, a number of historical characteristics can be discerned according to the degree of cultural development. Most of the ambit-patterns appear in early cultures but their application is at first limited, gradually developing later. The dynamic element which gives life to the pattern determines the type of melody and thereby the special historical and geographical development of the elementary model. Thus, according to the culture in which it occurs, a pattern which circles round a central note may become a recitative which is interrupted now by a high note, now by a low one (Exs. 53–55), or it may develop into a gently oscillating song (Exs. 59, 60, and 88). In the evolution of the more highly specialized types, certain patterns will be highly developed while others will fall into the background. Thus the ‘transposition’ pattern is far more significant in Australia and America than in Africa. Among the Red Indians double or triple transposition is one of the commonest methods of continuation, while the Negroes (in so far as they use the method at all) usually content themselves with a single transposition (Ex. 22). On the other hand, they use not only successive but simultaneous transposition, producing polyphony (Exs. 119 and 120). Where the patterns are realized in a primitive fashion, the European generally finds them easy to understand since they reflect rudimentary musical thought. On the other hand, where they are used within a highly specialized type of melody, the idea that music is an internationally comprehensible language is exposed as an utter illusion; such melodies can be approached only by way of careful analysis.

The absolutely unlimited wealth of rhythm revealed in the songs of primitive cultures is very striking. In later cultures, however, there is a strong tendency to organize the rhythm by devising definite
metrical schemes. Fixed metrical formulas become to a certain extent moulds into which the melodic material is forced. These schemes can sometimes be so complicated and extensive (Exs. 51 and 101) that they appear to be free rhythms; but close observation of the repeated stanzas will show that the rhythmic patterns are in fact organized.

There is no evolutionary relationship between tonal and atonal music. Both forms occur very early side by side. It is true that atonal is gradually displaced by tonal music, but even in highly developed cultures it survives in recitative and in songs in praise of the dead or of animal gods.

In the phrase-construction the form \( a \ a' \ a'' \) predominates. To the modest extent that primitive music allows, the development to \( ab, abc, \) and \( aba \) forms is already found in early cultures. The form \( ab \) appears to develop quite as much from a phrase \( a \) with an epilogue in the form of a shout or ostinato, as from the progressive differentiation of the repetitions of the motive. Fundamentally all musical forms are present in embryo in primitive cultures. Evolution proceeds essentially by the extension of the application of the given principles. The original patterns are moulded in many different ways: the rhythms extend over longer phrases or become more regular, the melodic phrases are given a wider span. The bi-partite Exs. 69 and 70 show concisely what Ex. 108 exhibits over a wider area. The transposition of Exs. 17 and 18 appears in an extended form in the numbers that follow. The progressive condensation of the series of functional parts is particularly important. Primitive themes are mostly very even, functionally, since their melodic lines often persist in the same function for a long time or because the contrast between two functions is only rarely emphasized by a metrically distinguished place. Even the different positions in which the motive appears when transposed are not always able to break up the dead level of the series of functional parts. The close series of melodic functions is best developed in melodies in which the compass is medium and constant in range (Exs. 87–93), or in spacious ascending melodies (Exs. 96 and 97). In the songs of late cultures the individual phrase is usually longer, and divides itself into two sub-groups.

It is only very slowly that the short motive with its varied repetition is replaced by a real theme developing consistently in the course of the song and leading to a new phrase which can be called the complement or answer. It is true that a tendency towards this process appears very early on (Exs. 69, 70, and 94) but it is not really applied until comparatively late (Exs. 95–97 and 101).
Since some scholars have attempted to make a widening of the compass a criterion of historical progress it must be emphasized that wide and narrow compasses are found in almost all cultures. It must also be remembered that wide fanfare-like melodies and transposition are found in very early cultures. An attempt to classify the music of primitive races according to the concept of cultural cycles has been published by Werner Danckert.¹

**MUSIC AND SPEECH**

There is no doubt that in the earliest cultures words and music are closely associated. The few reliable transcriptions of melodies and words available show that—except in purely syllabic songs—the smallest alteration in the words leads to a modification in the melody. In recitative and the mythological narratives, in which the melody often has a stronger curve, the relationship between music and words is different because the text predominates and the musical form is of secondary importance. A certain balance between music and words is sometimes attained by interpolating mystic syllables in the text, thus dividing the song into regular periods.

Often the text consists of merely a few words repeated over and over again, like the motive itself. In Ex. 13 the words ‘The frog leaps’ are constantly reiterated. Certain vowels or sonorous consonants sometimes take the place of actual words. A shout, or a few words expressing a wish, a surprise, a name or a short proverb, often constitute the entire text of a song. The result is that in primitive cultures the musical form is often more highly developed than that of the text. The whole emotional content of the text seems to be sustained entirely by the rhythm of the music. The broader the melodies and the words, the more the realistic expression of the words through song gives way to purely musical line-drawing and the close connexion between words and music is relaxed. Strophic forms or different words set to the same melodies are found particularly where the repetition of the melody is not very consistent. The Chippewa take the view that new words may not be set to old melodies unless the subject-matter is the same.²

Many of the texts are quite unintelligible to the uninitiated because they often presuppose the knowledge of some story, event or custom. When the Californian witch doctor says ‘In Dalmona I dig up the earth and find nothing but rotten turnips’, one has to know that

rottenness stands for disease and that in Dalmona the earth and the sick are both beaten with a digging stick.\textsuperscript{3} Frances Densmore has published a song\textsuperscript{2} sung by a grandmother to a child: ‘Say to me \textit{m m m} and that I belong to you.’ Here the consonant \textit{m} is a sign of love.

A very special relationship between music and speech occurs in the sound-languages\textsuperscript{3} where the meaning of a word stem depends on the level and direction of the intonation in which it is spoken (for example, be = to hide oneself; bë = to speak; bë = to take out). My researches on Ewe texts,\textsuperscript{4} Chinese songs and those of the African Batswa, have led me to the conclusion that there is certainly a direct correspondence between the high, medium, and low notes in speech and in music, though established rules may in many cases destroy it. Where there is a direct correspondence, the musical intervals move in the same direction as the speech intervals but differ in size. Normally the intervals are wider in song. Moreover, the tonal basis (from which the concepts ‘high’ and ‘low’ are derived) may be transposed in the course of the song (Ex. 43). An uninterrupted succession of high notes in speech will either keep to the same level in music or form a slowly ascending melodic line. In the case of low notes exactly the reverse applies. The most important rule is that notes that are high in speech can be low in music, if they coincide with a metrically emphasized point in the song. Similarly, low notes of speech can be high in music if they come on an unaccented beat in the song (Ex. 16).

\textit{INSTRUMENTAL ‘LANGUAGE’}

The ‘language’ spoken by flutes, drums, and horns also appears to be closely connected with sound-language. Herzog\textsuperscript{5} gives the melody played on an African horn (Ex. 174) in which speech curves are reproduced. The Bubi of Fernando Po speak into a calabash on which they are able to reproduce five tones of their language.\textsuperscript{6} The whistle language (on mouth pipes)\textsuperscript{7} which Baumann regards as an

\textsuperscript{1} J. d'Angulo and E. d'Harcourt, "La Musique des Indiens de la Californie du Nord", in \textit{Journal des Américanistes}, xxiii (1931), p. 203.
\textsuperscript{4} M. Schneider, 'Phonetische u. metrische Korrelationen bei gesprochenen u. gesungenen Ewe Texten' in \textit{Archiv für vergleichende Phonetik}, vii (1941?), and 'La relation entre la musique et le langage dans la chanson chinoise', \textit{Anuario musical}, v (1950), p. 62.
\textsuperscript{5} Op. cit., p. 455.
\textsuperscript{6} G. Tessmann, \textit{Die Bubi auf Fernando Po} (Darmstadt, 1923), p. 31.
\textsuperscript{7} J. Beecham, \textit{The Ashanti} (London, 1841), p. 168; Biblioteca Canaria, \textit{El lenguaje
element of hunting cultures\(^1\) and the flute music which represents the
beginning of programme music both reproduce speech rhythms and
modulations in musical form. R. S. Rattray\(^2\) has established that the
difference in pitch between two skin-drums used for transmitting news
corresponds to the high- and low-pitched vowels of ordinary speech.
Eboué also considers that drum language is an exact imitation of
speech rhythm\(^3\) (Ex. 175). Heinritz has emphasized the significance of
the reproduction of the ‘dynamic profile’ of the spoken phrase, and
I myself have drawn attention to the differentiation of vowel-sounds
and the connexion with the sound-laws which condition the relation-
ship between speech and melody-function.\(^4\) There are evidently also
pure ideograms such as those of the Nor-Papuas published by
Father J. G. Schmidt\(^5\) (Ex. 176). It is probable that these speech forms
originally represented some kind of secret language or language of
respect. In any case it is significant that the African Twi and Ewe do
not utter the praise-names of their gods in speech but only beat them
on their drums.\(^6\)

THE MUSICAL INSTRUMENTS (see plates 1 and 2)

The rhythmic articulation of time by means of an instrument of
some kind is far older than the construction of a true musical instru-
ment. Any object that primitive man happens to pick up when sing-
ing or dancing becomes a sound-producing ‘musical instrument’.
 Implements used exclusively as musical instruments and for no
other purpose develop only very slowly. Many instruments (for
example, the pot-drum) are merely adaptations of already existing
utensils.

As the instruments used by primitive man have already been in-
vestigated more thoroughly than his vocal music it will suffice to
describe only the most important types. The ideas associated with

\(^{silbado en la Gomera,} R. Ricard, A propos du langage sifflé des Canaris (Hesperis, 1932),
p. 140.

\(^1\) H. Baumann, ‘Afrikanische Wild- und Buschgeister’, in Zeitschrift für Ethnologie,


\(^3\) M. Eboué, Les Peuples du Ouabanghi-Chari (Paris, 1933), pp. 80 and 94; H.

\(^4\) W. Heinritz, ‘Probleme der afrikanischen Trommelsprache’, Beiträge zur Kölnial-

\(^5\) J. G. Schmidt, ‘Neue Beiträge zur Ethnologie der Nor-Papuas’, Anthropos, xxviii

\(^6\) D. Westermann, ‘So, der Gewittergott der Ewe’, Zeitschrift für Ethnologie, lxx

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them will be dealt with later.¹ Curt Sachs's History of Musical Instruments² gives a classification on morphological lines, and the same author has described the cultural and geographical distribution and morphology of primitive instruments in greater detail in his Geist und Werden der Musikinstrumente.³ In his Origines des instruments de musique,⁴ Schaeffner has given a classification based on the materials used in their construction, while Montandon has preferred to classify them according to the method used in playing them.⁵ Kirby’s The Musical Instruments of the Native Races of South Africa⁶ contains the richest collection of primitive instrumental music published so far.

Idiophones. The practice of beating the body with the hands or with some object appears to be transferred very early to the beating of horizontal tree-trunks and bamboos and to stamping on the ground. Jumping on or beating a springy plank (‘dancing tree’) or an animal skin laid across a hole in the ground is an early specialization of the process. If a tree-trunk is split open and hollowed out lengthwise like a canoe, the result is a slit-drum (often carved in the likeness of a man) which is played either with the feet or with two sticks. The ritual significance of the slit-drum will be discussed later. Its secular purpose is the transmission of news (‘drum language’), and to obtain the necessary variations of pitch, the drum is beaten in different places or tongue-shaped strips of different thicknesses are detached from the side. In the course of evolution, instruments originally made 2 to 7 metres long are reduced to hand-drums and finally to wooden bells.⁷

Stamping on the ground leads to the construction of special ‘stamping sticks’, which are used to beat the ground during a dance, and thin bamboo tubes which are commonly used in pairs of different length, thus producing different notes. When struck against a sheet of water, they produce a loud and sombre sound. Another way of producing sounds is by scraping the rough parts of sticks, tubes, or receptacles against some suitable object; human and animal bones, bamboo reeds, and shells are used for preference.

Idiophones can not only be beaten or scraped; they can be shaken. Shaking has led to the construction of the extremely numerous types of rattle. To make the rhythm of the dance audible, various small, hard objects, such as sea-shells, bones, teeth, coconut-shells, are strung together and hung on the human body. Rattles are also made

¹ See p. 51.
² Berlin, 1929.
³ G. Montandon, La Généalogie des instruments de musique (Geneva, 1919).
⁴ New York, 1940.
⁵ Oxford, 1934.
⁶ Paris, 1936.
⁷ Sachs, Geist und Werden, p. 47.
PRIMITIVE INSTRUMENTS

(a) Xylophone ($\times \frac{1}{2}$); (b) Slit drum ($\times \frac{1}{4}$); (c) Zither ($\times \frac{1}{4}$); (d) Rattle ($\times \frac{1}{4}$); (e) Zansa ($\times \frac{1}{4}$)

For further details see page xiii.
by filling the rinds of gourds, animal skins, or clay vessels with grains of corn, stones, or magic objects and fixing handles to them. The rattling objects may also be strung on a ring or enclosed in a hollow staff. Priests use rattle-staves of this kind as a token of authority and they are also used in dancing. In Indonesia staves filled with grain are used as seed-drills.\footnote{Ibid., p. 121.} Small bells made from the bodies of animals or fruit rinds are closely akin to rattles. Only small types of metal bells are found in primitive cultures; they are often used in pairs connected by a ring.

Whereas plucking as a sound-producing method for idiophones has led only to the jews' harp and the African zansa (which consists of strips of wood or iron fastened to a board, keyboard fashion, and plucked), the evolution of percussion has resulted in the construction of a much greater range of instruments. These include two sticks beaten against each other, wooden bats, and bell-like objects struck against each other; cymbals were probably first adopted from more highly developed cultures. The earliest forms of xylophone are also found in primitive cultures. The prototype consists of two pieces of hard wood which the player, seated on the ground with legs extended and spread, places on the upper part of his thigh and beats with two clubs; later on, two banana stems are used instead of the thigh. Holes in the ground or gourds under the wooden bars act as resonators. The xylophone is used not only to accompany but also to play instrumental works in one or more parts (Exs. 164 and 169); it seems to be regarded as an all-purpose instrument, rather like the modern piano, for its literature includes many arrangements of songs and pieces for drums and flutes;\footnote{Kirby, op. cit., p. 56.} it is also used for programme music.\footnote{S. Nadel, \textit{Marimbamusik} (Vienna, 1931).}

Of the other percussion instruments, only the lithophone is found in early cultures. The gong, which has been developed by higher cultures, represents an advanced element in the later farming cultures.

\textit{Membranophones.} The oldest forms are produced by stretching a skin over a tube, coconut, gourd, or bowl. All the early types are struck by hand only. In comparatively early cultures we find a drum the narrow middle section of which is spanned by a handle. This one-skin drum, shaped like an hour-glass, perhaps originally looked like a funnel or mortar. The two-skin drum of this type was not developed until later. The skin stretched across a round, hexagonal, or oval wooden frame is often found in the hands of witch-doctors, hence the name \textit{shaman drum}. The wooden hoop, which sometimes has
a handle, is criss-crossed by strings. The skin is struck with a beater, often made in the shape of a knife. Cask-like receptacles made of clay, covered by a skin stretched across with strings, are always beaten with the hands, whereas the bellied wooden drums, whose skins are nailed on, are played with sticks. They are usually fixed to a post or hung up on a cross-beam. Their side-handles and the fact that they are occasionally filled with rice, suggests that the instrument was originally used for a practical, not a musical purpose. In the case of the friction drum, the sound is produced either by a stick fixed on the skin, or by rubbing with damp fingers a string knotted through it. Drums usually reproduce the general rhythm of a song (Exs. 11, 12, and 21). But in many cases they have a tempo of their own (Exs. 50 and 150), or some formula completely independent of the song (Ex. 153).

The last membranophone to call for mention is the mirliton ('kazoo'). This is a fine membrane which vibrates in front of the mouth or at the open end of a pipe through which the player speaks, sings, or blows.

_Chordophones_. String instruments are very little developed in primitive cultures. Sachs derives the oldest form—the earth-zither—from a thinned-out wooden pole, beaten with a stick. Actually the oldest type of earth-zither is a 4-metre long rattan reed stretched horizontally across the ground and joined in the middle with a membrane, which lies above a small hole in the ground; the player beats the string with two little sticks (Ex. 163). The earth-bow is a genuine hunting implement. Its string, which is plucked or struck, is fastened at one end to a springy stick or tree and at the other to a piece of bark over a hole in the ground. In the ordinary bow (Ex. 162) the two ends of a flexible stick are connected by a string which is sometimes cut directly from the outer surface of the stick. To intensify the extremely soft sound a gourd or earthen pot is usually attached or the string is held in the mouth. The string is plucked, struck, or scraped with a stick.

A 'reed zither' is made by taking a narrow strip from the surface of a halved bamboo reed to form a string, of which only the two ends remain connected with the reed. The tension of the string is maintained by some object placed underneath and it is struck with two little sticks. In a more highly developed form, strings from the reed itself are replaced by strings from other sources, stretched across a board or a bowl. Lyres, lutes, and harps do not appear until the late farming cultures and then very often in backward forms.

1 Sachs, _Geist und Werden_, p. 60.
Aerophones. The bull-roarer consists of an oval or rectangular wooden board, the upper end of which is fastened to a cord. When the instrument is swung in a circle, it also revolves on its own axis and as the speed increases an extraordinary variety of noises is produced.

The most primitive flutes are made of bones and have up to four finger-holes. The mouth-hole in front or at the side is made by the insertion of a plug into the pipe. When two pipes are combined into a double flute, they are of different length. A flute in which the breath is sent not through a pipe but through a small convex vessel is very widely distributed; the player blows through a round unnotched hole. On the other hand, the round flutes made of clay, which are filled with water, are always notched flutes. The vertical flutes with notches can be divided into three types, according to whether the lower end is open or stopped or whether the stopped end has a hole through the middle. Curt Sachs conjectures that the stopped flutes, which are sometimes as long as 1 1/2 metres, are the oldest. The simple vertical flute with no special blowing appliance is historically later than the fipple and notched flutes. The transverse flute stopped at the lower end has some very archaic features. It may be as long as 6 metres and it has a maximum of three finger-holes. To make a double transverse flute, a mouth-hole is bored on both sides of the nodule of a bamboo reed. In many districts vertical, transverse, and vascular flutes are blown through the nose. The flute took a long time to develop into a really melodic instrument. Its primitive forms are scarcely capable of anything beyond signal-calls. The melody is also usually very indefinite in rhythm and somewhat irresolute (Exs. 170–3). Panpipes, on the other hand, exhibit far more definite musical forms. The reeds are sometimes arranged in a single more or less symmetrical row, sometimes they are tied in a bundle or in two rows (Exs. 166 and 168).

In the trumpet family the longish tuba made of wood or reed and the snail- or mussel-shells with a mouth-hole probably represent the oldest types. In the tuba the lips rest directly on the edge of the bore-hole; the player does not so much blow as shout into the pipe. The instrument may also be made from bottle-gourds instead of wood, or, like the alphorn, from a hollow branch of a tree wrapped in bark (Ex. 167). The animal horns which are played in Africa as transverse trumpets, are also very widely distributed (Ex. 174). The oldest clarinets have no finger-holes and are often quite long. The mouth-piece is usually inserted in a gourd or horn.

Singing is often accompanied by a rattle, a drum, a flute (Ex. 173),

1 Ibid., p. 81.
panpipes, or xylophone. The combination of drum with conch, pipe, horn, flute, or clarinet may be considered 'classical'. Choirs are often formed of similar instruments. In the drum orchestra (normally four to six instruments) each drum has its own motive (Ex. 175), which usually takes the form of a comment on the idea propounded by the biggest drum. Kirby\(^1\) gives the following South African example of the widely distributed panpipe orchestras: 1. Four to six small reeds, all tuned to the same pitch and played by one performer. 2. Three reeds (the same pitch, one performer). 3. Six reeds (the same pitch, one performer). 4. The player has one or two pipes in his hand. 5. This reed gives the pitch to all the other pipes. Its name means 'Weeping'. 6. A single pipe, whose name means 'weeping afterwards'. 7. A single pipe, meaning 'the cow'. 8. A single pipe. 9. The pipe with the lowest sound.

Ex. 168 gives a specimen of an orchestral hocket.

**REPERTORY**

Since primitive man sings much more spontaneously than civilized man, the repertory of primitive tribes is considerably more varied than that of art music. As it reflects the whole of life, most of it is 'occasional' or 'utility' music. Primitive man sings to call out, to play, to mock, to greet someone, to give thanks at the end of a meal. Many of the songs are improvised. Songs can even be sung before a judge; if two men quarrel or a couple want a divorce the contestants will plead alternately in words and more or less improvised songs. Whenever anything unusual happens—whether it be a boatman's oar falling into the water or a domestic animal running away—primitive man at once gives vent to his feelings in an improvised song.

He also sings at his work. When road-making, working in the fields, or rowing, however, the working man usually confines himself to the ostinato. Often a musician will keep the rhythm of the work going with a drum or oboe instead of song; he is not thought of as an idler but as an important helper. Most of the so-called working-songs are, however, intended for amusement; only a few show any direct connexion with the rhythm of labour. A special genre of working song has evolved among ploughmen, who address their horses or oxen in song.

In love charms the magic formulas are sung. The jocular love-song does not appear till very much later. Songs which celebrate the beauty of the loved one and are often accompanied on the flageolet (Exs. 104

PRIMITIVE WIND INSTRUMENTS

(a) Side-blown trumpet ($\times \frac{1}{4}$); (b) Vertical flute ($\times \frac{1}{4}$); (c) Conch-shell trumpet ($\times \frac{1}{4}$); (d) Palaeolithic whistle ($\times \frac{1}{3}$); (e) Globular flute ($\times \frac{1}{3}$)

For further details see page xiii.
and 172) are closely connected in style with the songs of praise sung in
honour of the tribal chieftain; both types often refer in their words to
mythological events. But in the market-place even the small man gladly
pays for a song of praise about himself, improvised by a musician
in a voice loud enough for all who pass by to hear. Needless to say, all
popular merrymakings are accompanied by music and dancing.

There is a very extensive repertory of children's songs, cradle songs,
songs to accompany games, songs which describe dreams, and songs
containing riddles or proverbs. All the rites relating to birth, circum-
cision, marriage, hunting, war, weather, medicine, and death are
permeated with musical elements. Among the funeral songs, the
women's laments and the songs which men sing in praise of the dead
deserve special mention.

In primitive cultures it is very difficult to distinguish musically the
various kinds of song since there is still so little differentiation of
form. Often the type of voice used determines the character of a
melody. Funeral songs and erotic songs are often sung in a nasal
voice; love-songs are accompanied by a significant play of the lips.
In more highly developed cultures formal differentiation is usually
determined by the various layers of tradition. An archaic style survives
in animal-songs and hunting-songs, and also in children's songs,
funeral songs, epic songs, and in medicine and weather charms.
Lamentations have a style appropriate to their own nature. In songs
of praise the melodic line tends either to rise emphatically or to start
very high.

It should be noted, however, that the 'literary' approach to song-
classification is not altogether satisfactory. Not every song sung
during a rain ceremony represents a true rain-song, since such cere-
monies are very complex. They include introductory songs, mytho-
logical recitatives, interludes, sacrificial songs, and songs of praise,
and only a small part of the ceremony is occupied by the song that
is intended directly to influence the rain. In the same way, war-songs
are not necessarily intended to incite the listeners to battle; they may
also be protective songs or individual medicine songs. In any attempt
to discover the stylistic qualities of particular types of song, the words
must first be studied very carefully. The relation between the musical
style and the content of the song (i.e. the words) lies not in the external
occasion (rain, war) but in the prevailing psychological tension. If
the witch doctor implores the spirit of disease to release his patient,
the song will be friendly; if he fights it with his spear, the song will be
warlike; yet both will be medicine songs.
THE IMPORTANCE OF THE MUSICIAN

The many-sided role which music plays in the life of primitive races explains the personal importance of the musician. No girl wants to marry a man unless he can play on the hunter's bow, and any girl is particularly proud of her man if he has been victorious in a singing contest. That singer is most highly esteemed who can sing a proverb or saying at the right moment. The arrival of a musician often turns a whole village upside down, and his departure is often accompanied by scenes of lamentation, especially among the women. Scandals between visiting musicians and married women are also a common occurrence.

In spite of all that, good musicians often receive invitations from neighbouring tribes. It is also customary for the musicians to lead a village community when it pays an official call on a neighbouring community and the latter presents the singers and instrumentalists with gifts. The musicians are very often feared, for their song is dangerous. Even if a singer is punished or banished for a satirical song, the effect of the song cannot be checked. Many chieftains take singers into their personal service in order to confirm their authority with a repertory of songs of praise of themselves. Here we have the beginnings of music as a profession.

Songs often represent real capital. When the girls of the Little River Woman Society reach the age limit of 18 years and have to resign, they sell their 'Society songs' to their successors and receive a horse or a dress of buffalo-hide in return.2

The distinction between higher and lower musician appears to go back to the very beginnings of musical history. In the primitive community of the Andaman Islands everyone is allowed to compose his own songs but not everyone is authorized to recite the tribal legends.3 Among the peoples of central Asia the narrator of the tribal myths is often also a shaman. The priest-musician endowed with medical knowledge, whose songs reach the world of the gods, has a distinct role in such communities. Mythological songs must not be paid for in money; in return for their own legends, the Uitotos ask for another sacred legend.4 In the transition to more advanced cultures, musical specialization leads to the distribution of musicians among various

1 Kirby, op. cit., p. 233.
4 Theodor Preuss, Religion und Mythologie der Uitoto, i (Leipzig, 1921), p. 15.
classes of society. In the Sahel and the western Sudan, society is divided into five castes: aristocrats, bondsmen, smiths, bards, and inferior musicians. The bards (dialli) are the custodians of lofty epic art and rank as great warriors. The inferior musicians, on the other hand, devote themselves to popular entertainment and their task in war is to goad on the mass of fighting men with their shouts and songs. Like the court jester of later times, the dialli are privileged to tell their masters things which others are forbidden to say, whereas the lower musicians are held in very low esteem. The musician represents the spiritual world. He is the ‘blacksmith’ of song and in West Africa he sometimes wears a costume not unlike that of a smith. In Togo the singer (who is quite distinct from the poet-composer) carries a horse-tail in each hand as a badge of authority. He is naked to the waist and his robe is fastened round the loins.

In general the musician is highly esteemed while practising his art, because he is regarded as the possessor of a higher power. But he is also feared, or despised. He is honoured in public but avoided in private. That he is able to traffic with the world of spirits makes him a somewhat sinister figure, and the more intensely a community feels his power the more it tries to keep him at arm’s length. Since it also needs him, it cannot banish him completely; so it acknowledges him secretly or openly, yet rejects him because it cannot forgive his superior powers.

**SPIRITUAL CULTURE**

So many writers have remarked on the astonishing unity of basic religious conceptions which underlies all the varied manifestations of primitive culture in so many different times and places that there is no need to emphasize it again here. Universal predispositions of spirit and the same fundamental observations have presumably resulted everywhere in similar conceptions; myths, symbols, and social organizations have been the clearest expression of these universal ideas. The progressive development of the physical and metaphysical conception of the world can be clearly traced from the earliest cultures right into the Megalithic Age, and the systematic symbolism of that age underlies the religious systems of the highly developed cultures. Some tentative efforts to combine the now disconnected remnants of these ancient conceptions into an organic whole have already been made. An attempt must be made here to represent the specifically

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3 Schneider, *El origen musical de los animales símbolos and La danza de espadas y la*
musical part of this ancient conception of the world, excluding as far as possible the contribution of the highly developed cultures, although it is very difficult to separate these latter elements since, on the one hand, the religious conceptions of the highly developed cultures include many primeval constituents and, on the other, many late elements have been assimilated by primitive cultures.

Music is the seat of secret forces or spirits which can be evoked by song in order to give man a power which is either higher than himself or which allows him to rediscover his deepest self. This is true of ‘religious’ and ‘secular’ music alike, for no distinction between the two kinds exists for primitive man, whose whole thinking is essentially religious or magical. When primitive man sings at his work, the music serves both to lighten his labour and to appease the spirit of the felled tree or the gods of the water he is crossing. It is only in later cultures that the working-song serves a purely practical end.

It has already been mentioned in connexion with totemistic ideas that every being has its own sound or its own song, the timbre and rhythm of which embody the mystic substance of the owner. Just as the ‘personal song’, which develops the sound-substance of the bearer to magical power, is not the melody itself but the personal way in which it is sung, so here too the term ‘sound’ is to be understood not so much as a clearly defined note as a particular inflexion or characteristic tone-quality. This rhythmical sound is the clue to the nature and quality of an object. From merely hearing a voice we know whether it is the voice of a human being and we can even identify the particular human being and tell whether he is happy or sad, resolute or undecided, bold or reserved. If we strike a tree or a stone, the sound produced tells us not only the nature but also the condition of the tree or stone. We can also tell by merely hearing the blows of an axe how well it has made its mark.

The mystical sound-substance inherent in all things, manifesting itself now directly, now indirectly, exists everywhere, even beyond the range of the normal human ear. The fact that primitive man easily attributes non-acoustic impressions to acoustic sources (owing to the unity of his sense-perceptions, or to the priority of his sense of hearing?) substantially widens the field of the rhythmic sound-substances tarantela (Barcelona, 1946 and 1948); ‘Los cantos de lluvia’, Anuario musical, iv (1949). Recent studies by the present writer after the completion of this section have strengthened the arguments here given. Cf. Schneider, ‘Die Bedeutung der Stimme in den alten Kulturen’, Tribus (Jahrbuch des Linden Museums) ii-iii (Stuttgart, 1953), Singende Steine (Kassel, 1955), and La philosophie de la musique chez les peuples non européens (Paris, 1956).

1 See p. 8.
which can be grasped indirectly. This is particularly facilitated by his psychological disposition to observe dynamic phenomena more intensely and to rate them much higher than static ones. When the sombre sounds and violent rhythms of a tempest convert the waves of the sea or the bushes of the forest into the likeness of the trampling and the swaying backs of a herd of animals stampeding down a hillside, the Duala Negro feels that these three phenomena are dynamically related and is at once able to reduce them to a common acoustic denominator by a suitable drum-song. Where the same sounds or rhythms appear, there also analogous beings are at work.

In view of the inconstancy of the world of form, primitive man questions the reality of static (spatial) phenomena and believes that transient (temporal) dynamic rhythms are a better guide to the substance of things. Hence he calls the same animal or the same tree by different names (i.e. rhythmic sounds) according to its age, condition, colour, and so on. Even one and the same person represents entirely different beings according to whether he acts in anger or kindness, as friend or foe, or moves like a child or an old man. The primitive conception of nature has a psychological basis. To the primitive mind the phenomena here called ‘rhythms’ are spirits, the audible souls of the dead ancestors who created all things¹ and in which they constantly reincarnate themselves. They are the physical and metaphysical reality which is the source of all life and all magical song.

In contrast to stones and plants the rhythms and sounds of which are monorhythmic and therefore have only one meaning, man is distinguished by his polyrhythmic constitution. The animals come between these two groups. It is true that man too has his own unequivocal basic sound, corresponding to the resonator of his outward appearance, but since his resonating surface is not so limited as that of inanimate nature, he is not only able to produce the sound peculiar to his own nature but also to imitate non-human rhythms and sound-colours. In addition, he can imitate sounds artificially since he makes musical instruments. Thanks to all these abilities, man is able to develop enormous power; for anyone who knows and can imitate the specific sound of an object is also in possession of the energy with which the object is charged. The purpose of magic is to utilize this indwelling energy (orenda, mana, sila, manitu, kami, &c.) in some way. The words orenda, mana, and so on denote the power of the sound-substance which an object emits audibly or otherwise. Orenda is the growth or the special curative power of plants, the purifying

¹ See p. 9.
power of water, the dynamic power inherent in a song. It becomes a magic energy whenever it appears to any exceptional degree. The resourceful magician gifted with special vocal powers can control this energy because he can imitate the sound-substance of the *orenda*; for, although it is emitted by spirits or particularly outstanding human beings, the *orenda* is an impersonal force which can be communicated, especially by exhalation or by shooting, to other people or suitable objects, such as musical instruments, and then withdrawn again. It is not confined to its bearer.

By sound-imitation the magician can therefore make himself master of the energies of growth, of purification or of music without himself being plant, water, or melody. His art consists first of all in localizing the object in sound and then co-ordinating himself with it by trying to hit the right note, that is, the note peculiar to the object concerned. He may attempt to do this by way of a rhythm in the cadence of its original murmur, by briefly shaking a rattle or by singing a short musical motive, thereby relating himself to the object or spirit by sympathetic vibration. If the contact between subject and object has led, by such musical analogy, to a mystic fusion of both parts, the sound or the motive will gradually develop into a song. Through the correct intonation, the spirit is held captive in the magicians’ body and sings through his mouth. But it is the song which the magician makes from the sound-substance of the spirit and the corresponding visible rites that determine the dynamic and the course of action which the magician attempts to force on the spirit. The spirit can be localized and allured by its own personal sound but it can only be captured, appeased, or overwhelmed by the song developed from its sound-substance. Admittedly, the visible rites may include analogical actions, such as the representation of the spirit by a mask, but their essential purpose is to act on the spirit which the sound-anaology has evoked. This activity may be expressed by the brandishing of a magic spear or sword, but it may also be limited to the words which envelop the sound-substance.

To understand this action of imposing the will on a spirit, it has to be remembered that for primitive man the world consists of an interaction of spirits which think and act like human beings. The spirits are conceived as fabulous beings (often in the shape of animals) dwelling in rain-clouds, springs, crevices, dark caverns, under heavy

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stones, in old trees, or in bamboo reeds. As a particular spirit is responsible for every disease and a particular healing-song exists to cure every disease, the doctor, after he has localized the cave-dwelling or the note of the spirit by examining the patient, must try to establish the name of the spirit, so that he can name it in the magic song. By means of a song pleasing to the spirit, by shaking a rattle, or by singing abusive and mocking songs, he entices the spirit from its dark dwelling-place (that is, from the recesses of the patient’s body). If the spirit appears, that is, if the doctor is possessed by the spirit, the spirit must be forced to ‘confess’. It must name its name, that is, sacrifice its substance and become a song. Although this sacrifice is entirely in the nature of the sound, the spirit makes it only on condition that a return service is offered in the form of a song or a sacrifice and that the patient patiently endures the suffering involved in the treatment.

The spirit which gives its sound and its name to the healing-song emerges from the dark cavern into the light, like sound escaping from a resonator. All the dark dwellings from which the spirits ‘look out’, that is to say, emerge in sound, are symbols of the sleep that brings health and purification, of the potential concentrated energy of the womb and ultimately of the fruitful sacrificial energy of the dead spirits which are the givers of all life. The ordinary man and the medicine man both receive their healing songs as a rule from a dead ancestor who is revealed to them in a dream. When the shaman sings a healing song, the spirit says to him: ‘You are singing a song which pleases me. It is my song. Therefore I will give you also my power. If you will care for me, I will care for you. If I hear your song, I will come.’ Spirit and medicine man need one another. The shaman receives his strength from the song, but the ancestor (i.e. the spirit which causes the disease and takes it away again) also needs to sound in song. By drawing the sounds of spirits from the dream-cavern and bringing them to light in the form of a song, the medicine man carries the spirit, becomes the singing cave, the ‘drum’, the ‘ship’, the ‘wagon’, or ‘bird’. The usual expression for this is: ‘He carries the tune.’

In view of the fact that sound represents the original substance of the world, the singing dream-cavern (which is also symbolized by


2 See p. 49, n. 5.

3 D’Angulo, op. cit., p. 201.
the moon or by water) constitutes not only the source of musical inspiration but also the source of Creation. In his *Religion und Mythologie der Uitoto* Preuss writes:

There is an inexplicable substance which seems to be a phantom and yet exists in a form hidden from the senses and perceptible only in dreams. The world came into being when God touched this unreal substance and as a result of a dream held it fast by a dream-thread which passed through the breath of his mouth. As he dreamt, he held the substance fast, stamped on the deceitful ground, and settled on the substance which he had dreamt, and created heaven and earth by secreting their elements from his body.¹

To produce a sound, however, an effort has to be made. The bow-string has to be stretched and the breath must impinge on a sharp resisting edge. The ‘ground’ must be ‘stamped down’. All life arises solely from stamping, from the tension or friction of two opposing factors, which have to sacrifice their strength and, if need be, their life for the birth of new life. All new life comes from sacrifice and, ultimately, from death. Since sound forms the substance of life, the spirits—that is, the sounding souls of the dead—are the real givers of life and preservers of the world. The dream-cavern is both the entrance to the underworld and the source of life. When the cavern sings or shouts, or the cloud thunders, each is sacrificing and emptying itself, like a fruit when it reaches maturity. But by giving their fruitful waters to frightened man, they liberate and regenerate themselves. When man offers his song or his shout, he purifies himself from the overripe guest of the cave and thereby helps it (the spirit) to achieve its full existence, to become sound. Sound is the material expression of the mutual sacrifice that is enacted between the living and the dead.

The experience that concentration and effort are necessary for every creative act led in ancient Indian philosophy to the cosmic idea of sacrifice. According to this, the world arose from the expiration of a light-sound, the ‘friction’ (sacrifice) of which created the gods and the stars, until it finally ‘expanded’ into matter. According to the Brihadâranyaka Upanishad this original sound was a song in praise of death or hunger which made all things grow or ‘swell’. The fasting ascetic acts analogously when he offers the breath of life in singing or reciting from the ‘cavern of his heart and lungs’. The sacrifice or ‘friction’ is the path or wagon on which man overcomes the dualism of the world. Since the world can be preserved only by the mutual sacrifices of the living and the dead, the ascetic can exert the same

¹ Op. cit., i, p. 27.
kind of compulsion on the gods as they exert on man. In the practical magic which has developed among primitive races from similar ideas, the idea of a balance between the living and the dead is much less pronounced. For primitive man the dead are always the more powerful and he is therefore not afraid to feign sacrifices to mislead the spirits, or to sing them flattering or plaintive songs in order to achieve the desired result.

Although primitive races are not acquainted with the idea of sacrifice in the strict and theoretical form in which it appears in advanced cultures, there is—quite apart from the fact that they are continually making food-offerings, performing ritual war-dances, castigating themselves and fasting—sufficient evidence to suggest that for primitive man, too, light-sound (in particular lightning and thunder), sacrifice, and an immanent dualism are recognized as the beginning of all things. When the gods were still wandering on earth they sang and drummed (= lightened and thundered) in order to create all things in the war-dance (sacrificial dance). These ‘gods’ are probably only sounds or vibrating objects conceived in the forms of human beings or animals. The Australian creator-god created the solid earth by beating the original seas with a reed. At the sound the waters divided and the death-gods came forth from their caves and created men and things. In European folk-lore the tradition of the beating of the water is ascribed to witches. The Marind-anim of New Guinea say that God lit a fire of bamboo wood to warm the first freezing (semi-human, semi-fishlike) creature; at the first crackling of the fire the creature’s ears were opened, at the second its eyes, at the third its nostrils, at the fourth its mouth: so man gradually came to life. (It is very significant that hearing was the first sense to be created.) The father-god of the Uitoto created the primeval waters by beating the hollowed-out tree-drum (he was probably one himself). The first crocodile created the harmony of the world when it drummed on its hollow belly with its tail. Theodor Preuss has already shown that the gods are thought to have produced all created things from their own bodies and, more especially, from their own mouths. Created things are apparently released from the caverns of the divine bodies, just as sound is released from a drum or thunder from a thunder-cloud.

2 C. Strehlow, Die Aranda und Lornitjästämme, i (Frankfurt, 1907), p. 3.
3 P. Wirz, Die Marind-anim, i, 2 (Hamburg, 1922), p. 185.
4 Preuss, op. cit., p. 29.
5 M. Granet, Danses et légendes de la Chine ancienne, i (Paris, 1926), pp. 263 and 326.
Music not only creates the world; it also cultivates and preserves it. On the island of Er they say that the first settlers, the original ancestors Pop and Kod, who were probably twins, dwelt in a hollow coral-tree (Erythrina) and made a song; then they climbed down to earth and ‘had connexion on the ground’.\(^1\) The custom of promoting the growth of fruit with such instruments as bull-roarers, panpipes, and flutes is very widespread. According to a story told in the Aleutian Islands a girl raised a man from the dead by singing.\(^2\) In the language of the Ewe the word \textit{lo} means both ‘to sing’ and ‘to weave’.

The idea of sacrifice is particularly marked in the cosmic myths according to which the world was created by the self-castigation or self-fertilization of a bisexual god. Sometimes the god is the god of lightning and thunder, sometimes a drum-, tree-, or cave-god. This immanent dualism is also represented by a fighting pair of twins, whose flashing swords and thudding shields produce the creative sound. The idea that this sound can develop only from fighting, castigation, and sacrifice dominates all religious music in primitive cultures. Song is a sounding sacrifice of the breath of life. Women beat the abdomen rhythmically; men beat their arms until the blood spurts. Stretched ox-hides are beaten with an ox-tail. The sound of the drum acquires magic power only when it is ‘heated’ by special songs\(^3\) or has been smeared with blood. Often, the drum must be beaten until the skin bursts. Many instruments have to be made from parts of sacrificed animals or human beings (bones or skin) in order to acquire magic power. A legend from the Sudan tells of a musician who acquired a lute from a blacksmith. But the lute ‘did not sing’. The smith said, ‘This is a piece of wood. It cannot sing if it has no heart. You must give it a heart. You must take it into battle with you on your back. The wood must resound at the blow of the sword; the wood must soak up dripping blood; blood of your blood, breath of your breath. Your pain must become its pain, your name its name.’\(^4\)

From painful darkness self-sacrificing man reaches the joyful light, as sound enters the light of day from the darkness of the cave. On the Andaman Islands it is said that the ancestor of the tribe once crushed between the palms of his hands the grasshopper sacred to the lightning and thunder god Biliku; the creature groaned like a human being and

\(^1\) \textit{Reports of the Cambridge Anthropological Expedition to Torres Straits}, vi (Cambridge, 1908), p. 19.
darkness fell; then the ancestor taught men songs and dances which
continued till the light returned.¹ Like night and sleep, music is the
dark giver of power which leads to the light. That is why the cavern
of night is the right time for music-making. It preserves life in the dark-
ness and every morning is a new act of creation through which dark
sound is brought to radiant light. In the mythology of the Pawnee
Indians the morning star repeats the act of creation every day, by
appearing as a warrior (beside its little brother) and bringing up a
dark ball (the sun). Reddening, it throws the ball in the air and sings:
‘This I did, when I became angry in order that in the future the earth
might be formed.’² (Ex. 52.)
The luminous nature of sound, which in Indian tradition is based
on the similarity between svar (light) and svara (sound), recurs in the
creation myth of the Navaho. Originally all mankind lived in a cave
in the heart of a mountain. Their light glimmered only for a few hours
a day but two flute-players enlivened the darkness with their music.
Accidentally one of the players hit his flute against the roof of the
cave. A hollow echo resulted and the men decided to bore a hole in
the direction from which the sound came. The flute was held against
the roof and the boring continued until they reached the outside of
the mountain. Then a wind arose which dried out the sea and the
people climbed out of the cave and played their favourite song
‘Patole’. Then they built the sun and moon and entrusted the two
flute-players with the conduct of these lights.³ The association of the
light-producing explosion of the bamboo nodules with the origin of
man has been mentioned earlier.⁴ Jakob Grimm held that the original
etymological affinity between ‘peeping’, ‘string’, and ‘ piping’⁵ indicated
that the idea of the association of light and sound also existed in
ancient Europe.

Music for worship consists in a repetition of the act of creation.
Admittedly it has not the creative power which enabled the divine
ancestors to call forth matter from nothing by their shining songs and
war-dances, but its power is analogous and has the power to renew
life. The sound produced by sacrifice or battle establishes the con-
nexion between heaven and earth. In many legends the sky formerly

¹ A. R. Brown, op. cit., p. 215.
² Densmore, Pawnee Music (Bureau of American Ethnology Bulletin 93) (Washington,
³ E. Fuhrmann, Tlingit und Haida (Hagen, 1923), p. 18.
⁴ See p. 47.
⁵ Grimm drew attention particularly to the English words ‘peep’ and ‘pipe’ and to
the German word ssegel which means both ‘pipe’ and ‘light’. See Deutsche Mythologie
(Göttingen, 1844), pp. 706–8.
hung so close to the earth that it was possible to come and go between
the two on an intervening rope (or tree). The obvious inference is that
the string of the earth-bow stretched between the bough of a tree and
a hole in the ground was the musical symbol of this rope. In any case,
sound nourishes and preserves both gods and men. In the sky
resound sun and moon, lightning and thunder, which give man sun-
shine and rain. The sounds of earth, human songs of praise, nourish
the celestial spirits. Since heaven and earth are regarded as analogous
spheres, though with opposite values, all earthly sorrow is a joy in
heaven and all earthly joy a heavenly sorrow. In accordance with this
inversion of values, the lamentations in which primitive music abounds
serve to attune the spirits to a happy, therefore favourable, mood.

The sound symbols developed from these ideas are very diverse.
Recitative bridges the dualism of the world by its psalmmodizing
balance between music and speech, or a tremolo-like oscillation be-
tween two notes (a third, fourth, or fifth apart). Perhaps singing in
parallel seconds (Ex. 125) also goes back to the same source. Other
forms attempt to reach their goal by inversion. On earth-bows sighs
are produced which resemble those of the human voice. If a funeral
song does not sound completely realistic, it progresses mainly in
descending semitones.1 Among the Duala piercing cries are regarded
as arrows, and even today in Andalusia in the night of Good Friday
the saeta (from sagitta) is still sung in a high falsetto, with hands
clenched. In the advanced culture of India the syllable om (arrow)
(which is pitched very high in the udghita song) is the ‘nail’ which
pierces the whole world and holds it together. The expression ‘to fire
off a song’ is also very widespread.

The long sustained (non-rhythmic) drone also appears to represent
a particular mystic force. In West Africa (Baule) it is thought to be
the expression of ‘female strength’. Among the Menominee it is sung
by the women to help the men.2 In the Caucasus it is associated
with a melody used in healing the sick.3 Among the Indians of western
Brazil a woman utters persistent piercing cries, while the men sing a
solemn communal song.4 In the South African panpipe bands the
drone is called the ‘weeping note’. Since the nose conveys the breath
of life among the living and has phallic significance among the dead,

1 The thirteenth-century theorist Elias Salomonis still calls the semitones below B flat,
4 T. Koch-Grünberg, Zwei Jahre unter den Indianern N. W. Brasiliens (Stuttgart,
erotic and funeral songs are often sung in a nasal tone. Piping during the night is usually interpreted as the voice of one recently dead. Among the Duala eating is stopped even in daytime whenever a passer-by whistles, lest the spirit of a dead man settle on the food. The sound of the bowstring represents a compressed force. The harsh sound of the scraper justifies the obstinate survival of this most unmusical of all primitive instruments since it represents the act of sacrifice most vividly as a process of ‘friction’.

In view of the significance of sound it is not surprising that certain sounds constantly associated with some process or other are considered the most important constituent of the process. The superior power of the rattle-spear, the setting stick, or priest’s staff is based on the specific noise they make. Deafening noise is particularly important. The roaring waterfall from which the spirit of great Manitou speaks, and any noise that proceeds from stone or iron frightens away evil spirits because—by definition—they shun the act of sacrifice. Noises are specially contrived in rain charms and at change of moon; noise keeps off the evil spirits which attempt to arrest the rain-laden clouds or prevent the birth of the new moon. At funerals the soul (which still cleaves to the earth for the first weeks after death) is banished as an evil spirit, until it is released from this world and transformed by the sacrifice of banishment into a good spirit. A systematic abstention from noise (prohibition of speaking and singing, pounding rice, and beating down nuts) is also recommended as a means of misleading the spirits.

Sound is regarded as just as much the substance of the powers of darkness as their dwelling-place. For primitive races sound is a wholly concrete expression of the spiritual world. In West Africa a series of identical musical phrases is likened to a string of pearls. In Uganda, where the soloist often breaks off in the middle of the theme and leaves the rest to the chorus, the chorus is said to ‘catch’ the melody (like a ball). Among the Nyamwesi, parallelism of voices is called going arm in arm. The expression ‘to carry a tune’ indicates that the singer is thought of as the seat, wagon, ship, or cavern of the sound.

The musical instrument and in particular the sound-box also represent a kind of sacrificial cavern. The ideas associated with instruments are largely conditioned by two factors: firstly, by the ideas connected with the surrounding world from which the material of the instrument comes and secondly, by the way in which the

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outward shape of the instrument conditions the antagonism of forces, thereby making the sound possible. Because of the place where it is found, the conch is closely associated with the life-giving ocean of death; its outward shape is thought to express the idea of bisexuality. Since the sound-substance of the world is produced by a dual being who overcomes (i.e. converts into sound) the immanent dualism by self-castigation or self-fertilization, so originally every sound-producer must be thought of as bisexual. The African drum which, in a moment of danger, speaks of its own accord; the tree-drum which is the seat of the deity and which beats itself to create the primeval waters; the crocodile which beats itself with its own tail: all these embody the immanent dualism. But where a male or female player approaches the instrument, the immanent dualism may disintegrate into two separate elements (instrument and player). Yet the two parts are related like horse and rider, who always form a unity in symbolism.

By this conception of the basically dual nature of musical instruments the writer differs from the view held by his revered teacher, Curt Sachs, who tries as far as possible to attribute a male or female character to each instrument. There is no doubt that in many instruments the accent is on one sex or the other but instruments seem to resemble the bisexual cave-god who is very often divided into two persons and is therefore sometimes thought of as male, sometimes as female (the god of spring or Magna Mater). If a predominantly female instrument is played by a man, the bisexuality is maintained in the relationship between instrument and player. The player, the instrument, and the sound are related as father, mother, and child. If a woman plays a predominantly female instrument, however (for example, a drum), or a man a predominantly male one (for example, a flute), the player acts only as the outward shape or even merely as the technique of the instrument and the sound of the drum is masculine and that of the flute feminine—a relationship which again recalls the self-fertilization of the mythical dual being or of the ascetic whose 'wife' (sound-box) resides in his own nature and whose 'child' (sound) represents his spiritual renewal.

In fact the idea that the present division of the sexes has gradually developed from an original unity, by way of a hybrid being and a pair of twins (the marriage of brother and sister), is already found in the old hunting civilizations.1 Usually this mythological figure is a bisexual forest god or a fabulous creature who manifests himself in the echo, in the whizzing of the bull-roarer or in the complaining note

1 Baumann, op. cit., p. 208.
of the bamboo trumpet. He is half man and half tiger or partly stone and partly straw or bees-wax. Sometimes he is also thought to be a grandmother or a hunter whose bow is carried by a brother or a mourning leopard (the transition from the hybrid to the pair of twins). The dualism is also expressed in psychological terms when the gloomy hunter indulges in some wild sport, killing or seriously injuring men and then healing them and teaching them medicine-songs. His close association with the rustling of the forest and the buzzing of insects suggests that the drone represents one of his most essential symbols. He too lives in hollow trees, and, as he is moreover lord of the dead, it is probable that the bisexual forest god is an anthropomorphic formulation of the dream- and resonance-cavern.

In order to understand the dual conception of instruments properly the whole man or the whole of nature as represented anthropomorphically must be taken into account, not merely the sexual aspect. Man and nature are tripartite beings. Heaven, intervening world (humanity), and earth correspond to the head, the trunk and the lower part of the body or, alternatively, to the mouth and nose, the heart and the digestive organs, the sexual parts and the feet. The body is often thought of as a circle, so that mouth and feet touch one another. When a man stamps in the rhythmic dance, or offers his sperm, he creates new physical life. In the sacrificial meal he mediates between heaven and earth, by passing on celestial food to the earth through the ‘digestive fire’. When he gives his breath, his speech, and his song, he creates spiritual values, analogous to heaven. These three zones represent the three aspects of the creative sacrifice. They are analogous to one another, but hierarchically ordered. A given symbol can be valid in all three zones. In Europe this tripartition survived in music right into the Middle Ages, when three kinds of music were distinguished: musica mundana, musica humana, and musica instrumentalis. As a mere tool, the instrument belongs to the third zone. The fact that it is essentially a sounding instrument, however, means that it cannot represent primarily a sexual symbol but belongs rather to the first zone (head, heaven). The player or the sound-board belongs to the second zone. The musical instrument therefore belongs to all three zones, but as used by man its specific task is to connect the third and first zones. And the power to do this comes to it from the ‘cavern’ of the second zone. If lightning and rain are usually interpreted as the product of the marriage of heat and cold (sun and cloud, drumstick and drum),¹ this simply means that an obvious aspect of dualism is

¹ Sachs, op. cit., p. 35.
being transferred to the first plane. The terms 'masculine' and 'feminine' (instead of fire and water, day and night, &c.) are therefore used below for all three zones in order to express as simply as possible the dualism that runs through all three levels.

The conch which Sachs, too, regards as bisexual,¹ is a clear example of the dual structure and the three levels on which it is expressed. Because it dwells in the sea and is spiral, it is thought to contain all the seeds of life. Its role in the first zone as propagator of the breath of life is apparent in creation myths, in its use as a call-signal, in its ritual fixing on the forehead, and in its combination with ear and nose shells. Its war-call or sacrificial call is used particularly in rain charms. From the second zone downwards, it is used increasingly as a simple implement besides its function as a musical instrument. It is heard in fertility rites, but in libations and cures it is used predominantly as a container. On the third plane it is closely associated with the worship of the dead, since conches are at the same time sexual symbols, dwellings of the dead, and burial places, from which new life springs. On all three levels the conch is a sacrificial cavity, but its fertility is spiritual in the first zone, physical in the second, and metaphysical in the third.

Rattles consisting of hard objects strung together, and hung round the body, turn the dancer himself into a rattle, into the *homme-sonaille* (to use Schaeffner's expression) from which the spirit speaks. In the vessel form the dual structure is indicated by magic carvings (for instance, of birds and aquatic animals) though it is already symbolized to some extent in the combination of handle and hollow ball. The first of the three planes is shown by its significance in the 'cloud festivals' (i.e. rain ceremonies) in which each dancer wears a tall head-ornament of feathers (representing clouds), to which a rattle is attached.² Its use in field and medicine rites corresponds to the second zone, as does probably also the interpretation of spherical rattles as female breasts.³ According to Frances Densmore a different rhythm is beaten for every illness.⁴ The third zone appears to be specially indicated by wearing the rattle in the region of the knee. Characteristically, the *orenda* of the rattle is also connected with that of the cricket and the dragonfly, both of which are creatures of the underworld.⁵

¹ Schneider, 'Los cantos de lluvia', *Anuario musical del Instituto Español de Musiquología*, iv (1949).
² Wirz, op. cit., iv, p. 60.
⁴ *Papago Music*, p. 102.
⁵ Preuss, op. cit., i, pp. 35, 80, and 128; *Die Nayarit-expedition*, i (Leipzig 1912), pp. 75 and 81.
The idea of sacrifice which is expressed in the conch and the rattle by the friction of the breath against the mouth-hole or the grains rubbing against one another in the hollow inside of the rattle, is symbolized in other instruments by the skin taken from a living body. When the skin is stretched over a pit or a hollow vessel, a drum results. Its specific effect depends on the quality of the sound it produces, that is, on the sound of the animal or person from whom the skin is taken. The dry hard sound of a goatskin attracts thunder, because the mountain goat is a thunder animal. Cow-hides bring rain. Although the low or belly-shaped drums 'speak' (in the first zone) they seem to belong predominantly to the second, i.e. the animal zone; they are regarded as mothers, cows, or frogs and are practically simple 'caverns'. On the other hand, the skin that produces the sound is thought of as the head. The ngoma-drum of the Venda seems, however, to extend over all three zones; it is called 'egg of an ostrich'; the side-handles are called 'a frog's knee'; the opening at the bottom is termed 'vagina'; the head, 'the skin of a man'; the smooth hairless circular portion in the centre of the head, 'a baby's fontanelle'; the pegs which secure the head, 'the fingers'; the drumstick, 'the hand of a person'.¹ The skin of these drums is often rubbed with sacrificial foods, and sacred stones or bones of the dead lie inside the instrument. If the skin bursts, no one is allowed to look inside.

It seems doubtful whether the friction-drum represents the sexual act, as is generally assumed. Its use in initiation ceremonies in the spring and at the winter solstice and also the term 'menstruation drum' seem rather to point to puberty.²

While the low barrel-shaped drum represents fertility as a crouching figure, longitudinal instruments express it in the upright or recumbent position of the mystic dual being. Since the self-fertilization typical of this dual deity is performed by most trees, it is not surprising that the deity also appears as a tree god. The corresponding musical symbols are the springy dance-tree (with a crocodile's or woman's face) and the slit-drum. The hollow interior of the slit-drum is the dwelling of the dual deity (or the deity itself) and the home of dead or still unborn souls. It was its 'word' that created the primeval waters when the father-god beat the slit (or himself) with the drumstick. The Uitoto connect this sacrificial act with the darkened moon. It is characteristic that the slit of the anthropomorphic drum is often

¹ Kirby, op. cit., p. 36.
found on the back, not on the front. The beating or whipping by a power behind (that is, invisible) clearly shows that fertilization is not conceived in specifically sexual terms. The head-hunters of the Naga place captured skulls on these sounding ancestral figures, tree-men, forest spirits or soul containers. Gigantic drums are laid or hung horizontally in a house specially built for the purpose or they are hung on a tree (usually in a sloping position). In this position they have quite exceptional power because they are thought to be suicides, i.e. beings who have become especially powerful spirits owing to their self-sacrifice.

Since the original types of flute were very large, like the earliest drums, the tree or the long reed seems to have determined their original symbolic form. Among the Tlinkit, flutes are carved in the shape of ancestral figures or supplied with figures of eagles or fishes (symbolizing fire and water). The dualism is also expressed by double flutes or pairs of flutes. (In the creation myth of the Navaho mentioned above, the two flutes correspond to the sun and moon.) In the initiation ceremonies of the Nor-Papuans the lads are laid on the drum and beaten until the voice of the spirit Brag sounds in the two flutes, of which the male is 1.5 metres and the female 1.25 metres long. It is said of the Parak flute, which holds the secret of life and death, that it forms the veil in which the god Wunekau has enveloped the mystery of procreation. The flute is primarily the carrier of wind and breath. 'I have reared a bird' means 'I have made a big bamboo flute.' If the face of the totem-god, to whom the instrument belongs, is known, the flute is provided with the corresponding head. Or when the spirit is evoked a corresponding mask is held ready, so that the totem-god can manifest itself vocally as well as bodily. Flutes are also played to promote the growth of the fruits of the field.

The flute is related to the drum in a number of ways. Neither instrument must be played indoors since both give rise to thunderstorms. Both 'speak' not only alone but to one another. In such dialogues the flute assumes the symbolic role of the drumstick. This relationship

1 A. Steinmann, 'Über anthropomorphe Schlitztrommeln in Indonesien', Anthropos, xxxiii (1938), p. 244.
2 Ibid., p. 243.
3 See p. 49.
4 J. G. Schmidt, op. cit., p. 344.
8 J. G. Schmidt, op. cit., pp. 341 and 666.
seems to be confirmed by the fact that in later cultures the flute is predominantly a male instrument and the drum female. Among the Banoro the sexual relationship between flute and drum is expressed in the longitudinal bisection of the spirit house. In the flute section (opposite the drum section) of the house, the bride is deflowered by one of her father-in-law’s kinsmen.¹ According to a story told by the Mandan and the Papago a boy saw his grandmother (the moon) take a full pot into bed with her every night, and the pot was empty in the morning. One day he found a snake in it and killed it. The snake (the sun) was the grandfather. The woman buried him (the grandfather) in a lake, took the stalk of a sunflower (or a reed from the lake) and made the boy a flute with which he could summon snow and rain.²

The high notes of the flute are particularly effective in sexual magic and a special style of singing has developed in association with this instrumental sound-symbol. The special songs sung while a flute is being made, which still survive in some European folk-customs, may also be connected with this. The reeds which grow on graves and betray the name of the murderer, the singing bones and the tomb-flutes close the life-circle by letting new life sound from the sacrifice of the old.

The power which springs from dualism is particularly obvious where a tree or a stick has been bent by an opposing force. The easily bent slit-drums or the sighing spirit-voice of the bow, with which the player holds converse, arises in this way. Even though the musical bow seems to be an earlier development than the hunter’s bow, the ideological relationships between the two cannot be overlooked. According to a legend of the Hehe, the musical bow sprang from a girl thrown into the water; her head became the calabash, her backbone the stick, and her limbs strings.³ According to a legend of the Marind-anim, however, the hunter’s bow is also a human being, sometimes even a pair of human beings. The stick is the man, the string the woman. When the Papuan goes hunting he conjures the ‘wife’ to clasp her ‘husband’ firmly so that the string shall not break.⁴ The Washambula believe that men whose strings break while they are playing the bow will not get wives.⁵

The harp, which derives historically from the bow, often appears

¹ Koch, op. cit., p. 328.
² Densmore, Mandan and Hidatsa Music, p. 81; Papago Music, p. 61.
³ Sachs, op. cit., p. 63.
⁵ Sachs, op. cit., p. 63.
among primitive races as the retrogressive form of an instrument from an advanced culture. It is the fish-hook of the death- and water-spirits or a man whose back is bent with sorrow and care. Because of its long neck it is also called crane, goose, or swan. With this identification with the swan (the ship of the dead) is probably connected the later ‘swan song’. In the outward shape of the harp, the hunter’s bow, and the easily bent tree-drums, one can detect the mystic shape of the ship which, like the cry, the arrow, the path, the wagon, the waning moon, and man is a symbol of sacrifice. According to totemistic myths, the canoe is a human corpse which has been stamped into shape. According to other traditions, the drum is a forest spirit which originally stood at the bow of a princely ship. Schaeffner has already drawn attention to the connexions between the construction of a harp and of a ship.

The bull-roarer also appears to be a small boat. Many Australian legends tell of the circular voyages of the totem-gods who left their caves after the dividing of the waters, singing and dancing with spears, and set out to create all things. Then they taught men the songs on which the preservation of the world depends, returned to their caves, and turned into bull-roarers. These instruments represent the ‘mystical body’ of the totem-god and renew its creative energy as soon as they begin to travel, that is, as soon as they begin to whiz in the air. As carvings representing the journeys of the totem-gods or ancestral figures (in animal forms) are often found on Australian bull-roarers, the whizzing of the bull-roarer appears to represent a revival of the voice and ritual journeys of the cave-gods. The bull-roarer which a grandfather carves out for a child is kept in a cave before the child is born and returned there after its owner’s death. It confers on its owner the joy of mystic communion with his ancestors so long as he hides it from the women. It is customary to give the sick a few shavings from the wood as medicine.

The bow or the tree-man that has been painfully bent into a circle or oval forms the framework of the shaman drum. It is used particularly in medicine, rain rites, and soothsaying. The victim (reindeer or horse) which gave its skin for the drum, is the lord of this ‘singing

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2 *The Rigveda*, iii, 53, 10 and ix, 97, 8 also requires the singers to sing like the swans who perform the prelude to the hymns.
3 Witz, op. cit., i, pp. 122 and 176.
4 Steinmann, op. cit., p. 244.
6 Streithow, op. cit., pls. 1 and 2.
7 Ibid., ii, p. 79.
bow tree’. Since the doctor’s original implement is a bow and arrow (medicine is ‘shot’), it is not surprising that the drum, which replaces the bow, is also called ‘bow’ and the drumstick ‘arrow’. Among the Shor of the Altai mountains the six ‘horns’ on the frame of the drum are used to attack, and the six iron rings (ring-mail) to ward off, evil spirits. The ‘iron bow-string’ runs right across the frame and beside it is the ‘sword’ (six knife-shaped iron plates). Like all symbols of sacrifice, the frame-drum represents a way or a means of transport by which the shaman travels to the world of spirits. If the drum is a horse, the drumstick is a whip. The skin, on which blood or libations are poured, is often decorated with symbolic drawings (of the sun, moon, drums, or animals) which represent ‘the whole world’. The number-symbolism of Samoyed drums probably points to a very late cultural development. On the other hand, the description of the drum as ‘grandfather’ and the Lapp custom of never bringing the instrument into a tent through the main entrance but only through the small ‘sacred door’ through which the hunters crawl are probably of earlier origin. Since the drum is a dead man it is worth mentioning in this context the custom of carrying the dead out of the house through a small door that is usually kept shut.

A dark god also speaks out of the hourglass-drum and is even depicted on it occasionally. Two similar, approximately triangular but inverted sections form the body of the drum. These outlines, which occur in many archaeological representations as the body of the tightly-girdled dancer (and later, in the shape of Shiva), represent the inversion brought about by sacrifice. The same significance attaches to the depiction of the waxing and waning crescents of the moon. The conches and the whale or crocodile jaws at the lower end and the resonant skin at the upper end of the instrument symbolize, like lizards and snakes, the dualism of water and fire.

In the transition to the higher farming and pastoral cultures many of the ideas touched on here undergo considerable extension or specialization. They become more and more the esoteric preserve of

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2 Ibid., p. 143.
4 Emshemer, op. cit., p. 147.
5 Menges and Potapov, op. cit., p. 64.
individuals; the people as a whole only partially continue the old tradition and usually lack any deeper understanding of it. But in the depths of the subconscious the ideas continue to be active. No art fascinates primitive man more than music; he is as vividly aware of its dynamic fluctuations between light and darkness as he is of the mysterious relationship between life and death.
1. Asia: Wedda (Wertheimer)

2. America: Tierra del Fuego, Small black Albatross (Hornbostel)

3. Asia: Moluccas, Rowing song (Tauera)

4. Indonesia: Kūbū (Hornbostel)

5. America: Taulipang, Cure of the sick (Hornbostel)

6. Australia: Yuna, Initiation into tribal laws (Schneider)

7. New Guinea: Sialum (Kolinski)

8. New Guinea: Kai (Kunst)

9. Europe: Votyak, Love song (Lach)
18. America: Osage, Song to water spirits (la Flesche)

19. New Guinea: Bukaua (Kolinski)

20. Asia: Vogul, Bear song (Kannisto)

21. America: Chippewa, Owl medicine song (Densmore) Drum:

22. Africa: Hausa (Schneider)

23. Africa: Nyamwesi, Travel song (Hornbostel)

24. Caucasus: Kartvelia (Dirr)

25. Europe: Cheremiss (Lach)

26. America: Omaha, Scout song (Fletcher)
27. America: Yamana, Song of bird (Hornbostel)

28. Asia: Malabars, Prayer (Hornbostel)

29. America: Patagonian (Fischer)

30. America: Ojibway (Hoffmann)

31. Torres Straits (Myers)

32. New Guinea: Sialum (Kolinski)

33. Bismarck Archipelago: Barriai (Schneider)

34. Asia: Vogul, Mythological spirit song (Kannisto)

35. Asia: Buryat (Stumpf)
36. Asia: Seram, Rowing song (Taueru)

37. America: Chippewa, Lullaby (Densmore)

38. America: Makurap (Schneider)

39. America: Omaha (Fletcher)

40. Africa: Masai, War song (Schneider)

41. Africa: Wahehe, Dance (Schneider)

42. Africa: Tanganyika, Hunting song (Molitor)

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50. America: Pawnee, Buffalo dance (Densmore) Drum  \( \frac{d}{2} \cdot 132 \) & 116

51. Africa: Uganda (Schneider)

52. America: Pawnee, Mythological song (Densmore)

53. America: Copper Eskimo, Dance song (Roberts)

54. America: Copper Eskimo, Dance song (Roberts)

55. America: Creek, Medicine song (Sapir)

56. America: Shasta, Girl initiation (d'Harcourt)

57. Asia: Burma, Prayer (Schneider)
58. Asia: Vogul, Bear song (Kannisto)

59. America: Makuschi, Women at work (Hornbostel)

60. Europe: Children's song

61. Torres Straits: Death song (Myers)

62. Asia: Pamir (Schneider)

63. Africa: Bushman (Kirby)

64. Africa: Bakango (Schneider)

65. Africa: Cameroons, Work song (Schneider)

66. Asia: Toba-Batak, Rowing song (Schneider)

67. New Guinea: Awembaliak (Künst)

68. America: Ashumawi, Puberty song (d'Harcourt)

69. Europe: Lapp (Schneider)
96. Europe: Cheremiss (Lach)

97. Asia: Flores (Kunst)

98. Oceania: Nissan, Lament for the dead (Hornbostel)

99. Asia: India, Beggar's Song (Schneider)

100. Europe: Spain (Tornier)

101. Africa: Sudan, Kerümbé (Schneider)

102. Africa: Acooli, Hero song (Schneider)

103. America: Chippewa, Love song (Densmore)
104. America: Menominee, Love song (Denismore)

105. Asia: Karakirgiz, Lament (Zataevič)

106. Asia: Ortos, Lament over lost horse (Oost)

107. Asia: Eastern Mongolia (Emsheimer)

108. Asia: Pamir, Love-song (Schneider)

109. Europe: Cantigas de S. Maria (13th century) (Anglès)

110. Asia: Wedda (Schneider)

111. Africa: Bambūtti (Schneider)

112. Asia: Kenta (Koliński)
122. Europe: 12th century (Trope) Adsit Johannes
123. Africa: Nyamwesi (Hornbostel)

124. Africa: Wabali (Schneider)

125. Oceania: Hūrea, Feast song (Schneider)

126. New Guinea: Sepik (Schneider)

127. Caucasus: Mingrelia (Lach)

128. Africa: Kindiga (Schneider)

129. Africa: Batswa-Pygmy (Schneider)
130. Oceania: Solomon Islands (Hornbostel)

131. Africa: Chewa, War song (Schneider)

132. Africa: Ngoni (Schneider)

133. Africa: Ngoni (Schneider)

134. Oceania: Solomon Islands, Kongara (Hornbostel)

135. Oceania: Solomon Islands, (Hornbostel)

136. Asia: Naga (Schneider)
137. Oceania: Raiatea, Religious song (Schneider)

138. Africa: Bashlengwe (Schneider)

139. Africa: Nyassa (Schneider)

140. Caucasus: Svanetia, Dance (Dirr)

141. Portugal (Sampaio)

142. Portugal (Sampaio)

143. Europe: Worcester 13th century (Hughes) Dulciflua

144. Bismarck Archipelago: Barria (Schneider)
152. Europe (medieval): Codex Las Huelgas. Clama (Anglès)

P 153. Africa: Bakango (Schneider)

Drum

154. New Guinea: St. Mathias, Death song (Schneider)

155. Oceania: Rennell Island (Burrows)

156. Oceania: Marquesas (Schneider)

157. Asia: Sema Naga, Women's song (Schneider)

158. Caucasus: Abkhaz (Lach)

159. Caucasus: Imeretia (Lach)
160. Caucasus: Georgia, Dirge (Dirr)

161. Europe: Codex Las Huelgas, Verbum Patris (Angles)

162. Africa: Bushman, Musical Bow (Kirby)

Voice
Bow

163. Indonesia: Earth-zither (Brandt-Büys)

164. Asia: Flores, Xylophone (Kunst)

165. Africa: Ivory Coast, Hunting song with sanza accompaniment (Schneider)

166. Africa: Bamalet, Reed flute ensemble (Kirby)

167. America: Bark trumpet (Alphorn) (Vega)
168. Africa: Bechuana, 4 reed flutes (Kirby)

169. South Africa: 2 Xylophones (Kirby)

170. Africa: Ubangi Chari, Shepherd’s flute (Schneider)

171. Africa: Chwana, Flute (Kirby)

172. America: Menominee, Flute, Love-medicine (Densmore)
173. Asia: Eastern Mongolia, The blue banner (Emsheimer)

174. Africa: Liberia, Horn (Herzog)

175. Africa: Duala, Drum orchestra (Schneider)

176. New Guinea: Nor-Papua, Drum signal (Schmidt)
II

THE MUSIC OF FAR EASTERN ASIA

1. CHINA

By Laurence Picken

INTRODUCTION

In spite of considerable differences between the musical practices of one locality and another, the vast territory of Far Eastern Asia—China, Mongolia, Tibet, Xinjiang (1), Shikang (2), Korea, Japan, Indo-China, Siam, Burma, Malaya, Java, Bali, &c.—can be regarded, with respect to its musical culture, as a unit, to be compared and contrasted with India perhaps on the one hand and western Europe on the other. A wave of musical culture seems to have swept over China to the seaboard of the great land-mass of Asia and beyond, so that there survive at the present time, on the periphery, types of orchestras and habits of polyphonic treatment which have vanished almost entirely from the central region.


2 Figures in brackets refer to serial entries in the Glossary of Characters, p. 190. The system of Romanization adopted here is that primarily due to Professor Jaw Yuanrenn of the University of California. Its main feature is that the tones are inherent in the spelling as they are in the spoken word. Knowing the system, the Romanized form can be read in its correct tone, thus reducing ambiguity. Typographically this system has the advantage that it avoids the use of all aspirates, diacritic signs, and superscript numerals. Some familiar words appear in new guise: Jou = Chou, Hann = Han, Wey = Wei, Tarng = T’ang, Sonq = Sung; chyn = ch’in, pyipar = p’i-p’a, shiau = hsiao, seh = sê; Symaa Chian = Szü-ma Ch’ien, Ju Shii = Chu Hsi. Again, the two types of pitch-pipes, previously written alike as lü, but pronounced in two different tones: lü and lü, are differentiated as leu and liuh. A guide to the system will be found in W. Simon, The New Official Chinese Latin Script, Gwoyeu Romatzyh (London, 1944).
This interpretation of the total musical picture of the Far East is to a considerable extent explicit in the surveys of Far Eastern music made by Sachs.\(^1\) Though the course of the exposition adopted here has been largely determined by this interpretation, it must not be accepted as more than a working hypothesis.

**PREHISTORY AND ETHNOLOGY OF THE FAR EAST**

China is to be regarded as a continent apart, turning her back on the rest of Eurasia, more isolated even than India; and it is this geographical setting which has determined the main features of Chinese history.\(^2\) Behind her natural barriers there developed a culture of such integrity that when, in the fourth century, invaders and conquerors came, it was they who were absorbed; and thus it has always been. The Chinese of Tarng (3) times was an entirely different person, ethnically speaking, from the Chinese of Chyn (4) and Hann (5) times, because of this constant absorption of invaders from the north and conquered peoples in the south.\(^3\)

Palaeolithic sites have been found in the Ordos region, and it is known that neolithic civilizations flourished in Mongolia as well as throughout the Yellow River valley. At the time of the development of high civilization at the turn of the third millennium B.C., the Chinese, or rather, the Proto-Chinese, differed from surrounding peoples in the superior organization of their agriculture rather than in physical character. Even at the present time they have linguistic relatives all over the Far East; indeed it is customary to recognize a Sino-Tibetan language-group which includes, on the one hand, Chinese and the various Thai languages of southern China and Indo-China and, on the other, the Tibeto-Burman languages of Tibet and Burma and (in China proper) of the Luoluo (6) and Mosuo (7) peoples of Yunnan (8) and Syhchuan (9). This group does not by any means embrace all the mongoloid peoples of China, however. Not included in it are the Turco-Mongols of the Gobi Desert, and the Miau (10) and Yau (11) peoples of southern and southwestern China; the linguistic affinities of the two latter are still uncertain.

The invasions of north China in historic times all came from

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\(^1\) *The History of Musical Instruments* (New York, 1940); *The Rise of Music in the Ancient World, East and West* (New York, 1943).


\(^3\) G. Haloun, "Die Rekonstruktion der chinesischen Urgeschichte durch die Chinesen", *Japanisch-Deutsche Zeitschrift für Wissenschaft und Technik*, iii (Kobe, 1925), pp. 243-70.
Mongolia or Manchuria, never from Shinjiang (Turkestan); that is to say, the invaders were always barbarians, never bearers of high civilization, such as were the merchants or pilgrims, transmitters of cultural gifts of the highest importance—mathematics, Buddhism, music, &c.—who passed along the Silk Road or the Buddhist Pilgrim route.

This pressure from the north provided an incentive to the progressive sinicization of southern China and perhaps led to the constant movement southwards of earlier offshoots of the mongoloid stock, the Proto-Chinese or, more generally, the palaeomongoloids. Among these one may perhaps include the Proto-Malays. The Japanese are also sometimes grouped with the palaeomongoloids. A number of characters suggest that they are a branch of the mongoloids separated off at a very early date; it is known that they are not the original inhabitants of much of the territory they now occupy.

Coming south to Indo-China and Indonesia, it is certain that the present ethnic complexity of this region goes back to prehistoric times. In addition to Negritos, the most ancient inhabitants seem to have included relatives of the present inhabitants of Australia, New Guinea, and Melanesia. A second and later wave of prehistoric immigrants to this region brought the Proto-Malay element, to be found in the present Batak and Dyaks of the islands, and in the Cham and other vanished peoples of the mainland. These folk are in many respects mongoloid; their ethnological position is uncertain, but they may perhaps be placed at the base of the mongoloid stock. They have a bamboo culture, and this fact may perhaps be important as an indication of affinity with the third wave of immigrants, the brachycephalic mongoloids, who also have to some extent a bamboo culture. These entered across the north-west frontier of Indo-China, and it is possible that they brought with them the first Bronze Age culture to reach Indo-China. As compared with Europe this culture arrived comparatively late.

At the time of the unification of China at the end of the third century B.C., the southern limit of Chinese territory scarcely extended beyond the Yangtz (12) River. Not until Hann times was southern China added to the Chinese domain; but by 111 B.C. Annam, in Indo-China, had been annexed. The Chinese continued to dominate this region during Hann times and from then until the tenth century. As early as the second and third centuries of our era, however, the colonization by the Hindus of Burma, Siam, Indonesia, and the coast of Indo-China, had begun and reached a peak in the fourth and fifth
centuries,¹ so that from the earliest times there has been a clash of cultures in this area.

The presence of the Ainu in northern Japan must not be forgotten even in this brief sketch of Far Eastern ethnology. They are not mongoloids and have existed in their present position since before the arrival of the Japanese.

Considering the ‘continent’ of China, Indo-China, and Indonesia as a whole, evidence points to a constant movement southward of more or less mongoloid peoples. To diffusion in other directions may be ascribed the colonization of the American continent: the Eskimos, and the Indians of North and South America are mongoloids whose affinities with the Pacific area, in the widest sense, is exhibited, among other characters, in their armoury of musical instruments. With the exception of a few instruments of universal occurrence all these (or their close relatives) are to be found exclusively in China, the territory between China and India, the Malay Archipelago, and the Pacific Islands. Of the instruments used by American Indians 50 per cent. occur in the Burmese hinterland and adjacent countries.²

In the light of this short account of ethnological relationships in the Far East, it is surely not surprising to find a marked uniformity in musical culture over the whole area, particularly with respect to more primitive features. It is known that primitive characteristics of musical culture are often preserved with great tenacity by peoples otherwise at a high cultural level: European folk-song, for example, retains extremely primitive features.³ The persistence in China proper, in spite of constant contact with other musical cultures (via Turkestan), of the characteristic minor third pentatonic genus, with the fourth as the dominant melodic unit, is the expression in musical terms of that vigour in her autochthonous culture to which, at the beginning of this section, her powers of absorbing conquerors and conquered were ascribed.

THE PLACE OF MUSIC IN CHINESE CIVILIZATION

The views on music held by the Chinese in antiquity were remarkable in that its essence was conceived to be not sound but a transcendent power. To a considerable extent this view of the nature of music survives even to this day. The music of the seven-stringed zither (p. 90) tends constantly towards imagined sounds: a vibrato is

² Sachs, The History of Musical Instruments, p. 203.
prolonged long after all audible sound has ceased; the unplucked string, set in motion by a suddenly arrested glissando, produces a sound scarcely audible even to the performer. In the hands of performers of an older generation the instrument tends to be used to suggest, rather than to produce, sounds.

As early as the date of compilation of the *Jouli* (13) (*The Ceremonial of the State of Jou*) in the third century B.C., a system relating musical sounds to the order of the Universe had been worked out. Its elaboration forms part of that scientific systematization of knowledge which took place between the fifth and the third centuries B.C. (the period of the Warring States), after the decay of the feudal system and at a time when the process of fusion to form states had already begun. At a very early date, at least as early as the *Leu Shyh Chuenchiou* (14) (*The Spring and Autumn of Leu Buhwei* (15)), 239 B.C., a theory was devised by which the notes of the Chinese musical world could be derived from a fundamental pitch-pipe by simple arithmetical operations. The orderly generation of sounds from a fundamental by this procedure was equated with other types of order in the Universe: with the four directions, with the categories of substance, with the orderly sequence of the seasons.²

(F) Autumn  
(C) Spring  
(G) Winter  
(D) Summer

This system was extended and worked out in a manner analogous to that of similar systems in India, Islam, ancient Greece, and the Christian Middle Ages.

In an attempt to preserve the harmonious correspondence between their system of sounds and the order of the Universe, the Chinese were early faced with the problem of fixing an absolute pitch. The pitch-pipes were not only of standard length but of standard capacity, and it is understandable that the Imperial Bureau of Music became part of the Imperial Bureau of Weights and Measures.

The belief in the power of music to sustain (or if improperly used to destroy) Universal Harmony was but an extension of the belief in the magic power of sounds. As a manifestation of a state of the soul, a single sound had the power of influencing other souls for good or ill. By extension, it could influence objects and all the phenomena of Nature. Symaa Chian (16) (163–85 B.C.) describes two zither tunes of

magic power: when the first was played, two groups of eight black cranes appeared at the opening strain; at the second strain, they stretched out their necks and cried, extended their wings and began to dance.

The conditions under which the zither might be played (up to fifty years ago) were originally of magical significance, but gradually their significance was forgotten until they became merely symbolic of the ideal way of life of the literatus. In Ming (18) times the playing of the zither was forbidden to women (though that did not prevent their playing it), and it was forbidden to perform before any but cultured persons. The fact that the zither became the favourite instrument of Taoist and Buddhist monks meant that it exchanged its more ancient magical associations for those of the monastery, but that it retained at all times the power to command a respectful hearing.

The categories of hieratic and popular music are to be distinguished in most cultures, in antiquity as in recent times, but China is perhaps unique in the extent to which ritual music came to be regarded as an effective regulator of the harmony of the Universe in general and of the State in particular, so that the first duty of the Ruler was to look to the perfect maintenance of tradition in the execution of the music and ritual of the State.

CHINESE MUSICAL INSTRUMENTS

The earliest Chinese documents (c. 1300–1050 B.C.) are inscriptions on fragments of bone recording the decisions of the tortoise-bone oracle. A number of these contain characters either certainly or possibly depicting musical instruments, and it has been suggested that they provide evidence for the use of drums struck by a drum-stick, bells on a wooden stand struck by a stick, suspended triangular stones struck by a padded stick, and a horn struck with a stick.

Excavations on the famous Shang (19) sites in the plain of north-east China at Anyang (20) have yielded sonorous stones (ching) (21) (pl. 4 (b)) and a globular flute (shium) (22) (pl. 3 (c) and (d)). The former are L-shaped slabs of calcareous stone which (according to the pictographs in bone inscriptions) were hung from a frame and struck with a padded stick. The shium from the Shang site is barrel-shaped and about 2½ inches high, carved with an ogre-mask. Hollow, with

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CHINESE INSTRUMENTS

(a) Zither (× 1/6); (b) The same (× 1/6); (c) Globular flute (× 4); (d) Two globular flutes (× 4);
(e) Mouth organ (× 12); (f) Detail of the same (× 4); (g) Vertical flute (× 4);
(h) Detail of the same (× 4); (i) Whistle flute (× 4); (j) Whistle (× 4)

For further details see page xiii.
an apical blow-hole and five finger-holes in the side, it is said to produce the note-series: do re mi fa sol.\(^1\)

In many of the folk-songs and dynastic songs from the Book of Songs (Shijing) (23)—often said to have been selected by Confucius, but probably only used by him for purposes of instruction—references to music occur specifically mentioning some of the instruments supposed to be represented in the bone characters or found in Shang sites. According to Sachs’s tentative chronology of primitive instruments, flutes with holes, and drums, such as are mentioned in these songs, belong to the middle neolithic stratum; they occur in neolithic sites and are distributed over several continents. The sonorous stones are also included among neolithic instruments. In some songs there are references to bells; these are the Bronze Age counterpart of sonorous stones.

Whistle flutes of clay, with or without finger holes, occur in China as children’s toys. One type from Shandong (51) without finger holes and in the form of a bear is shown in pl. 3 (i). In Shikang there is a whistle flute with four finger holes in the form of a frog; and there are specimens with two finger holes from Gueyjou (24) in the form of a bird. The fact that in each case the whistle has the shape of an animal may well be significant. Such clay whistle flutes are also to be found in central America and may be a legacy from a late neolithic substrate. A bamboo whistle-flute is reported to have been seen in funeral processions fifty years ago.\(^2\)

The Shang were overthrown by the Jou (25) about 1050 B.C., and many songs in the Shijing suggest a considerable increase in the number of instruments used by the Jou (1050–255 B.C.). In addition to sonorous stones and stone-chimes, bells and bell-chimes, their idiophones include the percussion clapper (chongdwu) (26) (pl. 4 (a) the trough (juh) (27) resembling a rice-pounding mortar with pestle; and the tiger (yeu) (28), with a serrated strip of wood along its back, thrice scraped to mark the end of the music. Scrapers (according to Sachs) are idiophones reaching back to the earliest neolithic stratum; there is some evidence that they have a life-giving significance as charms. The Jou armoury of instruments also included chordophones, for the existence of which in Shang times there is no evidence. Thus the first of the songs (in the traditional order) refers to welcoming the noble lady: ‘With chyn (29) and seh (30) we hearten

her.' The two instruments referred to are both half-tube zithers (using Sachs's nomenclature) of which the former (or a descendant) is still in use as the classical seven-stringed zither (*chyn*) (pl. 3 (a) and (b)) and the latter (*seh*) survives in a descendant with thirteen brass strings, the *jeng* (31). New aerophones include the mouth-organ, *sheng* (32) (pl. 3 (e) and (l), and pl. 4 (a)), two cross flutes, *yoh* (33) and *chyr* (34), a double pipe, *goan* (35), and the panpipes, *shiau* (36). (The modern *shiau*, a vertical flute, is shown in pl. 3 (g) and (h). Several sorts of drum, including one of earthenware, are mentioned.

From the *Yiliï* (37) (*Rites and Ceremonies*), edited at the latest in the third century B.C., we have the following description of the distribution of the orchestra at the great archery tournament:

On the day before the shoot are suspended, for the musicians, to the east of the eastern steps, facing west, the sonorous stones associated with the mouth-organs; south of these are the bells (*jong*) (38) associated with the mouth-organs, and south of these are other bells (*boh*) (39): all these are arranged in order towards the south. West of the eastern steps a drum is set up; it is beaten from the south. The answering drum (*byi*) (40) is to the east of this; it is struck from the south. To the west of the western steps are the sonorous stones associated with laudatory declamation; they face east. To the south of these are bells (*jong*) and to the south of these are other bells (*boh*); these are all arranged in order towards the south. To the south of all these a drum is set up; it is struck from the east. To the north of this is the starting drum *byi*. A drum is set up to the east of the western steps, it faces south. In the space between the set-up drums are the bamboos [flutes and mouth organs, presumably]. The hand-drum, *taur* (41) [struck by two buttons on two strings] rests on the western cords supporting the sonorous stones associated with laudatory declamation.² (See pl. 4 (b).)

The *chyn* probably had but five strings originally, the number being later increased to seven. The *seh* had twenty-six strings of silk-gut. The *jeng*, which survives particularly in southern and south-western China,³ has thirteen brass strings and seems to be a small version of the *seh*; it is the only one of the half-tube zithers which includes the bamboo determinative in its ideograph. This may perhaps be regarded as support for the theory that it was originally made from an internode of bamboo divided down the middle into two half-cylinders.

The mouth-organ, *sheng*,⁴ is always symbolized by a gourd (as the

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² *Yiliï*, viii.
shium is by clay, and the flutes by bamboo) and at some period a gourd formed (and in some places still forms) the wind-chest; among a number of primitive peoples playing the instrument today, however, the wind-chest is made of wood, and in China and Japan it is often made of lacquer. Thirteen or so slender bamboo pipes, differing in length, are arranged so that each opens into the wind-chest by an aperture covered by a free reed of copper (pl. 3 (l)). A small hole in the pipe near the reed is stopped at will, so that a sufficient back pressure can be produced for the reed to be set vibrating when the pressure in the wind-chest is raised or lowered by blowing into or sucking the mouth-piece. The reed may be tuned by weighting with wax (pl. 3 (l)). The number of pipes has varied considerably in China at different epochs, and among non-Chinese tribes the number is much less at the present time (see pl. 6 (b) and (l)). They are so arranged that the lower notes can be accompanied by their octave or fourth or fifth. The tessitura of the modern Chinese instrument is soprano, but it is very probable that the early forms were of considerably lower pitch. It is known from late Bronze Age figured drums, probably of the fourth century B.C.,¹ found in northern Annam,² that the sheng in use at that time closely resembled the large forms found among the tribes-people in southern China at the present day, and accordingly must have had a range approximating to D–d.

Mention must also be made of the jium (42), a stringed instrument used by the Jou for determining the pitch of bells; it consisted of strings mounted on a resonating table, 7 feet long.

The political unification of China brought about between 250 and 220 B.C. by King Jenq (43) of Chyn (Chyn Shyy Hwangdih) (44) was followed by the downfall of the unifier’s dynasty and the succession to power of the Han, during whose reign extensive contacts with various nomadic peoples on the north-western frontier of the Chinese empire, as well as with central and western Asia and India, led to the appearance of new musical instruments in Chinese orchestras. Chief of these was the pyipar (45), a short lute. It is reported to have been played on horseback³ and seems to have been a short-necked instrument with a circular body, four strings, and twelve frets.

Jing Farng (47), Imperial Secretary in 45 B.C., devised a stringed instrument after the fashion of a seh, the joen (48), in function resembling the jian of the Jou, for it was used to fix the sound of the sixty notes into which Jing Farng divided the octave (p. 96).

Some of the earliest representations of zithers, stone chimes, sheng, vertical flutes, panpipes, and the drum known as ingsuu (49) occur in the shallow bas-reliefs from Hann times on the walls of the Wuu (50) family tombs in Shandong (51) province.\footnote{H. E. Fernald, 'Ancient Chinese Musical Instruments', \textit{Museum Journal} (Philadelphia, 1936). Reprinted in Hsiao Ch’ien, \textit{A Harp with a Thousand Strings} (London, 1944), pp. 395–440.} On other Hann reliefs cross-flutes occur. In some of these Hann scenes the chyn is shown with but five strings.

By late Wey (52) times, that is, some two centuries after the overthrow of the Chinese empire in the third century A.D. by mercenaries settled on the northern frontier, the pyipar begins to appear in bas-reliefs as a four- or five-stringed, pear-shaped, bent-necked lute and may have resembled the gaku biwa of the Japanese court orchestra—an instrument over 3 feet in length.

A vertical angular harp also came to China in late Wey times, and representations are to be seen in the frescoes at Duenhwang (53) and on many stelae of the sixth century A.D.\footnote{H. E. Fernald, 'Ancient Chinese Musical Instruments', \textit{Museum Journal} (Philadelphia, 1936). Reprinted in Hsiao Ch’ien, \textit{A Harp with a Thousand Strings} (London, 1944), pp. 395–440.} According to size the harp had sixteen to twenty-five strings and is referred to in Chinese texts as konghour (54) (pl. 5 (a)). It did not establish itself in China as did other instruments originally imported in court orchestras from abroad.

The Shoosooin (Nara, Japan) preserves several Chinese pyipars of Tarng date (A.D. 600–900). This was an era of extensive intercourse between China and central Asia. Many new instruments and many types of orchestra were introduced, usually associated with their own dancers, jugglers, or acrobats, characteristically costumed. The size and composition of these orchestras is known from Tarng frescoes in the Thousand Buddha Caves at Duenhwang and from the Tarng histories.

Toy globular flutes with two finger holes occur in Tarng kiln-sites in the neighbourhood of the provincial capital of Syhchuan. Two specimens are shown in pl. 3 (d); both have the form of quasi-human heads. They furnish an instance of the survival as toys of ancient musical instruments whose ritual use has been forgotten.

Relatives of the pyipar in use at the present time, and possibly introduced in Tarng times, are the yuehchyn (55), a four-stringed flat
lute, the strings of which are said to be tuned in pairs a fifth apart; and the *sanshyan* (56), a three-stringed flat lute, played with a jade plectrum; the strings are tuned: *do fa do* or *do re la*.

To the same period of importation probably belong the various bowed instruments, of which a considerable variety are in use in China today. Bowed instruments are first mentioned in Persia in the ninth century,¹ and a reference to a bowed zither, related to the *jeng*, occurs in a Chinese account of a Khitan orchestra playing at the Chinese court about A.D. 900. An instrument of this kind was in fairly common use in Pekin up to fifty years ago.²

Bowed lutes (that is, fiddles) arose at a slightly later date, and all varieties found in China are known collectively as *hwuchyn* (57) (‘barbarian’ *chyn*), suggesting that the instrument came to China from central Asia. The *ellhwu* (58) is perhaps the commonest form of *hwuchyn*.³ It has a hexagonal tubular wooden body a few inches long, one end of which is covered with snakeskin, the other end is open; the whole acts as a resonator. The handle is inserted into the body at right angles to its long axis. There are two strings of silk-gut tuned a fifth apart, stopped by the fleshy part of the fingers, and the hair of the bow passes between the strings. The instrument is played with constant vibrato and glissandi and has a veiled tone of great beauty.

It is interesting to note that a dulcimer in use in south China today bears the name of *yangchyn* (59), the ‘foreign’ zither. It resembles the Persian dulcimer known as *santir*, but its distribution on the southeastern seaboard suggests that it reached China from the sea rather than from central Asia.

**HISTORY OF THEORY AND NOTATION**

The writings of Leu Buhwei from 239 B.C. contain an account of the making of the pitch-pipes by Ling Luen (60): *ling* means music or musician, *luen* is a rule or to rule.⁴ The name and the person were invented in the course of that scientific reconstruction by the Chinese of their own prehistory which occurred in the period of the Warring States already referred to (p. 87). There are no grounds for regarding

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¹ Sachs, The History of Musical Instruments, p. 216.
³ A *hwuchyn* leads the ensemble in The History of Music in Sound, i, side 3 (b).
⁴ G. Haloun, Tocharer und Indogermanen (Leipzig, 1926), pp. 156 ff.
the passage so often quoted from Leu Buhwei as other than a rationalization; it does not concern a historic figure nor does it include any precise geographical indications—the terms usually translated as place names are in fact general terms for geographical features:

He [Music Ruler] gathered bamboos in a valley on a mountain pass, taking those grown of uniform bore and thickness, and cut between two nodes; the length of the piece being three inches and nine tenths, he blew it, making this to be the do of Yellow Bell [the fundamental of the Chinese system].

At the present time the scale most characteristic of the Far East (as defined at the beginning of this chapter) is pentatonic without semitones, consisting of three whole tones and two minor thirds, the thirds being separated by one or two whole tones. The scale has the form:

\[ \text{do re mi sol la.} \]

The ancient names for this series, as pronounced today, are:

\[ \text{gong shang jeau jyy yeu.} \]

The evidence for the existence of five-note melodies in early Jou times is confined to references to the ‘five degrees’, and to the names of the five notes in texts compiled in the third or fourth centuries B.C. The same texts contain references to the seven sounds or the seven ‘beginnings’, and it has been supposed that these indicate that a seven-note scale with two semitones was known even in Jou times. The first definition of the notes is that given by Symaa Chian in the second century B.C.

The process by which the lowest note (Yellow Bell) engendered the rest of the notes in the Chinese system is also described in the writings of Leu Buhwei: ‘To the three parts of the generator add one part, making the superior generation. From the three parts of the generator reject one part, making the lower generation.’ The interpretation of this passage is that the complete note-series (of which the names are also given) was obtained by cutting bamboo tubes (of the same diameter) to lengths calculated by alternately subtracting and adding one-third of the length of the preceding tube, so that the ratio of the length of any pipe to that of the next in the series was as 3:2 or as 3:4. The notes given by pipes two-thirds of the length of their predecessors in the series were said to belong to the inferior generation; these are

\[ \text{1 Leu Shyh Chuenchiou, v. Guu Yueh (61).} \]
\[ \text{2 Leu Shyh Chuenchiou, vi. Inliuh (63).} \]
(a) CHINESE PLAYERS OF MOUTH-ORGAN AND PERCUSSION-CLAPPER

(b) CHINESE SONOROUS STONES AND HAND-DRUM

From Prince Ju Tzayuyh, *The Handbook of Music* (1596)
From the end of the 12th century

(4) CHINESE 7-STRINGED ZITHER TABLATURE
From Ch'en Yung, Yüh Shu (13th-14th century)

(5) CHINESE ROC-HEADED VERTICAL HARP WITH 18 STRINGS

[Image of tablature and vertical harp diagram]
the six female *leu* (64), made (according to legend) from the singing of the female roc. The six remaining notes were said to belong to the superior generation; these are the six male *liuh* (65) made (according to legend) from the singing of the male roc. Theoretically this procedure yielded a chain of ascending fifths and descending fourths:

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C - D - E - F# - G# - A#
F - G - A - B - C# - D#
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and, if arranged in ascending order, the note sequence: F, F#, G, G#, A, A#, B, C, C#, D, D#, E.

The *liuhleu* (66) (the complete note-series) was not a ‘chromatic scale’, but an array of all the notes in the Chinese musical firmament of the third century B.C. The process of generation described in the writings of Leu Buhwei presumably provided an approximate theory, satisfying the desire for order of those engaged at that time in systematizing the sum total of human knowledge. Similarly, the two ‘whole-tone scales’ of the male and female *liuh* (both *leu* and *liuh* are referred to collectively as the twelve *liuh*) were the result of a classification of the series into two groups by origin; there is no evidence that the Chinese musical genius at any time found expression in melodies referable to whole-tone scales.

It is certain that melodies making use of various scales must have existed before the *liuhleu*. The latter provided a theoretical means of deriving an array of notes, any one of which (again in theory) could act as *do* (that is, *gong*) in the five-note series. A pentatonic scale has five loci of modal inversion: that is, the series may begin (and end) on each of the five notes in turn, giving five modes. Each mode takes the name of the note which is *finalis*, which ends melodies in that mode. It is probable that the fact that different melodies were in different modes had been recognized at a very early date, and that transposition of the modes, changing the *liuh* selected as tonic, was practised.

Obviously, variation in the unit of length on which the length of the fundamental pitch-pipe was based at different times must have meant that absolute pitch was never attained. Under the Jou the minimal length of the Yellow Bell pipe is estimated to have been 20 centimetres. Europeans have accepted pitches of F (Amiot), E (Courant), D (van Aalst), E (Mahillon).\(^1\) For convenience the value of F will be adopted here.

The fact that so many of the *liuhleu* bear the name of *jong* (bell) suggests that part of the original note-series may have been a set of

\(^1\) For references see Bibliography, pp. 482–3.
bells (like the celestas or kettle-gong chimes in the Balinese orchestra). It is known that by 500 B.C. bells were cast in sets of six or seven members bearing, in some cases, names similar to those of bells in the liuhleu series. It is also possible that the names of the liuhleu were originally applied to a note-series differing from the liuhleu of Leu Buhwei.

**Hann Dynasty (206 B.C.–A.D. 220) to Swei Dynasty (581–618)**

While references in Hwainantzyy (67) suggest that a scale of seven notes was known in the second or first century B.C., there can be no doubt as to its use in the time of Jing Farng in 40 B.C.; nor can there be any doubt about the practice of transposition. Jing Farng gives an exact definition: 'At the Winter solstice one takes F (Yellow Bell) as do, G as re, A as mi, C as so, D as la, E as si (becoming do) and B as fe (becoming so), as the notes of the scale. Since the liuh(s) corresponding to the day act in turn as the fundamental, re and so follow (the fundamental) in accordance with their nature.'

It was under the Hann emperor Wuudih (68) (141–87 B.C.) that the Imperial Bureau of Music (Yuehfuu) (69) was founded. This was responsible for supervising rites, ceremonies, and music of all kinds (foreign, court, and folk-music); for preparing archives of national melodies; and for establishing and maintaining the correct pitch of the liuhleu. In an attempt to bring the last note in the cycle of the liuh nearer to coincidence with the octave of the fundamental, Jing Farng in 40 B.C. increased the number of liuh from 12 to 60. But even when continued through five cycles, the twelfth fifth of the fifth cycle would still differ from the octave of the fundamental—always supposing that a stringed instrument such as Jing Farng used (the joen) could be made to produce accurately the sixty theoretical liuh.

That some notation or tablature existed in early Hann times is clear from the beginning of the story, already referred to (pp. 87–88) of Duke Ling (70) of Wey, recounted by Symaa Chian. Ling heard a zither tune played by spirits and requested his music master, Jiuan (71), to write it down for him. Jiuan did so and asked for time to practise it. Symaa Chian, writing in the second century B.C., was therefore familiar with some method of zither notation.

The decay of the practice of ritual transposition during the next three or four hundred years may perhaps be correlated with the disturbed state of the empire during the period of the Three Kingdoms.

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1 Maurice Courant, 'Essai historique sur la musique classique des Chinois' in *Encyclopédie de la musique* (Lavignac and La Laurencie), 1\* partie, i (Paris, 1913), p. 94.
Not until the Swei (72) dynasty (581–618) do we again find explicit reference to transposition in relation to the lunar calendar.

In the early part of the sixth century a further theoretical extension of the series of liuh took place, the cycle of fifths being extended to 360 liuh; but while some attempt seems to have been made to put into practice the system of Jing Farn, the system of 360 liuh was undoubtedly of theoretical interest only.

In 587, Jenq Yih (73), Duke of Peh (74), in a memorial on the subject of ancient and contemporary musical practice, showed how to vary the tuning of the pyïpar (‘twisting the string-posts’, that is, the tuning-pegs) so as to extend the range available, and make ‘twelve yunn corresponding to the twelve liuh’; and the subsequent formation of eighty-four systems by transposition, each of the twelve liuh serving as initial.¹ The term ‘system’ (diaw) (75) includes both mode and key in the Western sense; that is to say, for the Chinese as for the Greeks the notion of a change of mode and a change of pitch were inseparable. The twelve keys (F, F♯, G, G♯, A, A♯, B, C, C♯, D, D♯, E) are known in Chinese as the twelve yunn (76); the seven modes are the seven diaw (the seven different kinds of systems) and this expression is identical with that used for the total number of different systems (scales in the Western sense) possible, \(12 \times 7 = 84\) diaw. If this appears confusing, it is so even to the Chinese. This is due to the confusion between a change in key and a change in mode, which arises because on an instrument with a fixed scale (a bell-chime, for example), a change in mode must also mean a change in pitch, that is a change in key. In due course the proposal made by Jenq Yih was accepted, the legitimacy of the seven-note scale was recognized, and the practice of transposition was re-established, although this did not receive imperial favour and take effect until the next dynasty, that of the Tarng.

_Tarng Dynasty (618–907)_

In 628, the emperor Taytzong (77) approved the eighty-four systems: the seven notes from below upwards ‘form a scale: yunn. In general, the twelve systems of do (that is the do mode in its twelve keys) all have the true fundamental, they have no sound lower than the fundamental. . . . The twelve systems of re all contain a note lower than the initial, this is the fundamental. The twelve systems of mi have two notes lower than the initial; these are the fundamental

and re.\textsuperscript{11} Each liuh starts a scale of the type: F, G, A, B, C, D, E, F, and each of these twelve scales is called a yunn. Each liuh also acts as each degree of the standard scale in turn, forming the initial to seven systems (modes in the Western sense) known as diaw. Sixty of the diaw are principal systems founded on the five points of modal inversion corresponding to the five-note scale; the remaining twenty-four are complementary systems founded on the auxiliary notes. The different systems are defined by naming the liuh which is do, followed by the degree which names the mode. Thus ‘Yellow Bell (F) do’ is the do mode on F, that is, with F as initial (and fundamental); ‘D\# re’ is the re mode on D\#, that is, with D\# as fundamental (do) and re of the scale of D sharp (E\#) as initial.

A single Tarng music manuscript has been found in the famous Thousand Buddha Caves at Duenhwang.\textsuperscript{2} It includes ‘Emptying-the-cup Music’ and is apparently written in a tonal notation, some elements of which are indistinguishable from numerals. This notation has not as yet been deciphered. It has affinity with the Sonq (78) notation used by Jiang Kwei (79) (p. 109) and with that of Ju Shii (80) and other Sonq writers, as well as with the gaku biwa notation of the Japanese court orchestra (p. 147). The structure of this composition will be considered later (p. 105). A tune of this name is mentioned in the section on rites and music in the Tarng History (190).

\textit{Sonq (960–1126) and Southern Sonq (1127–1279) Dynasties}

From the end of the ninth century onwards, the imperial music again fell into disorder, and a statement made in 959 reveals that only seven notes, forming the Yellow Bell scale, are in use; the other eighty-three systems have disappeared. Of many hundreds of melodies in the eighty-four systems only nine survived and all of these were attributed to Yellow Bell (F) do. During the decline of the Sonq, the invading Tartars were practising a simplified version of Tarng ritual music, basing their tuning on the pyipar. The Jin (81), who conquered the Sonq, made use of a set of twelve hymns for all ritual circumstances, comparable to the twelve hymns of the Tarng. In the thirteenth century the Mongol invaders were again practising ritual transposition.

In addition to the pyipar notation already mentioned, the Sonq

\textsuperscript{1} Courant, op. cit., p. 97.
\textsuperscript{2} Bibliothèque nationale de France; Collection Pelliot, No. 3808 v°. Professor In Faaalu of Pekin National University possesses a photographic copy which I have examined and of which I possess a written copy.
poet and musician, Jiang Kwei, made use of another notation, probably of very great antiquity, namely that of the names of the liuh. In four of his songs he also uses two notes sharpened by one or two commas, thereby extending the scale to nine notes (p. 110). In all cases the fractional tones are approached from, and quitted for, the note below, so that they are heard as a microtonal sharpening of two of the notes of a seven-note scale.

Jiang Kwei is also the first composer for the seven-stringed zither whose work survives in a contemporary tablature (pl. 5 (b)). This is based on these principles: each string is represented by one of the numerals from one to seven (82); the action of the right hand—whether the string is plucked with a forward or a backward motion, and which of the fingers 1–4 is performing the operation—is indicated by abbreviated characters written over, under, or embracing the number of the string concerned; the string may be open—indicated by an abbreviated character written over the complex—or stopped, in which case the finger of the left hand doing the stopping, and the point of stopping in relation to the nodes of the string, are indicated; the position adopted when playing harmonics is indicated by a prefatory character, as is the return to the usual position. The tablature of Jiang Kwei differs from that in use today in the very restricted use of ornaments and of ligatures, both of which are produced by shifting the position of stopping after the string has been set in motion. Jiang Kwei’s tablature is transcribed and the work described on p. 111.

The notation most widely used for flute music and songs, up to the end of the empire and the founding of the republic in 1912, first appeared in China in Song times. Ju Shii makes use of this notation, taken from books of popular music, and equates it with the other Song notation already referred to, possibly developed for the pyipar.

**Yuan Dynasty (84) (1271–1368)**

In the first Mongol dynasty of the Yuan, the ritual music was carefully preserved and the practice of transposition cultivated. It was under this dynasty that the diatonic major scale was introduced into China as the main mode, and it is in the flute notation associated with this scale that all music of the theatre is written to this day. The characters for the note-series: c’ d’ e’ f’ g’ a’ b’ c’ d’, are given in the Glossary of Characters (84a); alternative forms are omitted.

In the latter part of the Yuan dynasty, and from the rise of the
Ming onwards, the practice of ritual transposition again fell into disuse.

**Ming Dynasty (1368–1628)**

During the Ming dynasty there appeared what is perhaps the most remarkable of Chinese theoretical works on music: *The Handbook of Music* (85),¹ by Prince Ju Tzayyuh (86) of the house of Jenq (87). This work, running into nineteen volumes, is a complete survey of music, dance, and ritual in ancient China. It attempted a reconstruction of the music of Jou times, providing full scores of many ritual hymns, and proposed an equal-tempered chromatic scale a hundred years before Werckmeister made the same proposal in Europe. Not content with establishing a just scale, Ju Tzayyuh reached the concept of equal temperament and succeeded in calculating values for the length and diameter of a series of equally tempered *liuh*: an equal-tempered chromatic scale of two octaves.

This dynasty saw the publication of superb collections of zither tunes in tablature.² The number of abbreviated characters in use had increased considerably from Sonq times, judging by the single example of Sonq tablature from Jiang Kwei. This was due to the development of the finger technique and to the increased use of ornaments and ligatures of various kinds.

**Ching Dynasty (88) (1644–1911)**

At the beginning of the eighteenth century, in the reign of Kangshi (89), the ritual music was restored, and the practice of transposition reintroduced. It was also at this time, Tzayyuh forgotten, that the octave was divided into fourteen steps, in an attempt to combine the process of derivation through the cycle of fifths with the octave standard. This scale differed from that of the flutes and chimes on the one hand and of the stringed instruments on the other, and the official melodies of the Ching cannot be played on an equal-tempered keyboard instrument without gross distortion.

At the present time, the ritual music survives only, if at all, in the Confucian temple at the home of Confucius at Cheufuh (90). Knowledge of the systems has decayed until a majority of the melodies in the modern repertoire of the seven-stringed zither are in the *do* mode on F. Even among zither players, who as a class are knowledgeable in the old music, confusion exists between a tuning, a key, and a mode.

¹ *Yuehliuh Chyuanshu* (85).
² R. H. van Gulik, op. cit., p. 85.
In addition to staff notation imported from the West, the Chinese also make use of a sort of sol-fa system developed by the Japanese, representing the notes of the diatonic scale by the numerals 1–7. For homophonic music this is typographically simpler than staff notation. Practically all collections of popular songs published in the past ten years in China have been written in this notation. The first four bars of Ex. 209 (p. 127) would be written as follows:

\[ \begin{align*}
5 | 5 & 65 \quad 42 | 5 0 \quad 45 | 5 65 \quad 42 | 5 0
\end{align*} \]

**HISTORY OF THE MUSIC**

*Jouard Chyn Dynasties (before 206 B.C.)*

No specimens of music survive in any text earlier than Targn times, so that our knowledge of early and late Jou music is limited to descriptions of orchestras, names of songs associated with a particular ritual or with particular occasions, &c. A passage from the *Shujing* (91), the *Canon of Documents*, provides support for the view that Chinese music was essentially 'logogenic' in character at a time considerably earlier than the period of classical opera, in describing which Sachs makes use of this term.\(^1\) In Shuenn’s *Code* (92) we read: ‘Poetry expresses the will; song prolongs the expression; music depends on the prolongation.’ In a subsequent chapter\(^2\) we are given some idea of the nature of ritual music:

Kwei [the director of music] said, when the sonorous stones are struck lightly or heavily, when *chyn* and *seh* are struck lightly or heavily, and their sounds alternate with human voices, the spirits of the ancestors come: the guest of Yu [the emperor Shuenn] takes his place, the crowd of princes display their virtue in mutual courtesy. Down below, the flutes [double vertical flutes] and the small drums play together as soon as the signal is given by the wooden trough and cease as soon as the signal is given by the tiger-scaper. The mouth-organs and the bells play in the intervals.

Prince Tzayyuh, writing before 1595, chose the ‘Hymn for the Sacrifice to Confucius’, as played in the sixteenth century, to illustrate the ancient practice of transposition. The melody dates from the fourteenth century and may retain something of the character of the corresponding hymn performed in Targn times. To suppose, as did Tzayyuh, that it represents the music of the Jou, 2,000 years before his time, would appear unwise. The hymn illustrates not only transposition into five keys other than the initial key (each key being one

\(^1\) *The Rise of Music in the Ancient World*, p. 137.

\(^2\) *Shujing, Yushu Yihyi* (93).
tone higher than the preceding key) but also the constant distance of a fourth between the accompanying orchestra and the voices. By a brilliant emendation of a passage from the Joulii which, though it made cosmological sense as it stood, made no musical sense, Tzayyuh produces the following formula: ‘The instruments play in F, the chant is in A sharp . . . for the sacrifice to the celestial spirits. For the sacrifice to the terrestrial spirits the instruments play in G, the chant is in C . . .’ ¹ Sachs points out the similarity of this practice to that of one type of medieval organum: the organum (originally an instrument) accompanied the cantus at the fourth or fifth below.

Ex. 177

\[\text{Music notation}\]

This is the first stanza of the hymn quoted by Tzayyuh; the bar lines mark the ends of the four-word lines and the commas mark the rhymes. In this type of transposition the melody is transposed in the Western sense, without change in mode. But Tzayyuh also gives an example of transposition involving a change in mode as well as in pitch. While the evidence that the Jou did anything of the kind is slender, the effect is enchanting, as the following example shows. It is the ‘Hymn for the Sacrifice to the Imperial Ancestors’, first in its original form (do mode on F) and then in the first modal transposition (mi mode on D):²

Ex. 178

\[\text{Music notation}\]

Ex. 179

\[\text{Music notation}\]

¹ Courant, op. cit., p. 102.
² Ibid., pp. 114, 115.
One of the most remarkable aspects of the work of Tzayyuh is his reconstruction of the orchestral accompaniment to the ritual melodies, based on his own interpretations of ancient texts and on those of the Song Confucian philosopher, Ju Shih. Of this reconstruction perhaps the most brilliant feature is the elucidation of the ancient practice of prolonging a note, on plucked stringed instruments (such as chyn and seh) whose sound quickly decays, by means of a rapidly executed figuration—the procedure known as tsawmann (94). In a phrase used by performers of his day to tune their instruments, the Prince discovered what he believed to be the vestiges of the old tsawmann: the intervals of the octave and the fifth were played in succession to words meaning ‘the moon is bright, the wind is soft’. The following example sets out in score the opening line of the second stanza of the ‘Hymn from the Temple of the Ancestors’. The figuration differs in minor details from that given by Courant, and the mouth-organ part has been converted into chords of octave and fifth or fourth. The pitch of the mouth-organ may well be an octave lower than that at which it is written.\(^1\)

\(^{1}\) G. E. Moule, ‘Notes on the Ting-chi, or half-yearly sacrifice to Confucius’, *Journal of the North China Branch of the Royal Asiatic Society*, xxxiii (Shanghai, 1901), pp. 37–73, may be consulted for an account of the Confucian ritual as it survived at the turn of the century.
sections and employed more than 800 musicians. A great increase in
the number and variety of drums in use as compared with the previous
dynasty is to be noted; their designation by local names suggests that
regional music was played.

During this period occurred the first stages in the evolutionary pro-
cess which led finally to the development of Chinese opera. As in the
evolution of Greek drama, a performance originally of religious and
even of magical significance came to be repeated for the sake of its
value as entertainment. In Jou times there had existed a ceremony of
exorcism performed by a wizard, the fangshianq (95): this consisted
in dances and songs executed by a troop of performers masked as
animals and led by the wizard. It was made use of on two occasions:
in the annual nuo (96) ceremony for driving away disease; and at
funerals, to drive away the ghost. In Hann texts there appears for
the first time the expression koeilee (97) used, apparently, as a
synonym for fangshianq, and this term survives to the present
(though written with graphic variants) as a term for marionettes of
all kinds (98). What is unusual in the history of the Chinese theatre
is the importance of the puppet theatre as an intermediate step
between ceremony and entertainment by human actors.1 In Hann
times the musical accompaniment for the fangshianq-koeilee performance of the gentry probably consisted of an orchestra of strings,
flute, and handbells. The strings were chyn, seh, pyipar, and jeng,
and the flute was a vertical flute, shiau (99). This was the band used
for military and general purposes in the Court. The shiau and hand-
bells were lacking from the popular orchestra, however, which in-
cluded the mouth-organ and the cross-flute, dyi (100). It seems
probable that in the transformation of the koeilee from an exorcistic
ceremony to an entertainment of songs, dances, and music, there
was also a change in the status of its music from that of the court
to that of the common people.

Tarng Dynasty (618–907)

The only specimen2 of Tarng music supposedly transcribed from a
contemporary document, and having some claim to be regarded as
authentic, is the melody for the first song in the Book of Songs, printed
by Prince Tzayyuh in 1596. According to Tzayyuh the melody was
taken from the edition of the classics engraved on stone in the ancient

1 Souen K’ai-ti, ‘L’origine et le développement du théâtre des marionnettes chinoises’,
Bulletin du centre franco-chinois d’études sinologiques, i (Pekin, 1944), pp. 81–105
(summary in French) (194).

2 The melodies preserved by Ju Shii may perhaps be included here. See p. 109.
capital, Shi An (101), in Tarng times. Engraving began in 835 and was finished in 837.¹

This melody is one of those which Tzayyuh scores for drum, clapper, seh, sonorous stones, and voice. Another score is for voice, chyn, seh, two sorts of bells, sonorous stones of two kinds, clapper, mortar, tiger, drum, and small drum. The tune is remarkable in that it constantly avoids re but makes frequent use of both the auxiliary notes, fe and si. The chords supplied by Tzayyuh use only notes in the mode. Each four-syllable line of the poem is separated from the next by two bars of percussion, and there are 3½ bars of percussion at the end of each of the five stanzas. The first stanza only is quoted here. In Waley's translation the text runs:

`Fair, fair', cry the ospreys
On the island in the river,
`Lovely is this noble lady,
Fit bride for our lord'.²

The mode is mi on F. The voice sings the top part.

Ex. 181

An indisputably authentic relic of Tarng music survives in the manuscript from the Thousand Buddha Caves at Duenhwang already referred to (p. 98). From external features this is a suite in eight movements, headed as follows: `Emptying-the-Cup Music; another slow tune; another tune; quick tune; another tune; another slow tune; quick tune; another slow tune.' These terms may well have a technical significance.³ With the exception of the first section (`Emptying-the-Cup Music') and the last, each movement includes a repeat and a

¹ Professor E. G. Pulleyblank, Professor of Chinese Language and History in the University of Cambridge, has recently (November 1954) examined the stone-engraved ninth-century text of the Book of Songs in Shi An on my behalf. He reports that there is no trace of notation on the stones. This discrepancy between Prince Tzayyuh's ascription and the surviving stone-text at Shi An has also been noted by Professor Yang Inliou of the Central Institute for Musicological Research, Pekin. Thus the authenticity of Prince Tzayyuh's 'Tarng' melody remains unconfirmed.


³ This is undoubtedly the case for the term here translated as 'quick', which survives as a designation for final movements in the suites that form part of the repertoire of the Imperial Musicians of the Japanese Court (p. 147). (See H. Tanabe, Nihon Ongaku Kōwa (Tokyo, 1926), pp. 534 ff.). It would be of the greatest interest to compare the surviving part-books of the Japanese versions of the 'Emptying-the-Cup Music' with the Tarng manuscript.
coda. In the Tarng History this work (or a work with this title) is specifically referred to as a *dahcheu* (102) and is said to consist of at least ten movements.

The structure of this work corresponds to some extent with what is known from other sources of the structure of the 'extended melody' (*dahcheu*) of Tarng and Sonq times. These orchestral compositions consisted of a number of movements (*piann*) (103), each of which might be divisible into several subsections. The character of these varied in the different types of *dahcheu*. The Tarng poet, Bair Jiuyih (Po Chü-i) (105) refers to: 'free prelude', 'middle prelude', and *poh* (106) or 'broaching the theme'. Some types include as many as twelve different movements. This structure has been compared with that of the suite in western Europe; but a more direct comparison would seem to be with the structure of Indian *rāgas*, with the Turkish *fāsl*, and with the *nūba*, as it survives in Morocco and Algeria.

With regard to this last type of composition, it is interesting to note that the *dahcheu* occasionally included vocal movements. It is surely not without significance that the extended melodies of the seven-stringed zither repertoire are always referred to today as *dahcheu*. As we shall see, their structure offers points of resemblance to the structure of Tarng and Sonq *dahcheu* as inferred from literary sources, and it is reasonable to suppose that the zither compositions of the present day, lasting twenty to thirty minutes, echo an instrumental form which flourished from the seventh to the twelfth centuries.

From the period of the northern Chyi (107) (550–77) to the end of the Tarng (905), the music current in court circles on all but state occasions was known as *hwuyueh* (108): barbarian music. The fact that this foreign music was associated with the life of the court makes it improbable that the foreign styles had as yet become current among the people, though some influence cannot be excluded even at this early date. Since the popular music was essentially secular, it is not described in any of the records; but it seems probable that the musical accompaniment of the *koeileei* performances in Tarng times was a survival of the court military orchestra of Hann and Wey times.

The Tarng emperor Shuantzong (109) (713–55) maintained a troop of 300 actors, founded by himself in 714 and referred to as the Pear Garden; and to this period are traditionally ascribed certain melodies

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1 In Faaluu, 'Tarng-Sonq Dahcheu jy Laiyuan jy chyi Tzuyjy', *Wuuchang Hwajong Daihshyue Gwothlyue Yanliou Luennwen Juankan*, i. 4 (Dahlii, 1945) (104).
2 See p. 98 and Sachs, *The Rise of Music in the Ancient World*, p. 290. A comparison with the Turkish *fāsl* is in some respects closer than with the *pešrev*, instanced by Sachs.
3 Souen K'ai-ii, op. cit.
still current in the Chinese theatre. The following example is part of a
duet with accompaniment for cross flute, drum, and gong, transcribed
from a gramophone record and ascribed to Shiuantzong himself.¹ It
occurs in the opera, The Little Shepherd:

Ex. 182

Voice

Flute

Hoop drum

The purely pentatonic character of this and other operatic melodies
has been regarded as evidence of their antiquity, but as the examples
of the Tarng (?) melody "Fair, fair", cry the ospreys' and the Sonq
melodies of the next section show, it is questionable whether any such
deduction is legitimate. One would not expect the music of the Court
of the time of Shiuantzong to be purely pentatonic. On the other hand
such a melody might well be an echo of the popular koeileei music of

¹ G. Soulié de Morant and A. Gailhard, Théâtre et musique modernes en Chine
for commentary (p. 269) and translation. A slightly different version of Ex. 182 is
recorded in The History of Music in Sound, i, side 2 (e).
Tarnq times, which indeed seems to have provided the basis for the development of classical opera (largely pentatonic) in Sonq times.

**TABLE SHOWING THE COMPOSITION OF VARIOUS TARNQ ORCHESTRAS**

*(after In Faaluu, op. cit.)*

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Yannaua (116)</th>
<th>Cheching (793)</th>
<th>[Ganuah] (200)</th>
<th>[Shilang] (201)</th>
<th>[Koywa] (202)</th>
<th>[Koywara] (203)</th>
<th>[Shilang] (1)</th>
<th>Aqiu (204)</th>
<th>[Koywara] (205)</th>
<th>[Koywara] (206)</th>
<th>[Koywara] (207)</th>
<th>[Koywara] (208)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sonorous stones</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Stone-chimes</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Bells</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Bell-chimes</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Iron chimes</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<td>2</td>
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<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Conches</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Copper horns</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Long vertical flutes</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Short vertical flutes</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>Cross flutes</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>Chyr flutes</td>
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<td>2</td>
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<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Free reeds</td>
<td>2(1)</td>
<td>1</td>
<td>2(1)</td>
<td>1</td>
<td>3(1)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other reeds</td>
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<td>4(1)</td>
<td>1</td>
<td>1</td>
<td>2(1)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Halftube- and board-zithers</td>
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<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lutes</td>
<td>2(1)</td>
<td>1</td>
<td>2(1)</td>
<td>1</td>
<td>3(1)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Vertical harps</td>
<td>3(2)</td>
<td>1</td>
<td>3(1)</td>
<td>3(1)</td>
<td>4(1)</td>
<td>8(1)</td>
<td>2(1)</td>
<td>5(1)</td>
<td>2(1)</td>
<td>4(2)</td>
<td>2(1)</td>
<td>4(2)</td>
</tr>
</tbody>
</table>

The number of each sort of instrument used is shown in the appropriate column. Where a figure in brackets is given, this is the number of each of as many *kinds* of instrument as are shown by the number outside the bracket. Thus, under 'Drums', the Jioutzy orchestra contained one of each of 8 different types of drum; this is indicated in the form: 8(1). The category 'Other reeds' includes both oboe- and clarinet-type reeds.

Though practically nothing of the music of Tarnq times has survived, a great deal is known from contemporary accounts of the nature of the orchestras employed in the palace, the number of performers taking part, the costumes they, and the dancers and jugglers associated with particular orchestras, wore, and the names of the melodies they played. The composition of these orchestras has recently been reviewed and the table above is modified from a table.

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in this review. Foreign orchestras in China during this dynasty included orchestras from India, Bokhara, East Turkestan, Cambodia, Burma, Annam, Tibet, and Mongolia.  

**Song Dynasties (960–1279)**

This is the first period in the history of Chinese music from which printed music of the time survives to the present. The famous Song Confucian philosopher Ju Shii, whose ideas exhibit some affinity with the monadology of Leibniz and who may indeed have directly influenced Leibniz,¹ left twelve melodies for twelve songs from the *Book of Songs*.² The following is a setting of the first song, of which we have already seen what is possibly a Tarng version (p. 105):³

Ex. 183

![Musical notation](image)

This melody is in several respects remarkable. It is heptatonic considered as a whole, but the first stanza is entirely pentatonic and the last stanza is pentatonic except for the last line: the mode is stated to be *re* on D sharp but is in fact a mixture of this and *do* on F. Ju Shii ascribes all twelve melodies to a Tarng source and to the reign of the emperor Shiuantzong, Kaiyuan (713–741).

A figure from Song times deserving of much more attention than he has as yet received, either from Chinese or from Western scholars, is the poet and composer, Jiang Kwei, the White Stone Taoist. His works include *Nine Songs for Yueh* (111) (Yueh is the ancient name for Jehjiang and Jiangshi Provinces) written in *liuhleu* notation; a song with zither accompaniment and interlude (p. 111); and a number of tunes in the Song *pyipar* (?)-notation which, though they have received some attention,⁴ have not as yet been transcribed.

³ Stanza-divisions following Waley, *Songs*, p. 81.  
⁴ Shiah Chergdiao, *Bairshyr Gecheu Parnpoo Biann*, *Yannjig Shayuebaw* (113) (Peiping, 1932). According to a recent report from Pekin (*Dahgong Baw*, 7. ix, 1954), this notation has now been deciphered; and a substantial body of Song music in the same notation has newly been discovered.
Of the nine songs for the people of Yueh, the first six make use of only the seven notes of the diatonic scale, the mode being do or re in various keys. The text of the following example describes the singer awaiting the goddess of the Wuuchang Gulf (112), pouring a libation and riding the waves. The bar-lines mark the end of the lines (determined from the sense and from the verse-form); the comma indicates the caesura; and the double bar marks the ends of the stanzas. The mode is re on G sharp.

Ex. 184 The Spirit of the Billows

Four of the songs of Jiang Kwei make use of fractional tones (p. 99). In this example the mode is la on C. Fractional tones are indicated by diamond-shaped notes, following Levis.1

Ex. 185 General Parng

The single song with zither accompaniment by the same composer is prefaced by explicit directions for tuning the seven strings to the scale: F G A B d e g. The song is entitled ‘Old Regrets’. It is a woman who sings, considering with bitterness the passing of her beauty. After the first stanza there is an interlude in harmonics for zither alone; at the end of this the normal position is resumed and the voice enters once more. In the transcription below (Ex. 186) the tablature has been emended, where necessary. All notes not a direct transcrip-

tion from the text are printed small in the transcription.¹ The bar-lines mark the end of the lines (determined from the sense); the double bar marks the end of the stanzas (explicit in the layout of the text); and the comma marks a caesura. The tablature does not indicate the duration of the notes; the minim values are supplied on the principle that a note at the end of a line is likely to be prolonged for at least two beats of the basic note-value. A change in the direction of the stems of successive notes at the same pitch, but played in different positions, indicates that the timbre is changed. Though the finger technique is rudimentary compared with later zither technique, the variety of positions in which the same note is taken, and hence the variety of timbre, is very considerable. If the example is played on the piano, the sustaining pedal and una corda should be depressed until the end of each ‘bar’, and as much variety in touch as possible should be given to notes at the same pitch. The voice presumably reduced the zither part to the range of one octave.

Ex. 186

From various sources it is known that the street performances of the koeilee in Sonq times were accompanied by the music known as chingyueh (114).² This was the term used by Swei and Tarng writers to cover the old-style (non-ritual) music of Hann and Wey times; the term persisted until Sonq times and was used in contrast to hwuyueh

¹ Versions in the Syubuh Tsongkan and in the Cheangtsuen Tsongshu have both been utilized in making this transcription. See pl. 5 (b).
² Souen K’ai-ti, op. cit.
(barbarian music). The chingyueh orchestra included several instruments lacking in the imperial band of Sonq times, such as the fangsheang (115) (a chime of sixteen pieces of iron), sheng, dyi, &c. It seems it was in Sonq times that the evolution from the puppet to the human theatre occurred, and that this development took place through an intermediate step of living puppets, that is, of children dressed as adults. Two separate types of performance developed from the street entertainment of the 'flesh puppets'; each consisted of dances and songs. They differed with respect to the origin of their music and of the texts of their songs. One type made use of the words of songs originally belonging to the repertoire of secular entertainments in the palace—the yann (116) (banquet) music of Tarng and Sonq times, but their music was the chingyueh, in which the cross-flute, dyi, was the chief melodic instrument supporting the voice; this type is known as Nancheu (117) (Southern Songs) in the repertoire which survives to this day as classical opera. The other type made use of the words and music of yannyueh songs, and the chief instrument supporting the voice was the pyipar. This was the origin of the Beeicheu (118) (Northern Songs) of the repertoire of classical opera. The names of the two genres are understandable, since the Northern Songs were strongly influenced by foreign music reaching China from the north, while the Southern Songs reflected the musical atmosphere of the more conservative south.

If anything of the music of these entertainments survives, it has undoubtedly undergone constant revision at the hands of successive generations of performers. The following three 'overtures' are supposed to be of pre-Yuan date. They are entirely pentatonic and might well belong to the Nancheu tradition, but there is no documentary evidence of their antiquity.

Ex. 187

\[\text{Music notation}\]

\[\text{Music notation}\]

\[\text{Music notation}\]

\[\text{Music notation}\]

1 A. C. Moule, op. cit., p. 146.
2 Soulié de Morant and Gailhard, op. cit., p. 121.
The lyrics of *Nancheu* and *Beeicheu* were written in a special verse form, the *tsyr* (119), in which the lines are of irregular length and the syllables succeed each other in an ordered pattern of *tones*. The Chinese language is essentially monosyllabic, and since there are no double or triple initial consonants and only two finals in the northern dialect (for example), the sound equipment is poor. The number of different monosyllables is increased to something less than 1,400 by pronouncing each syllable with four different varieties of melodic accent (in the northern dialect)—the *four tones*. They have been represented in staff notation by Courant¹ as follows:

Ex. 188

The melodic accents are functionally neums,² and the types of melodic movement displayed in the four *sheng* (120) (the tones) are described as level, rising, falling, and entering. Shen Iau (fifth century) (121) was the first to make deliberate use of a pattern of accents, level and oblique (*pyng* (122) and *tseh* (123)), in a new style of poem, the *liuhshy* (124), in lines of five or seven syllables. At the end of the Tarng dynasty, one of the types of poem making use of a conscious neum-pattern was the *tsyr*.³ The length of line is irregular in this type, and the poem is held together by the repetition, with variations, of a number of different unit patterns of tonal accents. If we represent the level tones by – and oblique tones (rising, falling, and entering) by / the structure of a poem of this kind can be displayed diagrammatically as shown overleaf.

The melody of many Chinese songs is but an exaggeration of the tonal accents and is inherent in the first *pyngtseh* draft of the poem; a melody devised according to the *pyngtseh* scheme shown here, by

the Ching poet-composer, Shieh Yuanhwai (125), is transcribed on p. 125. The importance of the *tsyr* form in the history of Chinese music lay in its providing a great variety of types of melodic structure of considerable subtlety which could be used as moulds for new poems.

```
- - - / / \\
- - / - /
- - / / - - \\
- - - / / \\
- - - / / \\
- - / / \\
- - - / - - \\
```

The *cheu* was a quasi-popular development of the Sonq *tsyr*; it adhered less strictly to the tonal and rhythmic structure of the original *pyngtseh* draft; it was less 'classical' in its language and often betrayed local dialectical peculiarities in its tonal structure.

**Yuan Dynasty (1271–1368)**

Although there existed in Sonq times a type of theatrical performance known as *Tzarjiuh* (126) (literally 'Variety'), it was not until Yuan times that complete operas, comprising action, declamation, and songs, were devised.¹ The *Yuancheu* (127), as these works are known collectively, are of high literary quality and are the first representatives of the dramatic genre in the history of Chinese literature. While the importance of the *Yuancheu* as literature has been recognized by Western writers,² the fact that these were operas, not plays in the Western sense, has tended to be overlooked, and their very remarkable musical structure is virtually an unexplored field for future study.

At the time of the coming to power of the Yuan, two schools of opera were already established, the northern and southern schools of the Sonq dynasty; their differences reflect differences between the two regions in temperament and in contacts, and affect versification, music, and style in the broad sense. Musically the schools differed in that the southern school was strictly pentatonic and used the cross-flute as the chief accompanying instrument (if strings were used they

were secondary); while the northern school made use of the heptatonic scale, with free use of semitones, and the accompanying instrument was a stringed instrument. At the beginning of the Yuan, the northern school was particularly active and works composed entirely in the northern style were known by the same name as the Sonq 'variety' theatre, that is, as tzarjiuh.

One of the most fascinating musical features of these early operas (a feature still characteristic of Chinese opera) is the use of a label, the cheupair (128) or song-label, for each verse-form. The cheupair is a fragment of a cheu poem, usually consisting of three characters, and its function is to recall to the reader the structure of that particular verse-form. Its function may be compared with that of the metrical formulas in hymnals in the West which indicate to what type of melody a hymn text can be sung or for what texts a given tune is suitable. Very often the author was guided by association in his choice of a particular cheupair in a particular situation. Thus he might use the cheupair: shii shiangferng (129) ('delights in conjunction') if he felt a correspondence between the situation to be presented and the spirit of this cheupair. Since a particular cheupair was limited to a particular mode, this system tended to reinforce the association of that mode with a particular verse-form and a particular emotional situation. The number of different melodies current was (and still is) far smaller than the number of lyrics. A casual opera-goer, who did not happen to know a particular lyric, would nevertheless have some clue to the emotional situation, if he were familiar with the tune. This is still true at the present time and is essential to the average person's enjoyment of opera, since the lyrics are written for the most part in a language too literary to be comprehended by the ear alone.

Up to 1297 the northern was the more important of the two schools, but after this date mixed works, including acts in both northern and southern styles, were written, and by the end of the Yuan the southern school had become dominant. Five works of the ancient southern school survive, of which the most famous is the Pyipar Jih (130), The Story of the Lute, by Gau Ming (131). These were written at the end of the Yuan or at the beginning of the Ming. At the present time they are better known from private reading than from stage performance and are often played by amateurs en famille.

Ex. 189 is an overture said to date from the end of the thirteenth century and often made use of in The Little Shepherd (p. 107). A note outside the mode occurs in bars 15 and 16.1

1 Soulié de Morant and Gailhard, op. cit., p. 121, no. 4.
Ex. 190 is an intermezzo (guohmen (132); literally, 'crossing the threshold') said to date from the fourteenth century and chosen on account of its free-flowing line. A B♭ outside the mode occurs frequently:¹

Ex. 190

A most interesting feature of Chinese opera is the use of a characteristic theme or yeadyi (133) (literally, 'elegant flute') as a leitmotive in certain situations, or to express certain feelings. Three instances, possibly earlier than the thirteenth century, are given in Exs. 191, 192, and 193:²

Ex. 191

Anger, despair, plotting

Ex. 192

Lovers' quarrels

¹ Soulié de Morant and Gailhard, op. cit., p. 123, no. 4.
² Ibid., p. 124.
A collection of Yuan melodies for zither, only one of which has been transcribed, is contained in the *Sehpuu (Music for the Seh)* of Shyong Pernglai. This includes four volumes of tunes in both *liuhleu* and flute notation. One volume consists of twelve tunes identical with those of Ju Shii previously considered (p. 109); two volumes are entitled *New Tunes for the Songs* (that is, for songs from the *Book of Songs*), and a fourth is devoted to the Confucian ritual.

**Ming and Ching Dynasties (1368–1911)**

(i) *Seven-stringed zither.* The tablatures of seven-stringed zither tunes, printed in sumptuous large-paper copies and published in the Ming period, were one of the less conspicuous products of that unparalleled craftsmanship which has made the name of this dynasty a household word in the West. It will be convenient to treat the period from 1368 to the end of the Ching and even to the present day without further subdivision. The most famous zither tunes (with but few exceptions) were already in existence at the beginning of the Ming, but they are played today in Ching versions.

The nature of the development which the tunes have undergone between early Ming and Ching editions, is clear from successive versions (Exs. 194, 195, and 196) of the prelude from the tune 'Clouds over the Rivers Shiau and Shiang', ascribed to the Sonq composer, Guo Mean (134). Wherever a group of notes occurs in the early version which also occurs in the tune as played today, it has been given the same rhythmic structure in transcription as in current performance, so that the similarity between the versions is emphasized. The three preludes are in harmonics throughout.

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Ex. 194 is the prelude as it appears in the *Rare and Valuable Secret Treatise of an Emaciated Immortal*¹ (135), dated 1425. It bears the title: 'Mist and Rain on the Donqtyng Lake.' The text contains one complex which does not make sense; in its place a single note has been supplied to complete the phrase. The slur indicates that the

¹ *Chyushian Shernchyi Mihipuu* (135), by the Prince of Ning.
repeated notes are all played on the same string. Ex. 195 is taken from the Wugaang Chynpuu (136) of 1546. It has undergone amplification by extension and repetition of its members, and by interpolation. In this edition the prelude no longer carries a subtitle. One note has been supplied where the tablature seems to be faulty. The third version of the prelude is that current today. It differs but little in line from the seventeenth-century version in the Chingshan Chynpuu (137) (1673) though the notes are frequently produced in different positions. The transcription is made from a manuscript copy from an unknown source. The note-values approximate to those adopted by Shyu Yuanbair (138), one of the virtuosoi of the present day. The prelude has now become an extended melody which, even when it finishes, leaves the way open for more to follow. Interest is maintained by a continual shifting of the tonal centre.1

From the cheu structure of the classical operatic melody to that of the seven-stringed zither tune, the difference is one of degree rather than kind. The smaller tunes (sheaucheu (139)) are essentially cheu melodies; the words usually survive and are commonly sung by the performer as the tune is played. This is so for the tunes ‘Faang Tzyychyi’ (140) (‘Visiting Tzyychyi’), and ‘Yangguan San Dye’ (141), (‘Three Repetitions of the tune: “The Yang Pass”’), which will be referred to later. The larger tunes or dahcheu (102) are purely instrumental, and their structure is that of a melody of higher order; they are for the most part rondos, in which the returns of the main tune are transposed up or down by one or more octaves—necessarily with change in timbre, or presented in different ‘registration’—in harmonics or in a different position, without change in pitch but with change in timbre. The importance of timbre in this music is such that any transcription into staff notation can give but a faint impression of the original.

The larger tunes almost invariably begin with a prelude in slow time, often on the open strings, but frequently in harmonics. The prelude may include a characteristic turn of the main melody, as in the Ching version of ‘Meihua San Nonq’ (142) (‘Three Repetitions of the tune: “Plum Blossom”’)) which is here transcribed from Ja Fuhshi’s (143) recording in the Library of Congress8 (Ex. 197). Versions of this tune occur in Ming tablatures of 1530 and 1546. The first six notes of the prelude are related to the central phrase in the

1 Library of Congress, Music Division, Mr. Cha playing Chinese music, Order No. 1095, 4 sides: 4B, 5A, 5B, 6A. A slightly different version from that of Mr. Shyu.

2 Library of Congress, Music Division, Mr. Cha playing Chinese music, Order No. 1095, 3 sides: 3A, 3B, 4A; also in The History of Music in Sound, side 2 (b).
main tune; the latter appears three times in harmonics, always in a
different position. The following example is a transcription of the
tune at its third appearance, again as played by Ja. This is one of
the most immediately engaging tunes in the zither repertoire.

Ex. 198

A prelude of unusual type, echoing Buddhist cantillation, is that to
the famous tune 'Puuan Jow' (144) ('The Spell of Puuan'):

Ex. 199

Puuan was an Indian Buddhist of the twelfth century, but the tune
of this name was probably not composed before the seventeenth cen-
tury. The prelude opens with octaves, one string being caused to
produce a succession of sounds by shifting the finger after plucking.
The second section of the prelude is in harmonics (beginning at the
change of clef in the example). Although in many respects a work
sui generis it deserves mention here because of its great popularity
with zither players. Its square-cut rhythms recall Pekin opera-tunes and folk-songs of the north-western border.¹

The climax of a zither tune is frequently marked by a passage in harmonics. If the work is of considerable extent there may be more than one such—as in ‘Meihua San Nonq’, for example. These passages are felt to be of the greatest emotional tension: at these moments the music leaves the earth.

Most of the zither tunes, whether short or long, end with a coda in harmonics. This may be very short, or it may contain a reference to the main tune and summarize the whole work, as in the coda to ‘Yangguan San Dye’ (‘Three Repetitions of the tune: “The Yang Pass”’).²

Ex. 200

This includes a reference to the second phrase of the opening melody. The whole of the first section, including the thrice repeated refrain is transcribed in Ex. 201.

Ex. 201

The pass referred to in the title is that in the north-west through which so many have travelled to real or virtual exile. A Northern Song to the same words is transcribed in Ex. 210 (p. 127). It is not unusual for the last note of the coda to be a note other than the expected tonic, as in Ex. 200. Another example is provided by the end of a short tune

¹ Also recorded by Cha under the title ‘Universal Benediction’, Library of Congress, Music Division, Order No. 1095, 3 sides: 1B, 2A, 2B.
² A transcription of the opening phrases of a version of this work is printed by F. Bose in Musikalische Völkerkunde (Freiburg i. Br., 1953) as No. 50 of the musical examples, taken from a recording: Overseas Branch Rec. 17–2954, collected by Reinhard.
peculiar to Syhchuan Province, ‘Visiting Tzyychyi’. The harmonics begin at the change to the treble clef.

Ex. 202

Successive appearances of the main tune are usually at different pitches but in the same key. Modulation in the sense of a change of key is relatively infrequent. It occurs commonly, however, in the sense of a shift in the tonal centre, even in the course of one and the same melody, as shown in Exs. 196 and 201; the melody temporarily behaves as if some other note in the note-series of the mode were the tonic. Occasionally a true modulation to the dominant occurs, as in the following example from ‘Puuan Jow’.

Ex. 203

This is the passage in harmonics at the climax of the work. Two arpeggios of harmonics bring about a modulation to the dominant and there follows a pause on the dominant. Where the clef changes to the bass clef in Ex. 203, the normal position and the key of the tonic are resumed. Another example, in a work predominantly ‘minor’ in colouring, occurs in the short tune ‘Yih Guhren’ (145) (‘Remem-bering a Friend’) in which transition to the new key is prepared through the mediant. In this example the B is flattened throughout (Ex. 204).

1 Library of Congress, Music Division, Mr. Cha playing Chinese music, Order No. 1095, 2 sides: 9B, 10A; under the title ‘In Memory of a Deceased Friend at a Lonely Hill’.
Occasionally a note outside the mode may be introduced with overwhelming effect. Towards the end of ‘Shiau-Shiang Shoei Yun’ (146) (‘Clouds over the Rivers Shiau and Shiang’) such a note occurs; it is sometimes interpreted as a monastery bell.

(ii) Pyipar and Jeng. Of the instruments introduced into China in historic times, only the pyipar can compare with the chyn in the extent of its repertoire and the virtuoso skill attained by its finest exponents. Published transcriptions of pyipar music\(^1\) are atypical inasmuch as it is characteristic of this music that the melody is frequently accompanied by a simple bass—perhaps a single note repeated as a pedal point, and that considerable use is made of repeated chords. On the whole, music for the pyipar is even more frankly descriptive than that for the chyn. One of the finest performers, Yang Dahjiun (147), executes a battle-piece that includes imitations of the groans of the wounded and dying, and a moving version of the famous tune, ‘Geese Descend on the Level Sands’, with astonishingly birdlike noises.

In recent years Liang Tzyppyn (148) has travelled extensively in the mountainous interior of Fwujian (149) Province, collecting jeng tunes from elderly performers and studying their technique. In the south-west, and particularly in Kuenming (150), there is a vigorous group of amateurs of this instrument, and itinerant performers are to be heard in Cherngdru (151), the capital of Syihchuan Province. One of the most memorable tunes is entitled ‘Cold Crows Playing with Water’.

\(^1\) E. Fischer, Beiträge zur Erforschung der chinesischen Musik (Leipzig, 1910), also in Sammelbände der internationalen Musikgesellschaft, xii (1911), pp. 153–206. Other transcriptions will be found in A. Dechevrens, ‘Étude sur le système musical chinois’, Sammelbände der internationalen Musikgesellschaft, ii (1901), pp. 484–551.
CHINESE INSTRUMENTAL HETEROPHONY

A few transcriptions from phonograph recordings demonstrating Chinese polyphonic practice have been made. The first example is from a sheng recording.¹

Ex. 206

The second is for cross-flute (dyi) and fiddle (yuehchyn). The conclusion only is quoted. The yuehchyn accompaniment is largely a variation on the flute melody at the fourth below. The interest of this combination for a Chinese ear lies in the simultaneous presentation of theme and variant, not in their incidental clashes.²

Ex. 207

¹ E. Fischer, Beiträge, p. 1.
² Ibid., p. 11.
THE STRUCTURE OF CHINESE INSTRUMENTAL MUSIC

From an analysis of nine recorded works, all popular in character, it is clear that both binary (or quaternary) and ternary types of construction occur.¹ In their formal organization the pieces analysed reveal a high level of development; indeed, many of the formal complexities encountered can be paralleled in the procedures of the Netherland school of the fifteenth century. The structure of these nine pieces is generally as follows: after an introduction, a complex of groups of phrases is repeated several times with variation. Among the different types of variation the following may be mentioned; a group of phrases may be lengthened or diminished, or entirely omitted, or varied with such freedom that the variant is only recognizable as such because it retains some characteristic turn. Within a group, several bars may be transposed to the fifth or fourth; they may be arranged in a different order or they may be replaced by others. Transposition of entire themes to the fifth or fourth is fairly common, and two-part writing in parallel fifths or fourths, comparable to early medieval Western practice, is frequent.

In one instance a comparison has been made between recorded performances (on sanshyan and on the large hwuchyn, p. 93), by two different performers, and the noted version supplied by one of the performers.² The tune in question has been subjected to detailed analysis and in spite of its seeming simplicity is plainly anything but artless in construction. Its title, ‘Visiting the Son of Heaven,’ goes back at least to early Ching times; but the particular tune analysed is not one of the tunes of this title printed in the great Palace Collection of tsyr of 1747.

A TSyr MELODY

In his study of The Foundations of Chinese Musical Art, Levis analysed four tsyr melodies by the Ching composer, Shieh Yuanhwaï, written in 1848 according to the tonal structure followed by the Tarnq or Sonq author of the tsyr in question. The pattern of one of these Sonq tsyr was given earlier, on p. 114. The following example is Shieh Yuanhuair’s realization of the neums, transcribed by Levis:

Ex. 208

¹ E. Fischer, op. cit., p. 29.
At the beginning of the Ming dynasty the southern school of opera became divided into many small schools, working in different regions and making use of local dialects in their scripts. Towards the middle of the sixteenth century, a native of Kuenshan (152) in Jiangsuh (153) Province, Liang Borlong (154), wrote the script of *The Story of the Laundress of Fine Textiles* which was set to music by a fellow countryman from a neighbouring town, Wey Liangfu (155), who had invented a new style of singing. The result of their collaboration was immensely successful. The school which they founded at first bore the name of *Shoemodaw* (156) (literally: 'song ground in water') but it gradually assumed the name of *Kuencheu* (157): The songs of the men from Kuenshan. The collaborators proceeded to revise the works of the southern school, and their revisions were generally approved and accepted as models. The name *Kuencheu* as used at the present time, however, includes not only works of the southern school written subsequent to the collaboration of Liang Borlong and Wey Liangfu, but also all the works of the Yuan period, particularly those revised by Wey himself. The *chwanchyi* (158) was the characteristic form developed by the school of Kuenshan and differed in length from the Yuan *tzarjiuh*. While the latter had consisted of but four acts and a single singing role, the *chwanchyi* were composed of thirty to fifty acts of which perhaps four-fifths were in the southern style and the rest in northern; several acts might be mixed in style. From the point of view of the arrangement of the acts according to style, the seventeenth-century opera *Charngsheng Diann* (159) ('The Hall of Long Life') by Horng Sheng (160) is today regarded as a model. *Chwanchyi* also differed from *tzarjiuh* (p. 114) in the number of singing roles; the former recognized six chief types whose identification by the audience was (and is) facilitated by their characteristic costumes and maquillage.

Each act of a classical Chinese opera comprises both declamation and measured song. An important character, entering at the beginning of an act, will declaim a prologue in prose explaining the situati-
tion. This will be followed by a poem, which in turn will be followed by a monologue in prose. Each act is given a pithy title such as the following, taken from the Pyipar Jih: ‘Marriage by Imperial Command’; ‘Help to the Hungry’; ‘Difficulties in Maintaining Parents-in-Law’; ‘Sale of Hair to Bury Parents-in-law’; ‘Entire Family Decorated’.

A single act will generally include ten cheu, all in the same mode and key, either all in the southern or all in the northern style or with some in each style. Generally speaking the cheupair (128) are so chosen that all are suitable for the expression of the same quality of feeling, and the individual cheu patterns normally succeed each other in the order of their classification in the mode.

Exs. 209 and 210 are melodies of the southern and northern schools respectively:

Ex. 209

Ex. 210

These (and Ex. 208) are the only examples of Chinese vocal melody so far quoted that display melismatic as opposed to syllabic structure. All Sonq and Yuan melodies known from contemporary documents are syllabic, as were (so far as is known) the most ancient Chinese melodies; but it is to be remembered that none of the surviving melodies is popular in character, and it may well be that a proportion of the koellegei melodies of Tarng times were at least partly melismatic.¹

Whereas in the past twelve flutes, each at the pitch of a different

¹ Exs. 209 and 210 are transcribed from T'ung Fei, Fundamentals of Chinese Music, ii (Shanghai, 1927) (195), pp. 19, 20.
liuhleu, were used to accompany kuencheu, only a single flute is used today. The largest number of modes now used in any tonality is four, and two tonalities are represented by a single mode only. Each mode or system is associated with a definite character—fresh and distant, sighing and afflicted, rapid and varied, fierce and melancholy, elegant and reserved, &c. It is perhaps worth recalling that similar feeling about modal quality was current in Europe at least as late as the sixteenth century.

The essential accompanying instrument in kuencheu performances is the cross-flute, dyi, but other wind instruments—flute, mouth-organ, oboe-type reed instruments—may be added; strings—sanshyan and pyipar—may support the dyi; and a body of percussion is indispensable—indeed, the hoop-drum, bangguu (161), leads the ensemble. Changes of scene, and the beginning and end of the acts, are indicated by vigorous interludes for percussion alone. There may be some trace of Indian or at least central Asian influence in these interludes, though Chinese drumming never approaches the rhythmic complexity of that of India.

In Nanking or Pekin one may hear professional performances of kuencheu; but the operas to be heard all over China, even in small country towns, belong to the new northern style developed in the nineteenth and early twentieth centuries. The style is associated with the Manchu capital, Pekin, and operas of this type are often referred to collectively as jingshih (162) (plays of the capital). Provincial opera merits greater attention than it has hitherto received. Like the classical northern opera (of which it is to a certain extent the descendant) jingshih makes use of a stringed instrument (a hwuchyn of some kind) as the chief instrument supporting the voice. Superficially the most obvious difference between kuencheu and jingshih lies in the rejection of the tsyr form of lyric and the abundance of symmetrical melodies. While kuencheu makes use of only two rhythms: a 2/4 with the first beat strongly accented, and a 4/4 with the first beat strongly accented and the third beat divided into two quavers, jingshih makes use of a considerable number of rhythms, both regular and irregular.

The following example is transcribed from The Kingfisher-Feather-Screen-Mountain (Tsueepyng Shan) (163), a jingshih opera of the genre bangtzyy (164). The vocal line in 2/4 time is accompanied by a fiddle in 3/4 time, a sonorous wooden block beaten in 3/4 time.

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1 Chao Wei-pang, 'Yang-ko, the Rural Theatre in Ting.hsien, Hopei', *Folklore Studies*, iii (Peiping, 1944), pp. 17–40.
(the bangtzyy from which the genre takes its name), and a hoop-drum:¹

Ex. 211

As an example of a leitmotive of much later date than those given on p. 116, the following is of considerable rhythmic interest; it depicts complete intoxication (Ex. 212).²

¹ Soulié de Morant and Gailhard, op. cit., p. 137.
² Ibid., p. 125.
Evidence of the remarkable accuracy of the oral tradition in Chinese opera is provided by the nearly complete agreement between the kuencheu recording in Hornbostel's record-series Musik des Orients, and the printed edition of 1792.¹ The intervals agree almost entirely, but there are slight rhythmic deviations—a crotchet in the edition of 1792 may become a dotted crotchet in the recorded version.

FOLK-SONG

The scientific study of Chinese folk-music has scarcely begun, for though many collections are now being made, no collector, so far as is known, has as yet made recordings in the field; all depend on the ear. From personal observations made during a brief stay in central China it seems probable that traces of other and older types of scalar structure survive in the folk-music. This is suggested by street-cries collected in Syhchuan and Gueyjou Provinces. The enharmonic tetrachord (a fourth built up from a major third and a minor second) of the Japanese modes hirazyoosi, kumoizyoosi, and iwatozyoosi (p. 145) is rare in classical Chinese music and jingshih; it occurs, however, in the following street-cry:

Ex. 213

Again, chains of thirds, so striking a feature of Western, African,

Polynesian, and American Indian music, rarely occur in classical Chinese music, so strong is the tendency for a minor third to form a unit by adding a major second; yet Exs. 214 and 215 (also street-cries) are both expanded triads:

Ex. 214

Ex. 215

Ex. 215 illustrates a primitive stage of the 123 scale\(^1\) (E\(_b\), F, G, B\(_b\)) in which two superposed thirds form a pentachord and the lower third is filled in (123. 5). Ex. 216 is interesting in that the fourths are only acciacaturas:

Ex. 216

One feature of everyday life in China which impresses the stranger is the singing of the coolies; when pulling or carrying loads, they improvise a seemingly continuous chant, which has the function of co-ordinating activities and maintaining the rate of working at the optimum pace set by the leader. It is in fact an antiphon between leader and gang, in which statement and answer tread so closely on each other's heels that the sound is effectively continuous. Ex. 217 might be sung (to the vowel sound 'ah') by men pulling a loaded cart up hill.

Ex. 217

Ex. 218, on the other hand, might be sung by men trotting with a load slung on poles.

Ex. 218

In such improvised antiphons it is the leader alone who varies his utterance with successive repetitions. The answer frequently overlaps the statement. Sometimes one hears 'shanties' such as the following:

Ex. 219

An excellent short collection of popular Chinese songs, many of them folk-songs, has been published by C. H. and S. H. Chen. The collection merits praise not only for the notable accuracy of its transcriptions but for the quality of the accompaniments devised by C. H. Chen. In themselves they provide useful material for studying melodic variation and heterophony in Chinese music.

Ex. 220 is a well-known folk-song, sung to different words in different districts. It is a good example of the pure pentatonic genus, still characteristic of Chinese melody in spite of the constant infiltration of other genera from central Asia. Another purely penta-

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2 For another version of this tune see Hsiao Shusien, 'La chanson populaire chinoise', Sinologica, i (Basel, 1947), pp. 65–86.
tonic folk-song is shown in Ex. 221, taken from a setting by Liu Shea-An [sic.].

Ex. 220

Ex. 221

Within the last few years many popular collections of folk-songs from all provinces have been printed in China, transcribed in the numerical notation (p. 101). Though popular in character, these collections are of the greatest value and already enable us to determine the regions of transition to types of melody resembling those of western Asia.

BUDDHIST MUSIC

The music of the Buddhist office as practised in Chinese monasteries deserves special attention, since it embodies many features at first sight foreign to the Chinese musical genius. While some of these may well be due to Indian and Tibetan influence, some may echo that more primitive stratum of folk-music revealed in the street-cries already discussed. In a small monastery in Anshuenn (165), Gueyjou Province, novices in their teens have been heard chanting the scriptures in thirds (cf. the English and Scandinavian gymel of the twelfth century). The range of cantillation was a fourth, and the result could be placed alongside Lachmann's juxtaposition of the German folk-song 'Laterne, Laterne!' and Hornbostel's Macusi Indian melody.

1 Liu Shea-An, Three Songs (Tokyo, 1935).
as an example of the survival in China of tendencies observable in very primitive musical cultures elsewhere. At a funeral in a small country town, Meitarn (166) in Gueyjou Province, Buddhist priests were heard singing, to the accompaniment of cymbals and triangle, a metrical chant of that infectious gaiety so common in India and so rare in China. The aspect of Buddhist music which most merits study, however, is the singing of the office by precentor and novices. The instrumental accompaniment is provided entirely by idiophones and membranophones; the instruments include a large drum, a large bell, a gong, cymbals, a triangle, a small bell, and a wooden fish. The office begins with intoned statements and responses by precentor and novices, with occasional interruptions by single instruments. As the service proceeds the speed of recitation increases, and the precentor no longer waits for the novices to end their response before recommencing; as the overlapping antiphon develops, the frequency of percussive interruptions increases.¹

Concerning the Taoist office no information is available. Several hymns making use of a notation unlike any other Chinese notation are printed in the Ming Dawtzang (167). They have not been transcribed.

Note on the Zither-Transcriptions

To avoid excessive use of leger lines and signatures, the transcriptions on pp. 118–23 are made throughout as if the third string were tuned to F, so that in the commonest tuning the seven open strings will yield the series: C D F G A c d. In the hands of different performers, and on different instruments, the sounding pitch of the third string will range from F to B♭ (below 'cello bottom C).

¹ See also A. Stanley, 'Putoshan', Journal of the North China Branch of the Royal Asiatic Society, xlvi (1915), pp. 1–18.
III

THE MUSIC OF FAR EASTERN ASIA

2. OTHER COUNTRIES

By Laurence Picken

MONGOLIA

A considerable range of music recorded in eastern Mongolia has been published in transcription.\(^1\)\(^2\)\(^3\) The tunes are mostly pentatonic, with tetrachsords consisting of a major second and a minor third. Major third scales, in which the tetrachsords each consist of a major third with a minor second above, have been reported in melodies from the Buryat Mongols,\(^4\) but the material from eastern Mongolia does not afford a single example of this type. The melodies are often less than an octave in range and fall into two main groups: those in free rhythm and those which are measured. The first type is illustrated by the following example for male voice from the Chipchin tribe, ‘Bargas’ (an old tribal name) ‘of the Holy Mountain’.

Ex. 222

\[\text{Music notation}\]

The second example, the ‘Song of Chingis Khan’\(^2\) (male voice) from the Jalait tribe, is a symmetrical tune with a strong major flavour imparted by the arpeggioed triad in the first bar (Ex. 223).

\(^2\) H. Haslund-Christensen and E. Emsheimer, The Music of The Mongols (Stockholm, 1943). Several small collections of Mongolian tunes have been published in China in recent years. The tunes are all of the measured, symmetrical type.
\(^3\) Chūichirō Takeda, 'Songs of the Mongols, Notations and Explanations', Tōyō Ongaku Kenkyū, ix (Tokyo, 1951), pp. 147–54, and x–xi (Tokyo, 1952), pp. 67–73.
A third example, a flute solo from the Khorchin tribe,\(^1\) is Chinese in character.

Many of the songs have flute, fiddle, or ‘guitar’ accompaniments. Descriptions are given of four-stringed and two-stringed fiddles (pl. 6 (a)); a zither resembling the Chinese jeng; three types of ‘guitar’ (lute), one of which is the same as the Chinese sanshyan; and cross-flutes of the dyi-type.\(^1\) The resemblance between the square-cut type of Mongolian melody and many of the tunes of Pekin opera is striking.

SHINJIANG (CHINESE TURKESTAN)

The material collected by Haslund-Christensen in the region of Urumchi (Dyihuah) (169)\(^2\) has not as yet been published. This was taken from members of the Torgut tribe and should be of great interest. From a brief account of a troupe of dancers and musicians from Chinese Turkestan who visited Shanghai it seems that\(^3\) their practices show marked parallels to those of Tarnq times. Thus

\(^1\) Haslund-Christensen and Emsheimer, op. cit., p. 37.

\(^2\) Figures in brackets refer to serial entries in the Glossary of Characters, p. 190.

\(^3\) In Faaluu, 'Tsorg Lihshyy-shanq Luenn Shinjiang Gewuu', Shanghai Toyiung Ryhbaw (Shanghai, 12 Dec. 1947) (172).
CHINESE AND OTHER FAR-EASTERN INSTRUMENTS

(a) Manchurian fiddle ($\times \frac{1}{4}$); (b) Chingmiau mouth-organ ($\times \frac{1}{4}$); (c) Lolo Jew's harp ($\times \frac{1}{4}$);
(d) Minjia toy Jew's harp ($\times \frac{1}{4}$); (e) Borneo zither ($\times \frac{1}{4}$); (f) Borneo mouth-organ ($\times \frac{1}{11}$);
(g) Detail of the same ($\times \frac{1}{1}$)

For further details see page xiv.
dancers, dances, and instruments correspond to descriptions in the Targn poet Bair Jiuyih and in poems from early anthologies (Yuehshiu Shyij) (170); and their music displays structural features fitting the descriptions of Targn dahcheu (p. 106). One of their tunes has been identified with the seven-stringed zither tune known as 'Jaujien's Lament' (171). It is remarkable that such an identification should have been made precisely in the case of this particular zither tune, since Jaujien was the lady bestowed on the Hunnish Khan by the Emperor and carried away to Mongolian territory in 33 B.C. This account suggests that study of the music of this region may throw light on Chinese music of Targn times and may lead to the identification of those tunes or parts of tunes in early zither handbooks which date from Targn times. Chinese workers have begun to collect folk-songs in Shinjiang, and some of the material collected has now been published. A high proportion of these tunes are symmetrical, measured and heptatonic.

TIBET

The availability in recent years of a small number of recordings of Tibetan music made in Lhasa has transformed the picture of the music of Tibet based on earlier accounts. A recent review includes a number of examples transcribed from these recordings and brings together for the first time a wealth of information on Tibetan music and musical instruments and on the functions of music in Tibetan culture. The instruments described include a vertical flute with bell and whistle-mouth-piece (glii bu); a conical oboe similar to the Chinese suonah (rgya glii); bone trumpets (rkaî dui); large copper horns, in some cases extensible like telescopes to a length of 3 metres (rag dui); and percussion: braced copper kettle-drums and nailed drums, including an hour-glass drum made from two human skulls.

The recordings show that at least three distinct types of music, exclusive of folk-music, are practised in Lhasa. These are: (1) Sino-Mongolian music resembling Chinese provincial opera. This may be religious or secular. The following example is part of a hymn sung in perfect unison by two nuns (Ex. 225).

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3 An instrumental ensemble is recorded in The History of Music in Sound (H.M.V.), i, side 4 (a).
4 Ibid, side 4 (c).
All the Lhasa recordings of this type are in binary rhythms. The secular songs may be accompanied by flute, fiddle, zither (jeng), lute, and percussion. (2) Liturgical chanting. The voices in approximate unison and lowest register move in small, often microtonal, steps with an occasional step of a minor third, to the accompaniment of single metallophones, drums, and at times a horn-pedal. Instruments and voices may be rhythmically independent of each other, or they may coincide and proceed together in an unstressed rhythm of equal pulses, as in the following example.¹

¹ Recorded in The History of Music in Sound, i, side 4(b).
The vocal range in this recording is a diminished fifth, approximately subdivided into three minor seconds and a minor third. In the instrumental interludes for oboes, trumpets, pedal horns, and percussion, the melodic line may have a range of as much as an augmented sixth and resembles the vocal line of the third type (q.v.) Several observers comment on the constant use of drones during choral singing, and it has been suggested that this practice is due to Indian influence.¹ Two horns, in unison, or a third or a fifth apart, may sustain a drone for several minutes; this usage is comparable to that of the large curved horns of India (raṇa śrīṅga). The drum and cymbal rhythms, maintained by the orchestra, even when other instruments are silent, are Indian in character.² (3) Overlapping antiphonal singing; this style occurs in the recordings of historical dramas. The melodic line is non-Chinese in character, unmeasured, with arpeggiated triads (both major and minor) and major-third cadential tetrachords with the semitone above, as shown in Ex. 227: ‘Su-ki-nyi-ma (Lady, bright as the sun).’³

Ex. 227

There is no supporting melodic instrument, and perhaps for this reason the pitch gradually drifts in the course of this type of singing. The overlaps may occur at the unison, but sustained major seconds and major and minor thirds are also to be heard. The partners in the antiphon are not always of equal importance; the ‘confidant’ may prolong the ends of the ‘protagonist’s’ melismata. In the following example: ‘Da-we Sing-ge (The lion of the moon)’, the cadences of

² Ibid., p. 139.
³ Kyumu-Lunga Troupe (Lhasa); H.M.V. Recording, N. 16678 (Calcutta).
the soloist are supported by a divided chorus, and there is a rhythmic accompaniment of drum and struck cymbal. In contrast to the purely vocal antiphons for two voices, this example is measured.

Ex. 228

All the recorded examples in this style are sung in falsetto; this may be related to the need to secure maximum audibility in open-air performance. The style has some affinity with Tibetan working songs (Ex. 229); examples of these have been noted in which (as in Ex. 228) two- and three-note chords are formed on sustained finals.

Ex. 229

In contrast to Exs. 227 and 228, the voices here are of equal standing. The similarity to the antiphonal working chants of the Chinese (p. 131) is striking and merits closer examination, as does the parallel

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2 Francke, op. cit., pp. 3090, 3092.
with songs for solo-voice and one-note chorus from Sarawak (Borneo) (p. 178).

It seems probable that musics from different cultural strata, and possibly from different cultural groups, co-exist in the Tibetan area. This view is supported by a brief report from a traveller who entered Tibet from Nepal.¹ The existence of a non-Chinese element in Tibetan folk-music is indicated by the whistled arpeggios of common chords, diminished sevenths, and fragments of whole-tone scales recorded. The following example is of interest in relation to tetratonic, anhemitonic melodies from Indonesia (p. 170) where, however, the range is a tritone.

Ex. 230

A primitive three-note melody, consisting of two superimposed fourths, sung as a duet for men’s voices has been transcribed.² It may be compared with Japanese Buddhist cantillation, or with the vocal line of the Noo drama (p. 148).

Ex. 231

None of the recordings available exhibits the type of melody in ternary rhythm illustrated by Francke. Such rhythms, however, are common in Kashmiri music;³ their presence in Francke’s material may be due to border-conditions. One tune from Francke’s article is interesting in view of the occasional major-third tetrachords noted in the dramatic duets; but it must be emphasized that no Lhasa recording as yet shows a tune of this symmetry and rhythmic regularity with ascending major-third tetrachords having the semitone above.

Ex. 232

³ Teachers’ Training College, *Kashmiri Músíqt*, i (Srinagar, no date) (in Urdu).
A single specimen of lamaist music in score has been reproduced in facsimile. Superficially it is similar to the Taoist notation already mentioned (p. 134). This notation may have been brought to China with Mahayana Buddhism and borrowed by the Taoists, in the elaboration of their ritual.

KOREA

From the most extensive surveys of Korean music available, it is clear that a distinction must be made between the ritual music, directly derived from the Chinese Confucian or Buddhist ritual, and the secular music of the court and of the people. The latter differs markedly from Chinese music, either popular or classical, in that it makes almost exclusive use of 3/4 and 6/8 rhythms.

Korea acquired the Confucian orchestra early in the twelfth century, and instruments bearing the names of those in the Jou orchestra survive to this day. Some of the instruments preserved date from the fourteenth century. A number of variants of Chinese instruments also survive, several unique to Korea; there are, for example, six different types of half-tube zithers (chyn, seh, jeng, &c.). There is an interesting description of the completely mechanical performance of the ritual music: the fact that bells in a chime are hanging in the wrong order is of no importance; a difference of half a tone between bell-chime and stone-chime occasions no discomfort. The most valuable part of Eckardt’s account is the description of the instruments and the sketch of Korean musical history; the description of the music leaves many questions unanswered; but on the whole Keh’s transcriptions confirm Eckardt’s findings.

Ex. 233, the beginning of the ‘Hymn for the Sacrifice to Confucius’, dates perhaps from the introduction of the ritual orchestra in the fourteenth century. The first four bars may be a distortion of Ex. 177, p. 102:

Ex. 233

3 Eckardt, op. cit.
The official adoption of the Confucian orchestra and ritual dates from 1114; but it is certain that Chinese instruments (and presumably music too) were imported in Tarng times. The vertical angular harp is known to have existed in Korea.

A second example, in this case of funeral music, is rhythmically not unlike some of the works given in full score by Prince Tzayyuh in his 'Rustic Dances', quoted by Courant.¹

Ex. 234

Eckardt reprints Courant's² transcription of a piece for the black zither (hyon kum) (173) which he checked against the performance of a Korean musician. The last eleven bars are quoted here for their rhythmic variety and to show the use of ornaments:

Ex. 235

The following is part of one of the folk-songs noted: 'The Song of the Rising Sun and the Abiding Moon.' This is Keh's transcription.³

Ex. 236

¹ M. Courant, 'Essai historique sur la musique classique des Chinois avec un appendice relatif à la musique coréenne' in Encyclopédie de la musique, 1ère partie, i (Paris, 1913), pp. 135 ff.
² Ibid., p. 215.
³ Cf. C. S. Keh, op. cit., p. 7 of the musical examples.
The folk-songs include the following, a ‘National Song’, exhibiting major-third-plus-minor-second tetrachords.¹

Ex. 237

It seems probable that many more vestiges of the Tarng and Sonq Chinese theatre survive in Korea than in China.

JAPAN

A substantial body of information concerning Japanese music has been available to the Western reader for more than half a century. The following short account is based largely on Sachs,² Piggott,³ Courant,⁴ and Harich-Schneider.⁵

It might be expected that Japanese music would exhibit considerable Chinese influence; but it is perhaps somewhat surprising that it also exhibits features of which only traces are to be found in the music of China.

Pentatonic scales predominate, though there is a constant tendency for these to become heptatonic, as in Chinese music. The ‘Chinese’ modes are displayed in folk-song, as well as in more sophisticated

music, and it does not seem justifiable to assume that their usage
dates only from the beginning of Chinese influence in late Wey and
Tarng times. The tunings of the Japanese jeng (p. 90), the soo no koto
(31), as used in the Imperial Ceremonial Orchestra, cover a range of
six Chinese pentatonic modes. Three of these are so modes on A
(e f# a b c#), d (a b d' e' f#') and e (b c# e' f#' g#) (using the Chinese
nomenclature; see p. 94); these are the ritusen (174) (female forms)
and on the whole are preferred to the three ryosen (175) (male forms),
the do modes on d (d e f# a b), e (e f# g# b c#) and g (g a b d' e').
Occasionally other Chinese modes occur in Japanese music, as in
Ex. 238, a ‘Fisherman’s Song’ collected by the late Dr. Takeo Kamada
of Tokyo University. This is in the re mode on C. Many other
examples will be found in the recently published survey of folk-songs
of Tokyo and district.²

Ex. 238

![Music notation]

Though the re, sol, and la modes are usually thought of as modal
inversions of the 123.56 scale, the ritu-type scale cannot have been
derived from ryo: the latter, undoubtedly ancient, is based on the
fifth and lacks the fourth; the former is based on units of a fourth.³

In contrast to the ‘Chinese’ scales, the ‘national’ scales, though
pentatonic, have semitone steps. Like ritu, they are scales built up
from units of a fourth, but the tetrachords consist of major third
plus minor second. This is the type of tetrachord already met with in
certain Tibetan and Korean melodies and occasionally encountered
in fragments of Chinese folk-music (p. 130). While the Tibetan and
Korean melodies do not exhibit scales exclusively built up from two
tetrachords of this type, Japanese music offers abundant examples of
melodies with pure ‘major third’ scales. Three principal modes are in
use. The first mode, hirazyoosi (176), may be represented by the
series: A B C E F A. Ex. 239 is a cowherd’s song.⁴

1 Ibid., p. 56.
2 Y. Saionji, Nihon Minyō Taikan, Kantō-hen (Tokyo, 1953).
4 Y. Matsudaïra, Seven Japanese Folk Songs from Nambu District (Tokyo, 1937).
The second mode, *kumoizyoosi* (177), may be represented by the series: E F A B C E. Its plagal form is shown in Ex. 240, a Furuma dance song.\(^1\)

The third principal major third mode is *iwato*; it may be represented by the series: B C E F A B.

It is clear that modulation from one mode to another occurs frequently. The following example exhibits modulation from *kumoizyoosi* (disjunct tetrachords) to *hirazyoosi* (conjunct tetrachords):\(^2\)

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\(^1\) Y. Kiyose, *Six Japanese Folk Songs from Shinano District* (Tokyo, 1937).

Both 'Chinese' and 'Japanese' pentatonic scales tend to be converted to heptatonic forms; the former, by inserting a sharpened fourth and a major seventh, yielding the typical Chinese heptatonic scale: F G A (B) C D (E) F; the latter, by dividing the major thirds into two major seconds: A B C (D) E F (G) A. Music in the 'Japanese' scales frequently alternates between 'major' and 'minor' variants of the mode.¹

It is of the greatest importance for the study of Far Eastern music that there survives in Japan, albeit in modified form, music of the Tarng dynasty, introduced from China, along with Korean and Indian music, between the seventh and the tenth centuries.² Treatises on this old music written in the thirteenth, sixteenth, and seventeenth centuries are still available. Since the oral tradition of performance is comparatively little concerned with the written parts, it is probable that the latter, preserved in three different notations for flute, mouth-organ, and bass lute, are authentic relics. This is also suggested by the notations themselves, which have Tarng and Sonq parallels. As an example of the melodies inherent in the written parts, but only to be recognized with difficulty in the music as performed today, Ex. 242 gives mouth-organ and biwa (p. 92) parts of the first phrase of the 'Martial Virtue Music' as transcribed from the Japanese notation, printed in facsimile by Harich-Schneider in an admirable first-hand account of Japanese court music.

Ex. 242

mouth-organ
(shoo)

bass lute
(biwa)

(o = open string)

(• = pizzicato; other notes with plectrum)

Ex. 242 only shows the notes as written; it does not include percussion, also shown in the original; nor does it indicate the figured-bass-like expansion of the biwa part or the mouth-organ chords erected on each degree of the scale. Ex. 242 may be compared with the full score prepared by Harich-Schneider. The resulting elaborate heterophony was first displayed in score by Mueller³ who was able to test

¹ See examples in Piggott, op. cit., p. 103.  
² Harich-Schneider, op. cit., p. 65.  
each performer separately. A version of the ceremonial ‘Etenraku’ (180) (‘Music coming through from Heaven’) for a Western orchestra has been prepared,¹ and a number of modern studies of the vestiges of Tarng and Swei music surviving in Japan are available.²

On the whole, the Chinese musical instruments of Japan are those of the Tarng court orchestras rather than those of the Confucian ritual. There seems to be no counterpart in Japan of the Jou orchestra preserved in Korea, for example, though a number of very early Chinese instruments have survived in the incomparable treasure-house of the Shoosooin at Nara. This collection includes a Chinese chyn of the fifth century.³ What is perhaps the most ancient Japanese music—that of the temple dances and of the Noo (182) plays—makes use of flute or flutes and drums only, and seems to point to an even earlier musical substratum than that associated with the Shang culture in the Yellow River valley in the second millennium B.C.

Of considerable musical interest is the structure of the archaic lyric drama known as Noo, which reached the peak of its development in A.D. 1500, though in its use of masks and stylized expression it seems to hark back to a period earlier than the fifteenth century. The Noo orchestra consists of one stick-beaten and two hand-beaten drums and a cross-flute. While the drums maintain a regular rhythm, the voice moves to a large extent arhythmically and is only rarely supported by the flute, which for the most part provides interludes. Certain standard melodic patterns are introduced into a chant otherwise at one pitch—though this may change from time to time.⁴ A very characteristic feature is the shift in level of the voice by steps of a fourth, often by two fourths in succession. The notation of the Noo music is a flute notation. Like the Chinese drama of Yuan times, the texts of the Noo repertoire have considerable literary merit. The most famous, by the fifteenth-century writer Seami, have been studied extensively.⁵

The music for the solo instrument known as the yamada koto (178), essentially a large jeng with thirteen silk strings, has been the subject⁶

¹ H. and N. Konoye, Etenraku (Tokyo, 1935).
² K. Hayashi, Swet-Tarng Yanyuehdiaw Yanjiou (181) (Shanghai, 1936) (Chinese translation); H. Tanabe, Nihon Ongaku Kōwa (Tokyo, 1926).
⁶ Piggott, op. cit., p. 88. Examples of koto music are recorded in The History of Music in Sound, i, side 9.
of a special study. This is the most highly developed of the many Japanese board-zithers and its music is largely in the various major third modes. The style was fully elaborated in the seventeenth century, when a blind musician, Yamazumi, created the various modern forms. The same constructional principles are to be detected in slighter, less elaborate and more popular melodies.1 A short phrase of perhaps five notes serves as the basis of the entire composition, undergoing transposition and every kind of variation in the process of elaboration. This is music conceived largely in terms of the instrument and arising out of its mechanical properties; in particular the extended form known as dannono (179) is purely instrumental. An attractive feature is the use of arpeggios of the set of thirteen strings tuned to the characteristic major third scales. The following is from the first verse of ‘The Plum Branch’:2

Ex. 243

When accompanying the voice, the koto approximately follows the voice and maintains the rhythm if the voice sustains a note; it may supply two-note intervals—octaves, perfect or diminished fifths, fourths, thirds and seconds—to increase sonority.

An excellent account of Japanese Buddhist cantillation is available.3 The music is undoubtedly Chinese in origin, but elaborate ornamentation leads to a single syllable being sung to a group of notes instead of to a single note, as in the Chinese Confucian hymns. The notation (of which there are various forms) includes symbols indicative of the pitch of the main note to which a syllable is sung, and more or less graphic neums indicating voice movements during the execution of the ornaments about the main note. In the following fragment the numerals mark the essential degrees of the scale (Ex. 244).

1 Ibid., p. 102. See also Tokyo Academy of Music, Collection of Japanese Koto Music, (Tokyo, 1888).
2 Ibid., p. 90.
3 P. Demiéville, Hōbōgirin (Tokyo, 1930); see article ‘Bombai’ Tōyō Ongaku Kenkyū, xii-xiii (Tokyo, 1954), is largely devoted to essays on Buddhist music.
MIAU

Leaving the peoples of countries bordering on north China, we must now consider the music of various non-Chinese peoples living in southern China and the highlands of Burma and Indo-China. The anthropological and ethnological relationships of these peoples are complex, and no attempt will be made to classify them.

The Mialu (10) are a large group of tribes scattered over southern China and the highlands of Annam. To them are related the Yau (11) and perhaps some of the Thai-speaking peoples of Haenan (183) and the border country of China and Indo-China. In certain respects their culture presents features reminiscent of the earliest records of Chinese civilization. The antiphonal courtship songs of the Mialu have been compared with similar songs in the Book of Songs (Shijing) but this comparison has not gone unchallenged.

The most striking feature of the music of the Mialu tribes is the use of large mouth-organs resembling the Chinese sheng. Among the Chingmialu (184) of Gueyjou Province the sheng have six pipes, the

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longest of which may be 4 feet in length (pl. 6 (b)). In other tribes still larger specimens occur, up to 13 feet in length, but the largest forms often have only three pipes. The free reeds are cut from thin copper. The six-pipe *sheng* of the Chingmiau is fairly accurately tuned to the scale D F G A C D, beginning on the D below middle C; this is the Chinese *la* mode on F. A small blob of wax may be stuck on to the tongue to modify the frequency of vibration.

At least two men play at a time and while playing they lead an open, square, or round dance with the women following. The pace of the music is always a leisurely andante, even when the performers are leaping about with considerable speed and energy. The effect is grave and moving; this is a music with none of the uncertain pitch of Chinese opera or flexible rhythm of Chinese zither music.

Since the six pipes are played in groups of two or three at a time, as with the Chinese *sheng*, it is understandable that the music has a very limited melodic range. Ex. 245 was written down from a performance by members of the Chingmiau tribe a few miles outside Anshuenn in Gueyjou.

Ex. 245

The alternation of sucking and blowing is approximately indicated by the accents. A change in timbre between chords produced in these two ways adds to the quality of the music in a manner which cannot be guessed from the score. The phrasing suggested is not authentic; it is merely the sort of phrasing of which the performers made use. Since the pipes used for producing the middle voice in Ex. 245 (that is, A, G, and F) and the lowest pipe, D, are those with greatest resonance, the middle voice stands out in performance. Variety is obtained by varying the middle part; wherever possible, fourths and fifths are added above and below, as shown in the example.

In one dance the rhythm of the steps only coincided with that of the music to the extent that twenty steps were fitted to twenty quavers of Ex. 245. The distribution of accented stamping steps in
the twenty-step unit (checked repeatedly during the performance) was as follows:

\[ \overline{\text{1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20}} \]

At times the second quaver of the ligatures was dotted, giving a 'Scottish snap' to the movement. The players tended to break off on the interval $C_G$.

While this is the music played at the New Year Mating Festival in the second fortnight of February, corresponding to the Old Style Chinese New Year, music of another kind may be heard on market days, when the Miau come into the Chinese towns from their villages. The following is a fragment of a melody played in unison on two six-holed cross-flutes by two men who stood facing each other; it contains a major third tetrachord and would be converted into the Japanese mode hirazyoosi if the octave G were added:

Ex. 246

Ex. 247 is a remarkable three-note tune\(^1\) from the Yau people of Lienyang in Canton Province:

Ex. 247

Some of the Miau tribes use a Jew's harp;\(^2\) though no description of this instrument is given, many of the peoples of countries bordering on southern China have a bamboo Jew's harp, and it is certain that this is one of the very ancient instruments common to the whole area (p. 185).

The fourteen-pipe mouth-organs of the people of Laos in northern

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\(^1\) Hwang Yeoudih, 'Lienyang Yauren-di Inyueh', Minswu, i (4) (Canton, 1942), pp. 28–35.

\(^2\) F. Savina, Histoire des Miao (Hong Kong, 1924), p. 25.
Annam are made in three sizes: mezzo-soprano, contralto, and baritone, and in sweetness and clarity they are said to surpass both Dyak mouth-organ and Chinese *sheng*. Ex. 248 (‘The Possessed’) is written on three staves, but whether played by three instruments is not clear.¹

Ex. 248

Some of the examples show that the instrument may also be used entirely melodically: to play a one-line melody without chords or with only occasional chords or a pedal-point.²

In the highlands of Burma and the country of the Yunnan-Burma

border are the Karen people, possibly related to the Miao and possibly (though doubtfully) belonging to the Sino-Tibetan language-group. They make use of mouth-organs not inferior in size to those of the Miao, though differing from these in that they lack a mouth-piece a foot or more in length.

LUOLUO AND MINJIA

While the Miao and Karen are only doubtfully included in the Sino-Tibetan language-group, the Luoluo (6) are unquestionably members of the Tibeto-Burman branch. Those in the vicinity of Lihjiang (185) in south-western Yunnan, belonging to the Mosuo (7) group, have been studied by Professor Fuh Mawji (186) formerly of Hwajong (187) University, to whom I am indebted for specimens of their bamboo Jew's harps and of their tunes. The first type consists of a single vibrating tongue, cut in a length of bamboo; it vibrates in a long narrow slit and is set in motion by jerking the end of a short length of silk-gut attached to one end, while holding the other firm by a loop of silk. The instrument is held across the mouth, in front of but not touching the parted lips. By varying the shape and capacity of the mouth-cavity, selected partials of the fundamental are reinforced—as in playing all types of Jew's harp.

A more interesting type of Jew's harp consists of three tuned vibrators, each yielding a note of fixed pitch. In this case the vibrators are excited by plucking a slender projection on the free end (pl. 6 (c)). The three notes are, judged by ear, from above down: F sharp, D sharp (both above middle C) and the G sharp below middle C; they are clear and musical in quality. The player not only changes the shape of the mouth but alters the position of the tongue, as if articulating the words. Young men and women are able to exchange messages using this instrument as a generator of sound, modified by the changing properties of the mouth cavity as a resonator, as in speech.

Two popular three-note tunes, played on the triple Jew's harp, have been written down by Professor Fuh. The first, in ternary measure, is called 'The Bees Fly across the Golden Sand River':

Ex. 249

1 Sachs, The History of Musical Instruments (New York, 1940), p. 184 and pl. X d.
3 Another specimen is tuned F sharp, D sharp, and C sharp.
The second, in common time, is ‘A Dog Follows a Deer’. The unit is repeated over and over again, sometimes at great speed.

Ex. 250

Among the Lihjiang Mosuo the Jew’s harp plays an important part in the courtship pattern of the community.\(^1\) With another Tibeto-Burman people, the Minjia (188),\(^2\) now considerably sinicized, living about a hundred miles south of Lihjiang, on the Eelhae (189), the Jew’s harp is only a children’s toy. It is a small version of the first type described from the Mosuo, but with a cloven tongue (pl. 6 (d)).

**NAGAS**

Away to the west, over the southern continuation of the Himalaya range, are people who belong to the central and southern Assamese division of the Tibeto-Burman family: the Nagas. Their musical instruments include a bamboo Jew’s harp with a single vibrating unit, almost identical with those of the Lihjiang Mosuo and of the Minjia, and played in the same way; a flute; a fiddle,\(^3\) and slit-drums—the last often of gigantic size.\(^4\)\(^5\) The Sema Nagas have no slit drums, though they make use of various struck or shaken idiophones for non-musical purposes, but they have a two-holed cross-flute and a bamboo Jew’s harp. The following example is a three-part chorus sung by these people.\(^6\)

Ex. 251

\(^{1}\) See Rock, op. cit.
\(^{2}\) For a general account of this people (not, however, of any musical interest) see C. P. Fitzgerald, *The Tower of Five Glories* (London, 1941).
\(^{3}\) C. von Fürer Haimendorf, *The Naked Nagas* (Calcutta, 1946), fig. 49.
\(^{4}\) Ibid., figs. 38, 39.
ANNAM

The urban music of Annam is very largely sinicized. In the towns the instruments in use are Chinese, or variants of Chinese instruments, and (with the exception of single sonorous stones or metal slabs) all belong to the ‘modern’ category, that is, they are instruments imported into China in Tarng times or later. The instruments of the Confucian orchestra survive only as illustrations in early books, or as rare specimens, no longer played, in the imperial palace; even the sheng has been forgotten in Annam.

Of the tunes and fragments available, none exhibit any trace of the major third scale noted in Tibet, Korea, and Japan; with one exception all are ‘Chinese’, and all but two are strictly pentatonic. While the do mode is the most frequent, examples in other modes also occur. The following is a popular fiddle tune (for a fiddle of ellhwu-type, p. 93) entitled ‘Running Water’:

Ex. 252

A tune of unusually regular sequential structure is the following ‘Spring Breeze’ (Ex. 253).

3 Knosp, op. cit., p. 3104.
4 Ibid., p. 3105.
Knosp gives an interesting account of improvisation and examples of characteristic turns of phrase, including the following with its chain of fourths:

All the examples so far quoted are in duple or quadruple time. A remarkable specimen is the following hexatonic tune in triple time; this tune is more Indian in character than Chinese:

Some features of the material collected by Knosp suggest the presence of a more ancient ethnic substratum in Annam, and this suggestion has been fully confirmed by more recent studies. In rural areas, and in particular among the Sedang people, north of Kontum, an entire armoury of primitive bamboo instruments and stone chimes is in use. There are even hydraulic orchestras, actuated by the overflow from irrigation channels, including slit-drums, clappers, xylophones, stone-chimes, and a bowed gourd; two or more instruments, playing rhythmically and melodically differentiated parts, are mechanically co-ordinated so as to play continuously. To this list of archaic

1 Knosp, "Histoire de la musique dans l'Indo-Chine", p. 3106.
2 Ibid., p. 3103.
3 G. de Gironcourt, op. cit.
instruments may be added two forms of ground-zither, played by men only and used to accompany courtship-songs.¹

The specimens of rural music available display archaic features as striking as the instruments. The following example is the antiphonal vocalization of a waterman and his wife, as heard at dusk on the Hue River.² It makes use of four notes only, distributed over a range of one and a half octaves; the repeated drop of a fourth is striking:

Ex. 256

Superposed fifths are also to be heard.³

Ex. 257

Pure expanded-triad melodies occur, such as, for example, this lullaby from Phuc-tho:³

Ex. 258

Even in urban music there are traces of an early substratum in funeral music. The following example is played on a double oboe with reeds made from the pupal skin of a certain insect; the two components are tuned so that each 'note' is an interval of a minor second. This

¹ Knosp, 'Histoire de la musique dans l'Indo-Chine' p. 3117.
² Ibid., p. 3126.
³ G. de Gironcourt, op. cit.
instrument is doubled by a true oboe. The fragment is repeated indefinitely:

Ex. 259

The ‘fanfared’ character of this example (p. 178) suggests that it derives from the same ancient substratum as Ex. 258. Such expanded triad melodies are characteristic of certain primitive peoples in New Guinea. The existence in Annam of many ancient instruments, including two of the oldest chordophones known, and of a great variety of non-Chinese types of melodic utterance, is compatible with what is known from other sources of the ethnological complexity of this region. It is of interest that one type of ground-zither preserved in Annam occurs also in the southern Sudan among the Nuer.

CAMBODIA

One account of Cambodian music records that these people neither sing in the street nor play single instruments, though they possess a sonorous orchestra of instruments of superb workmanship. It may be, however, that this author was unfortunate in his contacts, since there is available from another source a collection of fifty-four songs, both words and music, from all the provinces of Cambodia. More recently a further collection of twenty-one songs, and a number of specimens of rural music (work-songs, &c.), and also of aboriginal music from the most primitive inhabitants, have been published.

Although the Khmers, ancestors of the Cambodians, were raised to a high cultural level for a thousand years by Indian colonists reaching Cambodia at the beginning of our era, the musical culture of their descendants, unlike that of Burma, shows very little Indian influence.

Of the fifty-four songs transcribed, two only are based on major third scales; half of the remainder are purely pentatonic minor third scales, half are hexatonic with minor third tetrachords; only a few are heptatonic. Some of those in the hexatonic group make only occasional use of the semitone. With few exceptions they are all in common time.

3 Knop, op. cit., p. 3129.
4 A. Tricon and Ch. Bellan, Chansons cambodgiennes (Saigon, 1921).
5 G. de Gironcourt, op. cit. A Cambodian lullaby is recorded in The History of Music in Sound, i, side 5.
The following example exhibits the plagal form of the mode *hirazyoosi* (to use the Japanese name); the upper tetrachord is occasionally filled in. This and other examples appear to be syllabic:

Ex. 260  'Dâmbang dék' ('Iron Rod' or 'Small and Tender')

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The first part of the next example is in plagal *hwato* with the lower tetrachord occasionally filled in; in the tenth bar it modulates to a different genus and key, returning to a major third tetrachordal structure in the last two bars:

Ex. 261  'Peak prampel' ('Seven Words')

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A number of the songs in the collection have four equal notes to the bar throughout, dotted notes or notes of two or three times the unit value being absent or few, as in the following example:

Ex. 262  'Bok srou' ('Rice-pounding Song')
The following four bars resemble the most ancient surviving Chinese melodies:

Ex. 263

In most of the songs, however, dotted ligatures replace single notes here and there, though the four-beat rhythm is maintained.

Ex. 264

The following is a more highly organized tune:

Ex. 265

Ex. 266 is a royal funeral chant sung antiphonally by soloist and chorus accompanied by oboe and two drums:¹

Ex. 266

While popular rural tunes may show major-third tetrachords and occasionally ‘filled-in’ tetrachords, the aboriginal music in some instances exhibits pure ‘fanfared’ melodies.¹

Cambodia has been included in the group of countries of eastern Asia where chime-instruments tend to have an equal-tempered octave

of seven equidistant notes, each of which can serve as a locus of inversion for pentatonic scales.\(^1\)

The 21 instruments in use in Cambodia include 2 xylophones of 21 and 17 keys respectively and a chime of 21 bronze plates; 2 gong chimes, the one an octave higher than the other; 3 long lutes; 3 fiddles, of which one is a spike-fiddle of Persian origin; a stick-zither with a gourd as resonator; an oboe and a flute; cymbals, 4 different types of drum, and clappers of wood.\(^2\) The striking difference, as compared with the Annamese orchestra, is the presence of various chimes. The stick-zither is not an orchestral instrument; it is unquestionably of great antiquity, like the ground-harp and zither of the Annamese.

There are 2 court orchestras, one of male, the other of female, performers. In the former, out of 11 instruments, 5 are chimes (gongs and xylophones are the chief melodic instruments), 2 are flutes, one is a spike-fiddle and the rest are percussion. To the 5 chimes, the women’s orchestra adds 6 different stringed instruments. The following 3 bars illustrate in short score a point at which heterophony becomes harmony: \(^2\)

\[Ex. 267\]

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**SIAM (THAILAND)**

Not until the end of the fourteenth century did Siam become a political unit under the leadership of Thai conquerors from the border country adjoining Yunnan, but by the end of the following century the new unit had conquered Cambodia and annexed the Malayan Peninsula. Prior to the end of the fourteenth century, the area later to become Siam was occupied by a group of states all strongly influenced by Indian culture; in certain regions this influence was predominantly Hindu, but for the most part it was Buddhist.\(^3\)

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\(^2\) Knosp, op. cit., p. 3131.

The tonal system of the Siamese was one of the first Far Eastern systems to receive attention from the West. It may even be said that Siam achieved a certain notoriety among musicologists when it was discovered that the system of the Siamese tends towards equal temperament of an unusual type: the octave is divided into seven equal parts. Generally speaking their tunes do not make use of all seven steps but of five only, skipping two to produce pentatonic scales that the Western ear interprets as ‘Chinese’ pentatonic scales of major seconds and minor thirds. Three modes are used, corresponding to the Chinese do, sol, and la modes.

When subjected to physical measurement this tempering is found to be far from accurate, and singers appear to take little notice of instrumental temperament. One recording includes a passage in which the singer makes use of almost Western intervals, but alternates with an orchestra playing in the tempered scale. In this recording the singer is never accompanied but alternates with orchestral ritornelli.

The Siamese orchestra seems to be almost identical with that of Cambodia. In a recording in the Music of the Orient series the Siamese orchestra is in fact identical with the Cambodian male orchestra of the palace. An entire composition was transcribed by Stumpf and has recently been reprinted by Davison and Apel. Ex. 220, taken from Seelig, is a tune (No. 17(b) in that collection) entitled ‘The Slim Cambodian’.

Ex. 268

\[ \text{Musical notation image} \]

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3 Phra Chen Duriyanga, Siamese Music (Bangkok, n.d.).
4 E. M. von Hornbostel, Music of The Orient (Record M.O. 107) (Parlophone, London).
7 For a collection of 150 melodies see P. J. Seelig, Siamesische Musik (Bandoeng, 1932).
From such transcriptions as are available and from the constitution of Burmese orchestras, there seems little doubt that Indian influence predominates in the music of Lower Burma. The characteristic Burmese orchestra is that accompanying plays in which the shadows of two-dimensional puppets are projected on a screen. It consists of two pairs of clappers, two pairs of cymbals, a gong-chime (like those of Siam and Cambodia), a drum-chime, a large drum, and two oboes (see pl. 7 (b)). Omitting the gong-chime, this is the sort of instrumental ensemble to be met with in southern India. It may be mentioned that Burmese orchestras were known to the Tarng court, and that the Tarnghsu (190) contains an account of Burmese music.

The Burmese apply the term ‘Chinese’ to their pentatonic melodies; and these form but a small part of the repertoire. The following is interesting in relation to some of the Cambodian tunes: if the rests are filled in with repeated notes the resulting melody closely resembles Ex. 262 (p. 160):

Ex. 269

![Musical notation](image)

Another ‘Chinese’ tune differs from classical Chinese tunes in the way it is built up in a square, predictable manner:

Ex. 270

![Musical notation](image)

Practically all the tunes quoted are symmetrical in structure; some of them have that exciting rhythmic quality which one associates with Indian drumming. Here is a tune with a conspicuous major third–minor second tetrachord, but with the semitone above (Ex. 271).


The melody has a non-Far-Eastern character in that the strong accent falls almost invariably on a note of the tonic chord of D major.

JAVA, SUMATRA, AND NIAS

The music of Java has been the subject of several memoirs of outstanding importance.¹ No part of the world, other than Japan, shows such a predilection for major third scales as does the Malay Archipelago; and in west Java (culturally the most primitive part of the island) singers perform in scales with two disjunct major third tetrachords, comparable to the Japanese mode kumoizyoosi. Instruments and whole orchestras are tuned to scales which include one or more major thirds, as in Exs. 272 (Sachs) and 273 (Groneman and Land); this major third pentatonic genus, pelog, is to be found not only throughout Java, but in Bali as well:

Ex. 272

When the pitch of successive notes in these scales is accurately measured, it is found that, on the same instrument, one third is not the same size as another, and seconds may be of several sizes. The reason for this is that the orchestras consist almost exclusively of idiophones tuned by comparison with standard metal bars kept by the gong-founders. Neither the cycle of fifths nor the harmonic division of strings is known to these people; their scales are duplicated, not constructed.²

¹ J. Groneman and J. P. N. Land, De Gamélan te Jogjakartá (Amsterdam, 1890); D. de Lange and F. F. Snellemann, "La Musique et les instruments de musique dans les Indes orientales néerlandaises", Encyclopédie de la musique, 1ère partie, v, pp. 3147–78. Jaap Kunst, De Toonkunst van Java (The Hague, 1934); Music in Java (The Hague, 1949); M. Hood, The Nuclear Theme as a Determinant of Pajet in Javanese Music (Groningen and Djakarta, 1954).
In order to allow more than one mode to be played within the same range, the idiophones of the pelog-orchestras are given seven notes; this series may be approximately represented as follows, starting from E: E F G A B C D. Although there were originally three ‘female’ (pelog) modes, nem, lima, and barang, much of the lima-material now available shows nem-characteristics.1

Ex. 273 pelog pают nem

Corresponding to the Chinese minor third pentatonic genus, the Javanese also have a ‘masculine’ genus, salendro or slendro, taking its name from the Indian dynasty of the Śailendra which ruled Java from the end of the eighth until the end of the tenth century. The two genera—pelog and slendro—are played by different sets of instruments in different orchestras. In effect, melodies in slendro sound to the Western ear like Chinese pentatonic melodies; but the octave in fact tends to be divided into five equal steps. The tuning of old instruments excavated in Java suggests, however, that there was a time when the octave was divided into steps approaching three major seconds and two minor thirds. It has been suggested that, whereas in the West, equal temperament arose from the need for freedom of transposition, in Java, it arose from the attempt to play melodies in different modes in the same range on instruments of fixed pitch.3

A recent study4 has shown that both slendro and pelog are essentially non-equidistant scale-systems. The results imply that the tendency to equal temperament has been overstressed. Furthermore, contrary to earlier views, pelog and slendro modes can be distinguished by their structure—by the position of tonic and dominant, and by their characteristic cadences, themselves determined by the limited range of the dominant chime-idiophone. The parallel with cadential formulae in the Tarng (?) melodies of Ju Shii (p. 109) is striking.

The following example is in the slendro mode nem.2

Ex. 274

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1 Hood, op. cit., pp. 194 ff.
2 De Lange and Snellman, op. cit., p. 3156; taken from Groneman and Land, op. cit., pp. 57 and 78.
4 Hood, op. cit.
It seems probable that the names for the modes were invented in relation to the major third pentatonic genus pelog and it is now accepted that this is the older genus.

Like Cambodian and Siamese orchestras, the Javanese orchestra or gamelan includes the Persian spike-fiddle known as the rebab; this instrument leads and is responsible for the prelude and for announcing the melody which forms the basis of the whole composition. The Javanese also have a solo reed instrument, a type of oboe, the selom-pret, but this does not form part of the gamelan.

In addition to the gong-chimes the Javanese make use of a number of celesta-like metallophones constructed on a plan similar to that of Indo-Chinese xylophones, but with flat metal plates replacing the wooden slats of the former. Both gong-chimes and at least one type of celesta (the gendèr) incorporate tuned resonators in their structure. As in the orchestras on the mainland, several solitary gongs of large size are also used. The gamelan includes one instrument not represented in the Cambodian armoury; this is a board zither of fourteen strings tuned to a pelog scale of two octaves.

In west Java a number of primitive instruments occur. The chime-idiophones among these are all made of wood; some are suspended xylophones of tubes or laths of bamboo. In those made with tubes, these are closed below and cut away at the open end until only a long, more or less flat, vibratile tongue, tuned to the pitch of the tube, remains. This form of tube is the same as that found in the other type of idiophone, the angkloeng. In this, two or more tubes tuned at the octave are arranged in a wooden frame in such a way that they can slide in slots, and are caused to emit their characteristic notes by striking against the end of the slots; a number of such frames, each of two or three tubes, may be arranged in a chime.

In Java occurs the first example we have met of a primitive zither constructed entirely of bamboo. This is the tube-zither, ketoeng-ketoeng. It consists of an internode of bamboo together with its two adjacent nodes. Round the periphery of the cylinder are a number of ‘strings’ formed by lifting up strips of the outer layers of the tube itself, and tuned by inserting small blocks of wood under the ‘string’ at each end. A hole is cut in the wall of the tube, so that the cavity acts as a resonator (pl. 6 (e)). Another primitive instrument is the set of panpipes, consisting of ten or twenty reeds, closed below, and

1 The figure in de Lange and Snelleman, op. cit., p. 3168 is wrongly labelled soeling; the soeling is a vertical flute, cf. ibid., p. 3149.
assembled in such a way that their open ends can be blown across in sequence.

A full score of an entire composition for a gamelan of twelve different instruments has been prepared;\(^1\) it includes ten distinct melodic voices. Except for a greater range, the theme itself is indistinguishable from Prince Tzayyuh's examples of the earliest Chinese ritual music (p. 102). It is as follows:

Ex. 275

![Musical notation]

Two bars of the full score are shown in Ex. 276.

Recent work has revealed a correspondence between the vibration frequencies of certain early Javanese metallophones and the vibration frequencies of particular modes on reed pipes.\(^2\) The results suggest that some of these early metallophones must have been tuned to a note series generated by a pipe. The suggestion is of the greatest importance, not only because it implies that at some period in the past the Javanese had a means of generating scales instead of copying them, but also because it raises the question whether pentatonic genera of some kind necessarily precede hexatonic and heptatonic genera in time.

In striking contrast to Javanese orchestras, none of the four different orchestras of northern Sumatra contains idiophonic chimes; all have single idiophones (gongs), percussion and a solo instrument of some kind—flute, clarinet, rebab, or other fiddle. This suggests Arab or Indian influence and might perhaps be correlated with the early conversion of this part of the island to Islam. Marco Polo records the existence of a Mohammedan state in west Sumatra as early as 1292.\(^3\) Among the more primitive peoples of the island, the idiophonic chime occurs in the form of a xylophone of bamboo laths; there is also a bamboo tube-zither, a two-stringed short lute, and a bamboo Jew's harp resembling those of the Naga, Mosuo and Minjia.

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3 *The Travels of Marco Polo*. Book III, ch. xi.
A detailed account of the music of Nias, an island off the west coast of Sumatra, has been given. The inhabitants of the southern districts are closely related to the Nagas. They exhibit a remarkable type of anhemitonic, tetratonic, vocal melody of the range of a tritone and usually in three-beat measures. The instruments of the island include single gongs; a three- or four-keyed xylophone, the keys of which rest on the thighs of the performer sitting over a trench; a remarkable aerophone consisting of a bamboo ‘tuning fork’, the tube of which selects and reinforces the fourth or fifth upper partial of the fundamental; idiochordic tube-zithers with one to four strings, struck or plucked; a Jew’s harp; an idioglottal free-reed pipe; a nose-flute and other flutes. The following example is a transcription of the gong music played in central Nias on festal occasions. The original score includes three drums:

Ex. 277

BALI

No part of the non-Western musical world has received more sympathetic treatment from Western musicologists than the small island of Bali, next in sequence to Java in the chain of the Archipelago. In contrast to Java which, from contact with Muslim India, was predominantly under the influence of Islam in the fifteenth century, Bali, having rejected Buddhism at a very early date, escaped the Islamic influence and remains to this day essentially Hindu. The ritual orchestras make no use, however, of instruments associated elsewhere with Hindu influence.

The classical orchestra, originally used only in the ceremonies connected with cremation, is composed almost exclusively of idiophones;

the only non-idiophonic instruments are the drums. The scale of the instruments is of four notes only. In many of the classical orchestras (gamelans) the idiophones are entirely metallophones; but in certain parts of Bali the classical gamelan includes wooden idiophones: angkloengs and two types of xylophones. Even when angkloengs are absent the classical gamelan is referred to as gamelan Angkloeng.²

The keyed metallophones are of two types: those in which the keys are suspended freely over the resonators; and those in which they rest on some damping material over the resonators. The former are the gendèrs, the latter, the gangsas. On the whole it is the gendèr type which is used in gamelan Angkloeng. Each gendèr has four keys within the range of an octave, and there are large, medium, and small gendèrs, tuned an octave apart. The gamelan includes a pair of the largest size and four (two pairs) of each of the other two sizes. The members of these pairs are tuned so that there is a difference in pitch—which may be as large as three-eighths of a tone in the large instruments—between corresponding keys; the effect of this is to give a bell-like sonority to the higher registers and a throbbing intensity to the lower.³

The remaining metallophones are the réjongs and gongs. A réjong is a pair of tuned kettle-gongs mounted one at each end of a wooden handle, and tuned a second or a minor third apart. They are played in pairs by two players, who between them cover the whole of the four-note scale. It is known from bas-reliefs that such réjongs existed in Java at least as early as the fourteenth century. Each gamelan also has a single gong, lower in pitch than the lowest note of the large gendèrs and tuned to a note which is not of the scale, but which roughly converts the four-note scale into a pentatonic scale. Thus if the scale is G A B D, the gong might be any note between E♭ and F♯. A second small gong is tuned to one of the notes of the scale but at a high pitch. Cymbals and two small drums, tuned a second apart, complete the gamelan.

Remarkably enough, the scale of the gamelan Angkloeng: G A B D, the 123.5 sequence of the commonest Chinese mode, common to so many primitive peoples, is considered by the Balinese to be identical with the four chief notes produced by a Jew’s harp, gènggong: G B♭ C D, that is 134.5, and tunes for the one are played on the other.⁴

¹ A gamelan is recorded in The History of Music in Sound, i, side 7.
² Ibid., p. 128.
⁴ Ibid., p. 127.
The nature of the parts played by the different instruments is as follows.\(^1\) Lowest in pitch is a *canto fermo* played on the largest *gendèrs*. This is in minims with a gong stroke at every ninth minim. Above this the higher pitched *gendèrs* play a melody in quavers based on the *canto fermo*, and above this the *réjong* play a two- or three-part figuration in semiquavers. In the classical *gamelan* the line based on the *canto fermo* may disappear, and the higher pitched *gendèrs* may assist the *réjong* in the figuration. The following example illustrates this figuration and its relation to the *canto fermo*:\(^2\)

Ex. 278

\[
\begin{align*}
\text{Canto fermo} \\
\text{Gong}
\end{align*}
\]

The type of melody developed from the *canto fermo* is shown in the next example:\(^3\)

Ex. 279

\[
\begin{align*}
\text{Gong}
\end{align*}
\]

In bars three and four the *gendèrs* occasionally split into two voices a fifth apart; because of their greater sonority the fifths stand out as a cross-rhythm in relation to the movement of the *canto fermo*. Similar fifths arise in the *réjong* figuration and give life to the music, just as does syncopated drumming within a fixed framework. There is a certain similarity between Balinese drumming technique and that of *réjong* playing; and also similarity in form between *réjong* and Indian (and Japanese) hour-glass drums.\(^4\) It is possible that the polyrhythm of the figuration is not Far Eastern but Indian.\(^5\)

The composition of an old-style *gamelan Angkloeng* is as follows.

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2. Ibid., p. 131.
3. Ibid., p. 135.
4. Ibid., p. 129.
The usual four-note metallophones and a single set of réjongs are supplemented by two small gangsas, four angkloengs, and two different kinds of xylophones: the grantang with angkloeng-like keys, and a simple xylophone without resonators, the tjoengklik. In this gamelan the réjongs and angkloengs are responsible for the figuration, the lowest gendêrs give out the canto fermo and the other keyed metallophones play the melody in unison. Grantang and tjoengklik each produce a different paraphrase of the melody. Only four of the nine staves of the original score are quoted here, omitting two staves of angkloengs, one of réjongs, one of cymbals, and one of drums.¹ The third note of the series is a B♭ in this example; this deviation is accepted as a mere change in intonation:

Ex. 280

¹ McPhee, 'Angkloeng gamelans in Bali', p. 138.
Yet another tuning is found in a different gamelan. One of the melodies played by this gamelan is as follows:¹

Ex. 281

The following two bars in full score (Ex. 282) illustrate the texture of another type of orchestra, the old-style ceremonial gamelan Gong, consisting exclusively of metallophones and drums.² Here the gong-chime expounds a flowing five-note pelog melody (scale: G♯ A C♯ D E) and the cantus of the gendèrs receives a first amplification from the gangsas in double octaves. This example illustrates the extraordinary harmonic quality imparted by the punctuating gongs.

The pieces played by the gamelans nearly always consist of two sections: a ‘body’ (pengawak) followed by an Allegretto (pengètjèt).³ Each is introduced by a solo (the pengawit): a statement of the musical material which it introduces. Whereas the ‘body’ is a complete statement which does not require repetition, the Allegretto is meant to be repeated; its closing note is the note on which it opens, and it is in fact an ostinato of at least a dozen repeats. The pengawit intimates what piece is to be played and sets the pace.

Since the sixteenth century, the vowels of the five names of the notes (ding, dong, deng, doeng, and dang) have been used in Bali to record melodies. Though time values are not indicated, the metres are named.

¹ McPhee, 'Angkloeng gamelans in Bali', p. 141.
The last example is an improvised pelog tune:\(^1\)

Ex. 283

Three admirable transcriptions of Balinese gamelan music, for two pianos, have been published.\(^2\) One—'Music for the Shadow Play'—is in the genus slendro: the other two are in pelog.

In Bali, Indian types of orchestra, consisting of rebab, flutes, cymbals, &c., are used for two purposes: one type accompanies the classic drama, Gamboeh, played in fourteenth-century Javanese, the themes of which are taken from romantic or mythical versions of Javanese history;\(^3\) and a similar orchestra of flute and percussion accompanies Ardja, a type of drama which draws to some extent on modern Chinese tales. In the latter the use of an instrumental accompaniment seems to be a relatively modern usage.\(^4\)

**OTHER ISLANDS OF THE INDIAN ARCHIPELAGO**

There are two reasons for including the other islands of the Indian Archipelago in this account. First, there are islands where primitive forms of instruments already met elsewhere in more refined versions survive; it would be wrong to give the impression that the distribution of these instruments ceases abruptly in Java and Bali. Secondly, there are traces in this area of a musical culture profoundly different from that so far reviewed. Though the music of China at the present time differs from the ritual music of ancient China quite as much as it differs from the ritual music of the Balinese gamelan, all three have greater affinity with each other than they have with certain musical elements to be met with in the islands.

The ethnological picture of this region is of the utmost complexity; in New Guinea alone, there are hundreds of tribes of varying mixtures

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\(^2\) McPhee, *Balinese Ceremonial Music transcribed for Two Pianos, Four Hands: Pemoengkah; Gambangan; Taboe teloe* (New York, 1940).

\(^3\) B. De Zote and W. Spies, *Dance and Drama in Bali* (London, 1938), pp. 134 ff.; *Gamboeh* music is recorded in *The History of Music in Sound*, 1, side 8.

\(^4\) Ibid., p. 196.
of races with many and various cultural strata superimposed. The evidence supports the view that there are in this area traces of a different main stem of mankind, of a people more different from the Mongoloids and the Proto- and Deutero-Malays than are these from each other; and it is suggested that this fact is reflected in the total musicological picture of this region. The most important work in this field from the standpoint of comparative musicology is that of Kunst, though valuable information regarding instruments and the music of certain tribes is to be found scattered through the anthropological literature of this part of the world. A brief survey of the instruments of the islands with some account of musical practices is included in de Lange and Snelleman's article previously mentioned.

While many of the instruments recorded are such as we have already encountered, there are others (many idiophones, certain flutes, certain free aerophones) which are new and which are obviously primitive instruments (in the sense of Sachs's classification). From the distribution of various instruments in this area, it is clear that New Guinea and the adjacent islands constitute a region in which a high proportion of these primitive instruments occurs. It is also in this region that a type of music becomes conspicuous of which in this survey only traces have hitherto been encountered.

Before coming to discuss the music of the Papuans, the occurrence in Madagascar of stick-zithers with resonators (both plucked and tapped), and of tube-zithers, should be mentioned; they were taken thither by a Malay people (the Hovas) some time in the fifteenth century. The tube-zither of the Hovas (valiha) has the strings tuned for the most part in thirds (D F A, E G B) in a manner recalling one tuning of the Japanese yamatogoto or wagon (191) (d A D G B E), claimed by the Japanese as an entirely national instrument and said to have been derived from six long-bows tied side by side. Chords of thirds or sixths are frequently used in playing the valiha.

From Borneo (Sarawak) songs of great interest have been recorded and transcribed; in some instances these combine an upper minor-

1 Kunst, A Study on Papuan Music (Weltevreden, 1931); Over zeldzame Fluiten en veelstemmige Muziek in het Ngadaen Nageh-Gebied (West-Flores) (Batavia, 1931); 'Music in Nias'; 'Music in Flores', Internationales Archiv für Ethnographie, Supplement to xlii (Leiden, 1942).

2 A. Sichel, 'Histoire de la musique des Malgaches' in Encyclopédie de la musique, 1ère partie, v, pp. 3226-33. See also Sachs, 'Les instruments de musique de Madagascar', Travaux et mémoires de l'institut d'ethnologie, xxviii (Paris, 1938), and The History of Music in Sound, i, side 5.

3 For a recent account see E. Harich-Schneider, op. cit, p. 57.

4 C. S. Myers, 'A Study of Sarawak Music', Sammelbände der internationalen Musikgesellschaft, xv (1914), pp. 296-308.
third tetrachord with a lower major-third tetrachord with the semitone above. The following example, from the Long Kiput tribe is of particular interest in relation to the style of antiphonal singing described from Tibet (p. 139):

Ex. 284

The major-third tetrachord with the semitone below is also displayed in music from Sarawak. Ex. 285 is a Kenyah dance-tune played on a six-pipe mouth-organ (keluri). The triple rhythm and pendulating tonic-dominant harmony are both noteworthy.

Ex. 285

The Papuans of the Nassau Range in New Guinea know no other musical instrument than the Jew's harp, but they possess two entirely different types of melody. While the greater part of their melodies are primitive in the sense that their range does not as a rule exceed a fourth, others have a range of as much as an octave and are 'fanfared': that is to say, they are expanded common chords. Recordings from the Kauwerawet people of the Van Rees Mountains on the one hand, and from pygmooid tribes of the Central Mountains on the other, also reveal two completely different types of melody. The following example is from the Kauwerawet; melodies of this kind are characteristic of Australian culture:

Ex. 286

The next example is from the Awembiak, one of the Central tribes; it is fanfared and has a range of an octave and a half:

Ex. 287

Certain coastal melodies, such as those of the Waropen, seem to betray Malayan influence, judged by their pelog character. The following is an example:

Ex. 288

Other coastal melodies are triadic in character but not fanfared. This suggests that the fanfared melodies are correlated with the persistence of the Negrito civilization in those regions most sheltered from foreign influence: the mountain ranges of the interior of New Guinea. It is assumed by some authorities that fanfared tunes can arise only in regions where wind-instruments are, or have in the past been, played; but fanfared melodies also occur in Formosa among the Vusun aboriginals and are there clearly linked with the use of the musical bow. With this instrument the fanfare is derived from the upper partials of the fundamental, selectively reinforced by the mouth cavity. Similarly, the Jew's harp may be the source of the Negrito fanfares; for any instrument producing sounds in which the harmonic series of overtones is conspicuous may serve as a source of a fanfared series (2nd, 3rd, 4th, and 5th overtones), when coupled with the mouth cavity as a selective resonator. It may be argued that the Negrito civilization, although comparatively primitive, stands on a higher level, from a musical point of view, than does the younger component, represented by the 'Australian' melodies. This superiority in musical culture is paralleled by the general cultural superiority

1 Takatomo Kurosawa, 'The Musical Bow of the Bununs[sic] Tribe in Formosa and Suggestion as to the Origin of the Pentatonic Scale', Tōyō Ongaku Kenkyū, x–xi (Tokyo, 1952), pp. 18–32.
of the Negritos as compared with coastal peoples, in whom the proportion of Australian and Melanesian blood is higher.\(^1\)

Although the extreme type of fanfare melody seems to be confined to central New Guinea and certain of the islands off the coast, melodies of a pronouncedly triadic character have been recorded from the coastal regions of New Guinea, among the Semang in central Malaya, in Flores (east of Bali in the chain of islands), and in Samoa among the central Polynesian Islands.\(^2\) It is understandable that canons in unison may arise from the antiphonal singing of triadic melodies, and such have been transcribed from recordings made among the Semang.\(^3\) The most remarkable canons are those recorded in west Flores.\(^4\) One of these is a two-part canon in unison sung by two women over a drone bass of tonic and fifth sustained by two men; a third man proposes a chromatic variant on the melody (against the drone) while the women interrupt their canon.\(^5\) The following is another (partial) canon on a tonic pedal held by two voices:\(^6\)

Ex. 289

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CULTURAL INTERRELATIONS

It remains now to consider the interrelations of musical cultures over Far Eastern Asia, both in time and space. First, in contrast to

\(^2\) See Exs. 44 and 78.
\(^4\) See Ex. 113.
\(^6\) Kunst, *Over zeldzame Fluiten*, p. 78.
the condition observable in what has been defined here as the Far Eastern area, orchestras of idiophonic instruments have never (so far as we know) been a feature of the musical life of India. This statement may require revision when more is known of the musics of primitive Indian peoples. It remains true, however, that the whole tendency of cultured Indian music is towards chamber music: a singer is accompanied by a double drone on the tambura, or by two fiddles and a pair of hand-beaten drums, or by vInda (a stick-zither), fiddle, and drum.\(^1\) Such ensembles obviously have more affinity with the Chinese theatre orchestra than with the ritual orchestra described in the Yilii (p. 90) or with the orchestras of Siam, Cambodia, Java, and Bali. The ritual music of Bali introduces us to a very different musical world, a world with almost no point of contact with the orchestras of present-day India and almost without contact with the music of present-day China; but it resembles, to some extent, the world of ancient Chinese ritual.

If we survey rapidly the present distribution of ‘idiophonic’ orchestras, that is, of orchestras including a high proportion of chime-idiophones, we find, first, a few ritual orchestras surviving in China, rarely, if ever, played. In Korea we find stone-chimes, bell-chimes, celestas of iron plates, surviving in their ancient Chinese form and still played. In Annam a few instruments survive in the palace, unplayed, but as we have seen (p. 157), in rural Annam both stone- and bamboo-chimes and orchestras are to be found. In Cambodia and Siam we meet with a functional orchestra of gong-chimes, celestas, and bamboo xylophones, with flutes and drums as the only non-idiophonic components. In Java we observe a division of the celesta-like metallophones into forms with and without resonators; flute and sometimes rebab are used as leading solo instruments—perhaps a trace of Islamic dominance. Then comes the classical Balinese orchestra of idiophonic instruments and drums only; next the wooden chime-idiophones scattered over the islands, sometimes united as orchestras, sometimes used as single instruments; and finally there are the single wooden idiophones, simple as opposed to compound, flung far out over the Pacific Islands even to the Americas: the slit-drums and drum-substitutes made from bamboo tubes.

Were there no chime-idiophones in Korea and China one might define an Indonesian musical culture centred on Java, fading out in Annam in contact with China, in Burma in contact with India, in the islands in contact with Australian and Negrito elements. But the

existence of chime-idiophones as the first-named components of the Jou ritual orchestra, surviving to this day in Korea, necessitates a different assessment: their existence suggests that that cultural element in Indo-China, in Indonesia, and in the Pacific islands, which is responsible for the existence of chime-idiophones today, was still actively shaping Chinese musical culture at the time of the Warring States in the third century B.C.

We might suppose that Chinese influence in our own era had imposed this chime-idiophone culture on Indo-China and Indonesia. But this is out of the question. Annam, for example, the region most obviously under Chinese influence, was an integral part of the Chinese empire from 111 B.C. until A.D. 939; it was again held by the Chinese for a brief period in Ming times. Yet in spite of a deliberate attempt by the Annamite dynasty to foster Confucianism in 1007, and a fierce persecution of Buddhism in favour of Confucianism by the Chinese in Ming times,¹ there is almost no trace of the ritual orchestra in urban Annam at the present time. Indeed, chime-idiophones only survive in regions least exposed to Chinese influence.

A second possible channel of Chinese influence was established later: Khubilai Khan, Mongol emperor of China, attacked Java in 1292. His offensive was repulsed; but from this time onwards Chinese influence in Java grew until, at the end of the fifteenth century, it is noticeable in the treatment of landscape in temple bas-reliefs.² The contact was established too late, however. It is not to be supposed that Chinese influence in Yuan times led to the development of an orchestra in some respects more primitive than the ritual orchestra of Jou times.

In Siam and Cambodia, on the other hand, the chief formative cultural influence is usually held to have been Indian—either Sivaist or Buddhist; yet the music of Siam and Cambodia is characterized by the use of orchestras of chime-idiophones with the rebab as the sole Indian (or Islamic) borrowing. From bas-reliefs on the great stupa at Borobudur in Java (750) it is known that orchestras of the time included all the instruments of ancient India.³ The evidence suggests that in Java, at any rate, Indian musical influence was at one time paramount in court and ritual orchestras; it renders even more striking the fact that Java now shows so little trace of this influx of foreign instruments. If one assumes that Siam and Cambodia were at one time no less Hinduized than was Java, it is remarkable that

² Ibid., p. 412.
they also exhibit so little Indian influence in their current musical practices.

An alternative explanation would seem to be that in the remote past the inhabitants of the great plain of the Yellow River included an ethnic element closely related to that now distributed all over southern China, Farther India, Indo-China, Indonesia, and the Archipelago. A number of cultural parallels have in fact been adduced at different times in support of the idea of an ancient community of culture over Far Eastern Asia. One such is the parallel between ceremonies in different regions in which protective animals participate. Attention has been drawn to the resemblance of the Balinese Barong to the lion-dancers in Hokusai’s album Daily Exorcisms;¹ and the Barong has been compared with the Chinese lion that dances in the street at the New Year.² To these may be added the Tibetan lio dancers. It must be admitted, however, that the common factor in these parallels may be Tantric Buddhism of Indian origin.

There are, however, certain other features, so far unconsidered, common to the musical cultures of the different peoples in this area. One of these is the importance of the bamboo plant. The Javanese myth of the origin of music is described by Raffles in the following terms: ‘the first music of which they have any idea was produced by the accidental admission of the air into a bamboo tube, which was left hanging on a tree . . . the angkloeng was the first improvement upon this Aeolian music.’³ Here, as in the Chinese account of the making of the pitch-pipes (p. 94), bamboo is of primary importance.

A second point in relation to bamboo concerns the curious mixture of names of bells and of pipes in the Chinese names for the series of pitch-pipes, the liuhleu (p. 95). This mixture of names has functional parallels in Indonesia. In the quotation from Raffles an idiophonic instrument is regarded as the descendant of a wind-instrument; conversely one finds wind-instruments (goembang) in gamelans in West Java, which functionally replace single gongs and are in fact bass flutes; other examples of such instruments are to be found on other islands—on Flores, for example.⁴

The functional equivalence of struck xylophones and struck metallophones can be observed all over Indo-China and Indonesia. Moreover, in the area of the islands many of the simple struck idiophones are resonating bamboo tubes; for a tube may either be struck or

¹ De Zoete and Spies, op. cit., p. 95.
blown to yield a note. The observation, then, that names of bells and names of bamboo tubes were freely mixed in naming a series of pitch-pipes in ancient China, is surely less surprising when one finds: (1) blown pipes functionally replacing struck metallophones; (2) bamboo xylophones existing side by side with metallophone chimes; and (3) a living tradition to the effect that, although a blown pipe produced the first music, a struck tuned pipe (the *angkloeng*) was the first improvement on such a system.

Considerable interest has been aroused among musicologists by the parallels between Chinese and South American panpipes. In surviving specimens of Chinese panpipes, the pipes are divided into the two sets, the *liuh* and the *leu*, arranged symmetrically on either side of the instrument. In ancient Peru the two sets of panpipes (in ‘raft’-form, as in China), played by two players, were connected by a cord. This arrangement still exists in Bolivia and among the Karen in Burma. Now the two sets of pipes in the Chinese instrument are the male and female portions of the series (p. 95); and, as if echoing Chinese practice, among the Cuna Indians of Panama, the player has two sets of panpipes, a fifth apart, referred to as man and wife and connected by a cord. These instruments seem to point to the possibility that a knowledge of the properties of pipes is a part of the most ancient cultural heritage of a people distributed in the course of time from the Yellow River valley to the Burmese hinterland and Central and South America.

The whole position of the bamboo plant in early Chinese civilization is of importance in the discussion of cultural affinities. It seems reasonable to assume that, whatever elements may have coexisted or been added at a later stage, there must have been a considerable bamboo-cultural element in the people who made and played and sang about mouth-organs (in the *Book of Songs*) in the eighth century B.C. Elephant and buffalo, as well as the bamboo rat, *Rhizomys*, were known to the people of Anyang in Shang times, and the climate in general was milder and more humid then than later. Though large bamboos do not grow today in the region of Anyang they may well have grown there in the second millennium B.C. The presence of such a bamboo-cultural element would make understandable the preoccupation of these people with the properties of pipes as sound-producing organs of all types, both as wind-instruments and as

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struck-idiophones. Furthermore it seems likely that a relationship between struck-idiophones and free aerophones, such as one observes in this area, could only have been discovered in a bamboo culture, since bamboo is unique among natural products in mechanical properties and in conformation.

Various wooden idiophones have been known in China since ancient times: the tiger (a scraped idioophone), the percussion clapper, and the trough (a struck-idiophone) were used in the Jou orchestra; the wooden fish, still in use among Taoists and Buddhists, is a slit-drum. By this armoury of simple wooden idiophones, China is linked with many peoples of south-eastern Asia; and one of these ancient idiophones, of the dimensions of a toy, distributed at the present time almost universally over central Asia, Siberia, China, Indo-China, Assam, Indonesia, and Melanesia, is the Jew’s harp.

The position of the Jew’s harp among musical instruments is remarkable. It is, following Sachs’s classification, a plucked idiophone, that is, an instrument of naturally sonorous material requiring no additional tension (as do strings or membranes) to convert it to a substance of high elastic modulus. But in the form in which it occurs among the Naga, Mosuo and Minjia, for example, it is only a step removed from the free reed of the mouth-organ. There is evidence that the free reed has always been recognized by the Chinese as an instrument distinct from the mouth-organ in which it occurs. It is referred to in the Book of Songs as hwang (192) written with the bamboo determinative, and this is nowadays identified with the metallic free reed of the mouth-organ: Waley\(^1\) translates, for example, ‘Blow my shèng-pipes, trill their tongues’, where ‘tongue’ is ‘hwang’. Although the free reeds are of thin copper in the Miau mouth-organs (p. 150), as they are in the Chinese instrument, in those from other peoples of south-eastern Asia—from the Dyaks of Borneo, for example—the free reeds are cut in thin bamboo and let into the wall of the pipe (pl. 6 (f) and (g)). From the photograph it can be seen that in construction these reeds are miniature Jew’s harps, with the thickening near the free end of the tongue carved in the substance of the reed, as in the Jew’s harps (pl. 6 (c) and (d)). ‘Whistles’ from Shandong may consist of two short tubes of bamboo into the walls of

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\(^1\) The Book of Songs (London, 1937), p. 192. This is the usual interpretation of this passage; but it is worth noticing that there is a suggestive change in the verb in the Chinese. A literal translation would be: ‘Blow sheng; strike hwang.’ Van Gulik (R. H. van Gulik, Hsi K’ang and his Poetical Essay on the Lute (Tokyo, 1941)) has indeed suggested that the hwang was a separate instrument—in his opinion a variety of sheng. It may have been a plucked or struck idiophone.
which two bamboo free reeds are inserted, as in the Dyak instrument (pl. 3 (j)).

From accounts of the Jew’s harp-technique in eastern Asia, it is clear that although this is a plucked idiophone, and the mouth-cavity acts as a loosely coupled variable resonator, the amplitude of vibration of the tongue is influenced by the manner in which the breath is expelled against it. The Jew’s harp is not so far removed from the free reed, activated by the breath and closely coupled with a tuned resonator, as one might suppose. The frequent use of a large, loosely coupled resonator with the Jew’s harp in Java, for example, narrows still further the gap between free reed and Jew’s harp. Only in bamboo, however, is a continuous transition possible, in the same material, from struck or plucked macro-idiophone to a plucked micro-idiophone (a Jew’s harp) and from this to a breath-activated micro-idiophone (a free reed). This is because of the special properties of bamboo; its stiffness is greater than that of any other wood and it occurs naturally in the form of resonators.

One remarkable aspect of the Jew’s harp technique in various regions of the Far East is its use to imitate animal or human sounds; similar use is made of its relative, the free reed. We have seen how the Jew’s harp is used by the Lihjiang Mosuo in China to imitate speech during courtship (p. 154). The koouchyntzyy (193) (a free reed ‘whistle’) is used in Pekin puppet plays today for imitating animal and human sounds—hens and infants, for example; and there is a Song account of a man rendered mute who successfully used a ‘whistle’ for purposes of communication, ‘as do the puppet players’. In Bali there is a Jew’s harp orchestra which not only plays music of the ritual orchestra, but also provides an accompaniment of animal noises for certain dances: in particular, noises of toads for a pantomime toad chase. Lastly, tribes of the Nassau Range in central New Guinea ‘symbolise consciously certain animals by means of the Jew’s harp...’

Even the onomatopoeic names for the Jew’s harp, current in widely separated regions of eastern Asia, appear to be related. The Balinese gênggong recalls the gonggina of the Garos in Assam.  

5 De Zoete and Spies, op. cit., pp. 249 ff.
the kunka of the Golds (lower Amur, eastern Siberia) and the qongon of the Gilyaks (lower Amur and Sakhalin). The Chinese hwang, for the free reed—derived (according to Karlgren) from an ancient form g'wang, may also be related to these.

The coming of the Bronze Age to the Far East meant the translation of stone or bamboo idiophones, both simple and compound, into bronze. The free reeds, we may suppose, were translated at this time to metallic free reeds; and the Jew’s harp has also undergone translation into terms of metal. Bronze Age culture undoubtedly reached the various regions of the Far East at very different times: although it was advanced, for example, in the plain of the Yellow River by 1500 B.C., it does not seem to have reached northern Annam until the fourth century before our era (p. 91). In rural areas on the mainland and in some of the islands of south-eastern Asia, the translation of bamboo idiophones into metallophones has never occurred.

We have seen (p. 87) that the five notes of the Chinese scale were anciently correlated with various aspects of the cosmos. A similar correlation exists in Bali, where the five notes are associated with the gods of the five directions: North, East, South, West, and Centre. The Centre is the realm of Batara Siva (whose colour is white) and is equated with the first note of the series, ding. Each of the four directions has its colour and is equated with one of the notes. It may be that this system is Indian in origin, but it has not been possible to find an Indian correlation of a five-note scale with the properties of the cosmos. Moreover, even before the third century B.C., the Chinese were certainly familiar with the Five Rulers of the Earthly Regions, each with his characteristic colour. At the time of the compilation of the Lijih Yuehling the following equation had been established between the notes and the directions.

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<td>la</td>
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1 Emsheimer, ‘Über das Vorkommen und die Anwendungsort der Maultrommel in Sibirien und Zentral-Asien’.
5 Courant, ‘Essai historique sur la musique classique des Chinois’, *Encyclopédie de la musique*, 1st partie, i, p. 93.
From McPhee's brief statement it is not possible to be certain what are the Balinese correlations of notes, colours, and directions, except in the case of the tonic, *ding*, which is the Centre and is white. In the Chinese system the Centre is yellow; but correlations varied. Symaa Chian,¹ for example, quotes a system with *re* and *la* reversed. The existence of such a correlation in Indonesis, even though the terms correlated differ, merits investigation.

Looking back now over the whole of the Far Eastern area, we may surely regard it, with some justification, as a unit. From what centre an ancient common musical culture spread throughout the area under review cannot as yet be determined; nor are we in a position to do more than note the possible significance of cultural parallels recently established between the Balkans and south-eastern Asia, parallels which suggest a far closer connexion between the Far East and the lands of the Pontine Basin in the first millennium B.C. than has hitherto been envisaged;² but that the 'chime idiophone' substratum is of great antiquity is clear from the recent discovery in southern Annam of stone-chimes knapped in the manner of neolithic flints from the Bacsonian of Indo-China and tuned to a pentatonic scale close to the *pelog* scales of Indonesia.³

In spite of the foreign instruments and music which began to invade China from Hann times onwards, and in spite of the one time dominance of Indian instruments and music in Indo-China and Indonesia, we are never likely to confuse Chinese, Siamese, Cambodian, or Indonesian music with Indian music, so strongly marked is the individuality of the music of Far Eastern Asia. In some of the islands of the Archipelag, however, we meet a different musical culture; there, melodies take the form of expanded triads or fanfares. Pure fanfared melodies also occur, as we have seen, in rural Annam and in Cambodia. Their occurrence on the mainland accords well with the general picture of population dynamics in south-eastern Asia; anthropological studies also suggest the presence in parts of Indo-China of

² Kunst, 'Kulturhistorische Beziehungen zwischen dem Balkan und Indonesien', *Mededeling No. CHI, Afdeling Culturele en Physische Anthropologie, No. 46, Koninklijk Instituut voor de Tropen* (Amsterdam, 1953).
negritoid peoples. The possible relationship of certain peoples of south-eastern Asia to African peoples must not be lost sight of; and here again studies of music and musical instruments already offer significant pointers. Finally, there is reason to anticipate that traces of other, and possibly earlier, musical strata than the common substratum will be found throughout the Far Eastern area; it is for the future to confirm their existence and determine their ethnological significance.

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(46): For shin read shi of Kangshi (89).
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IV

THE MUSIC OF INDIA

By Arnold Bake

INTRODUCTION

The term 'Indian music' embraces a very wide and varied field of musical phenomena. Classical theory was formulated in detail as early as the second century B.C., the date now accepted for Bharata's Nātyaśāstra, the earliest surviving treatise. This is actually a work on stagecraft, but includes six chapters on music. On the subject of religious chanting there are even older texts, like the Rkpratiśākhya (fourth century B.C.?), and the oral tradition of that kind of music goes back at least a thousand years more.

Apart from this historically developed and theoretically defined system, one has to take into consideration the numerous ways in which the different peoples and tribes of India give vent to their musical impulses, which vary according to their respective stages of culture. This wide range of musical activities has not escaped the notice of the indigenous authors on music; they mention its existence but do not take it into account when formulating the classical theoretical system.

When we examine the system which the Indian writers themselves have built up, we see that we are confronted with something closely related to that of Ancient Greece. The conclusion reached by Antoine Meillet in respect of the metres of Ancient Greece and India: 'Le nombre et la précision des concordances du védique avec le grec sont trop nets pour qu'une rencontre fortuite soit vraisemblable';¹ is equally applicable when comparing the systems of music of the two ancient civilizations.

The music of India is the easternmost representative of a large group of interrelated musical phenomena, in the same way as Sanskrit is the easternmost representative of a large group of Indo-European languages. On the northern and eastern border of India this group meets, but does not intermingle with, the basically different conceptions of the Chino-Tibetan and the Far Eastern tone-systems. It is

true that one finds strains of a composite nature in the folk-music of Nepal, northern and eastern Bengal, Assam, and down into the Chittagong Hills, but the official system does not acknowledge them, nor are they found anywhere outside these very definite border-regions.

CULTURAL AND PHILOSOPHICAL IMPORTANCE

It is impossible to divorce Indian music from the whole structure of Indian culture and philosophy with which it is interwoven in a number of ways from the earliest times of which we have records.

A remarkable feature of Indian culture is its ability to integrate many different and seemingly divergent tendencies against the background of a unifying philosophical thought. From an Indian standpoint there is nothing strange in the fact that the Sāṅgītaratnakāra (The Ocean of Music), a treatise dating from the thirteenth century, should begin with a detailed cosmogony, gradually narrowing its scope to the human body and the stages of pregnancy from month to month, before it gets down to what we should consider the subject of music proper. To the Indian student, music is not an isolated phenomenon but one directly and inextricably linked with philosophy and religion, and of cosmic importance. The right kind of music—that is to say, the only kind of music worth considering—is that which deserves the epithet vimuktida (bestowing liberation), that is the music which, when properly practised, serves to break the cycle of birth, death, and rebirth. The eminent French Sanskritist Sylvain Lévi once said: ‘On ne sait pas assez le rôle immense qu’a tenu la musique dans les civilisations anciennes comme un élément intégrant de la vie religieuse et politique.’ To look into that aspect of the matter well repays the trouble.

In the finished system, as found in the texts of the classical, pre-Islamic period, such as the Sāṅgītaratnakāra, we find the central notion of nāda (sound) which has, of course, a musical connotation, but, apart from this musical meaning, a physical as well as a metaphysical aspect.

In music—the Sanskrit term for which, Sāṅgīta, includes vocal music, instrumental music, and dance—vocal music is considered to be pure sound, sound per se, in contrast to instrumental music which is described as a manifestation of sound. Dance, the third

1 In a letter to the Director of the Kern Institute of Leyden University (25 November 1929).
component of the triad, is dependent on both vocal and instrumental music, so that music as a whole is dependent on sound.¹

This definite distinction between the nature of vocal music and that of instrumental music seems strange from a rationalistic standpoint. Why should the one be pure sound in itself and the other a secondary manifestation? It seems that at the time when these theories were first formulated the function of the vocal chords was unknown. Thus it is easily understandable that the miracle of the change from silent life-breath (prāṇa) into sounds of meaning and beauty, without the aid of any visible or perceptible agent, came to be considered as a spontaneous manifestation of sound itself, basically different from the sound produced by a man-made instrument.

That the function of the vocal chords was unknown, or at least considered to be irrelevant, we may conclude from the description of the five stages of this spontaneous manifestation:² ‘This prāṇa then, stirred by the fire of the body, goes gradually upwards and produces an extremely subtle sound in the navel, a subtle sound in the heart, a strong sound in the throat, a weak sound in the head, and in the mouth a sound with the qualities of art.’

On the physical plane the entire human society is dependent on sound, as explained by the following reasoning:³ ‘By sound the letter is formed, by letters the syllable, by syllables the word, by words this daily life. Hence this human world is dependent on sound.’

It must be borne in mind that the sound that rules the world by means of speech is the same spontaneous manifestation which produces the musical phenomena.

The metaphysical theory of sound, set forth in the Saṃgītaraṇākara, shows the position of music in the religious system of India. It probably represents a medieval attempt at explaining the actual religious importance of music which struck the philosophers of those days, but had its roots in much earlier, even prehistoric periods.

¹ Śāṅgadeva, Saṃgītaraṇākara (referred to later as SR) Ānandāśrama Sanskrit Series, 2 vols. (Poona, 1896), i. 2. 1; Dāmodara, Saṃgītadarpāṇa (referred to later as SD) (Paris, 1930), i. 13:

   gītām nāḍātmokam vādyam nāḍāvyakyāt prāsasyate
   taddvayāṅgatam nṛtyam nāḍādhīnam atas trayam

² SR, i. 3. 3-5a. SD, i. 34, 35:
   pāvakaṃprītaḥ so ’tha kramāḥ urdhvapate caran
   atisūkṣmam dhvanim nābhau hṛdi sūkṣmam gale punah
   pūṣṭam śīrṣe tvapūṣṭam ca kṛtrimam vadane tathā
   avirbhāva-vatī evam pañcādīḥ kīrtīte budhaḥ.

³ SD, i. 2. 2; SD, i. 14:
   nādāna vyājyate varṇāḥ padam vānāt pṛddāḥ vacah
   vacasa vyavahāro ’yaṃ nāḍādhīnam ato jagat.
The metaphysical explanations are principally concerned with vocal sound, as being primary in nature. This, as we have seen above, was produced by the gradual upward surge of the prāṇa or life-breath. In its course the prāṇa passes different mystical centres of power, bearing the name of cakras (circles), portrayed as lotuses with a varying number of petals. Two of those cakras have special importance from the musical point of view, namely the anāhatacakra situated in the heart, and the viśuddhacakra in the throat. The latter, having sixteen petals, is considered as the seat of speech and of all the musical notes with their divisions and variations.¹

The sound alluded to so far is only the āhatanāda (struck or manifested sound), which cannot exist without its ideal counterpart, the anāhataanāda (unstruck or unmanifested sound). It is this dual nature of sound as āhata and anāhata, which brings it right into the centre of religious-philosophical speculations, because the unmanifested sound, the anāhatanāda, is identified with the creative principle of the universe in its transcendent form of Shiva himself, as well as in its immanent form as the syllable OM which is said to reside in the heart. Hence the name of the centre of power placed there, the anāhatacakra:²

In the heart is a lotus with twelve petals, called anāhata, belonging to Shiva in his aspect of the syllable on, a beloved object of adoration.

There the wise revere the unmanifested sound according to the instructions of the preceptors, the sound that is for liberation but not for enjoyment. That sound, however, when manifested in the world, serves for enjoyment, but also to break the cycle of existence.

In this context the breaking of the cycle of existence means the merging of the individual self with the creative principle of the Universe.

It is now easy to see how music was held to serve as a means to that ultimate bliss. Sound, in its unmanifested aspect, was identical with the divine creative principle of the Universe, not only in its transcendent aspect, but also with that aspect which dwells in one’s heart. So it remained for the individual to find the right way to realize the connexion between the latter aspect of the unmanifested sound and the manifested sound, in order to be brought into direct contact with the divine creative principle of the universe itself, which amounted to the desired liberation. The obvious means to this end was music,

¹ SR, i. 2. 199 ff. SD, i. 18–25a.
² SR, i. 2. 164b–165. SD, i. 16–17a:

\[
\text{tatrānāhataṃ nādam tu munayah samupāsate}
\]
\[
\text{guropādiṣṭa-mārgena muktidam na tu raṅjakam}
\]
\[
\text{sa nādas tvāhato loke raṅjakaḥ bhavabhājikah.}
\]

(16)
and preferably vocal music, which by its own nature was pure sound itself.

On the physical plane the power of music was easily grasped when one understood that, on the one hand, sound regulated human society through its power to form letters, syllables, and words, and that, on the other hand, vocal music was that very sound in its spontaneous form. The ideal means to influence and regulate the course of human existence would thus naturally be a combination of words and musical sound, that is to say the intoned formula, or mantra, which we actually find used for that end in every form of religion on Indian soil.

In the above philosophical construction of dhāta and anāhata nāda, we find consequently the crystallization of the ancient Indian belief that music has a well-defined power to influence the course of human life in this world, and that it even can lead to the ultimate bliss of the merging of the self with the divine principle of the universe, in other words that it can bring about the breaking of the cycle of existence. Hence it fully deserves the epithet vimuktida (bestowing liberation), given to it in the Sanskrit texts.

VEDIC MUSIC

The notion that the power of music, especially the intoned word, can influence the course of human destiny and even the order of the Universe, goes back to the very oldest surviving form of Indian music, namely, the music of the Vedas. The intoned formula is the pivot of the whole elaborate structure of Vedic offerings and sacrifices. It is the power of the words, enunciated with the correct intonation, that determines the efficacy of the rites: a mistake may destroy everything. The priests claim that by their activity they not only uphold the order of human society, but maintain the stability of the universe. By means of well-conducted ceremonies they have compelling power over the Gods themselves. The instrument that conveys that power is the word. It is impossible to overlook the connexion between Brahman, in the sense of divine principle, and brahman in the sense of sacrificial formula or incantation.

The Vedic offerings comprise a great many actions: altars are built, fires are lit, butter and other substances are poured into the flames, and animals are sacrificed. Sometimes these activities may continue for a year or longer, but none of them have any value unless accompanied by the prescribed recitations, uttered with exactly the right intonation. Musically those recitations are of great interest, as in their successive forms they represent the development from ordinary speech
to elaborate singing, with a compass ranging from one or two notes to an octave. The bhāṣikāsvara (speech tone) has the narrowest compass and is employed, according to tradition, in reciting the formulas of the (White) Yajur Veda. It is an even recitation without variation in pitch. A greater compass, however, is found in the Rigveda, the basis of all the texts used at the Vedic offerings. It contains the hymns to the different deities as they were composed by the sages of old who are known by name, but about whose date nothing is known with certainty. Opinions range over a couple of thousand years, one school placing them in the fourth millennium B.C., another about the middle of the second millennium.

The way of chanting the Rigvedic hymns has definite musical importance, as the three accents employed, the udāṭta, the anudāṭta, and the svarīta, denote a distinct difference in pitch. There is some controversy as to the original meaning of these accents and their relationship to the pracamya (multitude)—a term denoting a succession of unaccented syllables. As we find the practice of Rigvedic recitation in our days—and examples collected by Haug in 18741 and Felber in 19122 seem to indicate that at that time the same system was followed—the accents indicate a compass of a minor or major third, the middle note being the udāṭta, the lower the anudāṭta, and the upper the svarīta. The pracamya coincides with the udāṭta, which, as a matter of fact, is itself unmarked in the Vedic texts. The anudāṭta is indicated by a horizontal line under the syllable, the svarīta by a perpendicular line over it:

Ex. 290

\[
\begin{array}{c}
\text{nā- rā-yā-nam} \\
\text{mā-hā-jē-yam} \\
\text{viś-vāt-mā-nam} \\
\text{pa-rā-yā-nam}
\end{array}
\]

(Taittirīya-aranyaka X. 11, as sung by Manjeri Ramakrishna Iyar, Allepey, Travancore.)

The melodic line follows the text in every detail; the words prescribe the rhythm and the flow; there is one note to each syllable, pitch is independent of duration. One might say that the melody only supports the words.

The Rigveda is extensively used, not only during the great Vedic

2 E. Felber-Geiger, Die indische Musik der vedischen und klassischen Zeit (Vienna, 1912).
sacrifices, but also during the lesser ceremonies in everyday life in the house. A large measure of similarity in tradition over a very wide area would thus point to a great antiquity and bear witness to a tenacity of custom not surprising in a field where deviations from the prescribed method were believed to have dire spiritual and material consequences. Adherence to the hereditary style would last as long as faith in the efficacy of the rites in question persisted. That faith has not yet died in India in spite of the onrush of modern civilization.

In the Sâmaṇveda, which, in contrast to the Rigveda, is used exclusively in connexion with the larger offerings and sacrifices, we find a complete reversal of the rules laid down for the recitation of the Rigveda. To begin with, the compass used is much wider, and some schools of Sâmaṇvedic chanting are said to use the full octave (the texts give the names of the seven notes, originally counted from the highest note downwards) but even if, as among the Nambudiris of the Malabar coast who follow the Jaiminiya tradition, the compass of only a second is used, the tendency is to deviate as far as possible from ordinary speech or even chanting. The words are broken up in an arbitrary fashion and often the periods start in the middle of a word; vowels are lengthened beyond recognition, and syllables without rational importance are inserted in the text. In most cases the basis of the Sâmaṇvedic chants is a hymn from the Rigveda, but it is overlaid and changed to such an extent that the original is usually well hidden. The object of this procedure is purely liturgical. By the very minutely prescribed changes the spiritual efficacy of the formula is heightened and the success of the sacrifice ensured.

The limitation of the use of the Sâmaṇveda to the actual offerings and sacrifices is the cause of its much greater rarity, and it would be useless to look for a sound tradition of the chanting of this Veda in parts of India where, owing to social changes, these larger ceremonies seldom take place: for instance, in northern India where continuous foreign invasions have shaken the very basis of Hindu society. It is in south India that the tradition according to the different schools is carried on, handed down from teacher to pupil, as has been the case for centuries. Priestly families in which the tradition is known to have persisted unbroken for twenty generations are not uncommon.

Research in this field, except by members of the priestly class itself, is greatly hampered by the secrecy that surrounds this type of singing, which is not meant to be heard, much less written down or recorded, by uninitiated persons. This is hardly surprising when one realizes the
supernatural effect attributed to the correct reproduction of the melodies.

At the actual sacrifices a hymn is executed by three priests who sing its seven divisions alone or in chorus. The priests to whom the singing of the Sāmaveda is allotted are the Udgātār with his two acolytes, the Prastotar and the Pratihartar. The introductory part, the Huṃkāra (the singing of the syllable huṃ), is done by the three together. Then follow: 2, the Prastāva, or prelude, sung by the Prastotar; 3, the Udgīthā, or main theme, by the Udgātār; 4, the Pratihāra, the first responsorium, by the Pratihartar; 5, the Upadrava, second responsorium, again by the Udgātār; 6, the Nidhāna, or final chorus, by the three priests in unison; and finally, 7, the Prāṇava, the chanting of the syllable om, also in chorus, which seals the hymn like our Amen.

For purposes of study or practice, however, the hymns are sung by one person only according to the song-books, the Gānas, of which there are four. The different schools of Sāmavedic chanting all use these four books, but sing them to quite different melodies. Even in one and the same school the differences are sometimes considerable:

Ex. 291
Kauthuma Sāmaveda (Chidambaram and Trichinopoly) S.V. I66a

Ex. 292
Kauthuma Sāmaveda (Baroda)
It should be mentioned that the tradition of the *Kauthumas*, as observed in Trichinopoly and Chidambaram, both centres of south Indian orthodoxy, shows no differences at all, apart from those that might have resulted from individual uncertainties of one singer or the other. The totally different style of the example from Baroda which called itself *Kauthuma* too, may be due to the very influence indicated above—the foreign invasions and their cultural consequences—and bears traces of the flourishes of the later, purely secular, musical style, strongly influenced by Moslem practices.

One can see that the claim made by the classical Indian theory of music, that the proper use of this art leads to salvation, has its roots in the Vedic practices. It is true that the object of the Vedic ceremonies, built on the proper enunciation of the intoned word, is not salvation, in the later spiritual sense, but the upholding of the order of the world and, by extension, of the universe. But in both cases the sole aim is to get in touch with the powers of the world of the gods, an aim that has perpetuated itself through the centuries, varying only as to the nature of the gods and the nature of the desired contact.

The second component of the triad comprised in the word *Sangita*, namely, instrumental music, has perhaps not such direct and clear connexions with the Vedic ceremonies as vocal music. Instruments are mentioned in the *brahmanas*, the treatises that describe the procedure of the ritual, and drums and cymbals must have made their appearance at a very early date. However, seeing the paramount importance of the spoken or intoned word, it is but natural that instrumental music should occupy the second place. In any case it is more than probable that the development and perfection of instrumental Indian music is of much later date than that of the vocal art.

As to the third component of *Sangita*, dance, which shares the epithet *vimuktida* with vocal and instrumental music, its links with Vedic ceremonies are very direct and clear. We find that the chanting was accompanied by movements of the hands, and perhaps also by
prescribed steps when executing certain tasks that involved going from one place to another. The hand movements were partly mnemo-technical, the position of the thumb against the different phalanges of the fingers indicating certain notes or figurations—rather like the Guidonian hand in Gregorian music—and partly had a textual meaning, inasmuch as certain postures indicated certain ideas or symbolized certain deities, thus approaching a sign-language that accompanied, followed, and intensified the meaning of the chanted text. These sequences of hand-postures and their development into a kind of sign-language are the basis of the most classical form of all Indian dancing, the Bharatanāṭya of southern India, and, to a lesser extent, of the Hindu forms of north Indian dancing, as well as of the mimed dramas of the coast of Malabar, the Kathākali and the Yakṣagāna.

As these movements are an integral part of the Vedic ceremonies and share the holiness of everything that belongs to revealed religion, one sees how they are by rights the third component of Sangīta, in so far as they have their roots in the practices of the Vedic ritual.

In actual life it is not improbable that at times the third component of the triad had a more prominent position than the other two. As mentioned above, the oldest data about the theory of music are found in the Bharatanāṭyaśāstra (c. 200 B.C.). This has thirty-six chapters, of which only chapters 28–33 deal with music.

It seems doubtful whether, outside the ritual sphere, the spiritual importance of music was always fully realized. After all, the dhatanūda was said to be for enjoyment as well as for the breaking of the cycle of existence, and one cannot wonder that the accent was often laid on the first function rather than on the second. Still, many traces of the original sanctity are preserved, for instance in movements of adoration and obeisance which one sees musicians and actors perform even nowadays and, more especially, in the attitude of the pupil towards his music-master, which is to a great extent that of a novice towards his spiritual guide. It is not forgotten that—if the latter understands his task properly—he ought to lead his pupil on the way to salvation.

THE CLASSICAL SYSTEM

Quite apart from its religious importance, the classical system of Indian music deserves attention in its own right. It explains every aspect of construction and technique in great detail, from the notes of the scale and their subdivisions onwards.
The Octaves

The basis of the classical system—as represented in the Saṃgītaratnākara, for instance—is the octave and its division into tones and semitones, closely akin to our system. The number of octaves recognized is three, one in each register, the low being the breast register, the middle octave the throat register, and the high octave the head register. This classification is another proof of the primarily vocal conception of music in India.¹

Consonance

The division of the notes of the octave is accomplished according to the laws of consonance, three intervals being recognized as such, namely, the octave, the fifth, and the fourth. Only they are consonant (saṃvāḍī). Dissonant (vivāḍī) are only the semitones. All the others are assonant (anuvāḍī).

Śrūtis

For the definition of what constitutes consonance or otherwise, the Indian theory has recourse to a tonal subdivision smaller than the West has taken into consideration for the construction of its scales. This microtonic unit is called śrūti, a word derived from the root śru (to hear) and it is defined as follows:² 'The sound that is just perceptible as such by the ear, without reverberation (i.e. harmonic connexion) is called śrūti.'

There are twenty-two śrūtis in the octave and the question has been asked whether they are mathematically alike. Sir William Jones, the first European scholar to interest himself in the matter, in the late eighteenth century, maintains that they are not, but are intended to be alike in a general way. He points out that mathematics do not enter into the subject at all as far as the writers of the Indian treatises are concerned.³ Bosanquet recognizes a general likeness in the conclusion of his article 'On the Hindu division of the Octave',⁴ a conclusion with which Rao Sahib P. R. Bandharkar

¹ SR, i. 3.7: 
vyavahāre tvasau tredhā hṛdi mandro ’bhidhīyate 
kauṅthe madhyo mūrdhṇi tāro dvīguṇācattārottaraḥ.

² SD, i. 49: 
svarāgāmātraśravanāṃ nādo’nuraṇānam vinā 
śrūṭī ity ucyate bhedāḥ taṃ tasmād dvāvdviṃśatīr maṭāḥ.


⁴ Proceedings of the Royal Society, xxvi (1877).
agrees.¹ Fox Strangways, however, attributes three definite mathematical values to the śruti:² (a) the difference between a major and a minor tone, 22 cents, called pramāṇāśruti; (b) the difference between a minor tone and a semitone, 70 cents; and (c) the difference between a semitone and the pramāṇāśruti, 90 cents. Reasoning along altogether different lines, a German scholar, Dr. B. Breloer³ arrives at the values, 24, 66, and 90 cents, practically identical with Fox Strangways’s conclusion. A more recent publication, however, A. Daniélou’s book on Hindu scales,⁴ attacks these calculations for not being precise enough. The exact value of the śruti, therefore, is still debated. It would seem, however, that, so far as the Indian opinion of ancient times is concerned, śruti is a generic name for any interval smaller than a semitone. No mathematical approach to the matter is found in India before the eighteenth century.⁵

Śrūtis are important in practice in defining the character of parallel modes with similar intervals; a śruti smaller or larger in the one mode than in the other creates a different mood or atmosphere. They are also of practical importance in ornamentation when the voice, or the vibrating string pulled sideways, swings above and below the actual pitch of the intended note without deviating as much as a semitone. But it is quite wrong to suppose that these śrūtis are ever used in succession, like our semitones in a chromatic scale.

Svaras

In theory the śrūtis are important to define the notes (svaras) of the octave and to establish their consonance or otherwise. A note—or, rather tonal interval—is defined as ‘an uninterrupted series of śrūtis, belonging together in harmonic connection’.⁶

śādja or sa, consisting of four śrūtis,
ṛṣabha or ri, consisting of three śrūtis,
gāndhāra or ga, consisting of two śrūtis,
maḍhayma or ma, consisting of four śrūtis,
pañcama or pa, consisting of four śrūtis,
ḍhaivata or ḍha, consisting of three śrūtis,
and niṣāda or ni, consisting of two śrūtis.

¹ Indian Antiquary, 1912.
² Grundelemente der altindischen Musik (Bonn, 1922).
⁴ In the Saṃgīta-pārījāta (Paradise Tree of Music) of Ahobala.
⁵ SR, i. 3. 26:
śrūtyantarabhāvī yoh snigdho nuraṇānātmaḥ
dsvo vaitajata śrōttītām sā svara ucyate.
Bharata says that notes at a distance of nine or thirteen śrūtis from one another (viz. fourths and fifths) are consonant. Those at a distance of twenty śrūtis (viz. seconds or sevenths) are dissonant. The remaining intervals are assonant. The later texts give two śrūtis distance as the definition of vivāḍī notes.

Grāmas

The scale according to the ratio 4, 3, 2, 4, 4, 3, 2, given above, is only one of the two basic scales, or grāmas, in practical use. It is called the sa-grāma, because it starts from the sa of the middle register.\(^1\) Parallel to this we find the ma-grāma, which is identical, except for the difference of one śruti in the pa, which in the ma-grāma consists of three śrūtis, causing the dha to have four. It is expressly stated that the ma-grāma starts on the ma of the middle register.\(^2\) The ratio of the ma-grāma thus is: 4, 3, 4, 2, 4, 3, 2.

The fourth śruti of pa which in the ma-grāma becomes the first śruti of dha is called pramāṇa (standard) śruti, probably because it was the only śruti readily demonstrable in practice. As both the sa- and the ma-grāma were living conceptions in Bharata’s times, it was possible to set the middle of the sa-grāma, 4, 4, 3, 2, (ma, pa, dha, ni), against the beginning of the ma-grāma, 4, 3, 4, 2, (ma, pa, dha, ni) on two identical vīnās, the pa being played on the second open string in both cases. The difference in pitch between the two pas gave a demonstration ad auras of a śruti (śru = to hear) which then could serve as a measure—pramāṇa—for the determination of the other, purely theoretical tonal divisions.

Following the indications of the ancient texts, which—probably as a remnant of the original descending order of the scale in Vedic times—accept the axiom that a note is realized on the last of its component śrūtis, the four śrūtis of sa lie between sa and ni and not, as we would reckon, between sa and ri.

Consequently the sa-grāma roughly corresponds to a D mode, the ma-grāma to a G mode, the former beginning with a minor third, the latter with a major third. Bharata explains in book 28, in the prose following verse 32, that one can play the ma-grāma starting from sa by changing the initial minor third of the sa-grāma into a major third by giving the ga four śrūtis instead of two.

A third basic scale, the ga-grāma, starting on the ga of the middle register, has no practical value and is not mentioned by Bharata, but

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\(^1\) SD, i. 79: tatra madhyasthasadjena sadja-grāmasya mūrchanāḥ. SR, i. 4. 12b.

\(^2\) SR, i. 4. 13b. SD, i. 79. Madhyamadhyamam ārabhya madhyamagrāma-mūrchanāḥ.
only by writers some centuries younger than he. It is said, even by the first writer who mentions it (Nārada), to exist only in heaven. This may refer to an arrangement of śrūtis that once existed, but had fallen into disuse at the time when the theoretical treatises were written, or to the fact that it is a purely theoretical construction. Its ratio is 3, 3, 3, 4, 3, 2, 4, and consequently it seems to have no connexion either with the sa- or with the ma-grāma, except for the fact that the pa consists of three and the dha of four śrūtis, as in the latter. Apart from mentioning it in passing, the texts take no further notice of this ga-grāma and base their subsequent calculations exclusively on the sa- and the ma-grāma.

Alterations

The difference in allocation of śrūtis to the pa and the dha found in the two grāmas is a basic and unalterable one. Apart from this, one finds that the notes in each grāma can be subject to other alterations, some comparable to our Western accidental sharps and flats. Including the change of the sa- to the ma-grāma the Samgītaratnakara mentions twelve possible changes in śrūti allocation, though, as some of them overlap, they work out to only seven in reality. Out of these seven only two (the kākalī ni and the antara ga) are in general use and taken into consideration when making permutations and combinations.

As in the classical texts the names of the notes are attached to the last of the series of their constituent śrūtis, the basic sa-grāma presents itself as follows:

\[1 \ 2 \ 3 \ 4, \ 5 \ 6 \ 7, \ 8 \ 9, \ 10 \ 11 \ 12 \ 13, \ 14 \ 15 \ 16 \ 17, \ 18 \ 19 \ 20, \ 21 \ 22\]
\[sa, \ ri, \ ga, \ ma, \ pa, \ dha, \ ni\]

It is evident that, as the notes were understood to be at the end of their constituent śrūtis, the loss of a śrūti at the beginning of a note was perceptible only by the fact that the note below it was raised one śrūti in pitch.

The alterations are:¹

(i) Sa, having four śrūtis, comes down from the fourth to the third śrūti, at the same time giving its first śrūti to kaiśika-ni (see the

¹ Joanny Grosset, 'Inde', in Lavignac, Encyclopédie de la musique, 1ère partie, i (Paris, 1913), p. 289.

SR, i. 3. 41–47:

\[\text{ta eva vikrtavastha dvadaśa pratipaditah}\]
\[cyuto’cyuto dvidha sañño dvisrutivikrtya bhavet\]
\[sadhāraṇe kākalīte niśādasya ca dhṛyate\]
\[sadhāraṇe śrutim sadjīm rpaḥah samśrīto yadda\]
eleventh alteration). Sa thus becomes a note of two śruti. This is the first audibly altered note, cyuta (fallen) sa.

(ii) Sa remains on its proper, fourth, śruti, but has its two initial śruti annexed by kākali-nī (see twelfth alteration). This sa is called acyuta (not-fallen) sa, and is not audible as an actually different note, as the position of the name-śruti is not changed.

(iii) Ri remains on its proper, seventh, śruti, but annexes sa’s top-śruti. Sa thus becomes cyuta-sa (first alteration).

(iv) Ga shifts from its proper (ninth), to the tenth śruti, annexing the first śruti of ma and thus becoming a note of three śruti. This is the second really new note, called sādhāraṇa (common) ga.

(v) Ga annexes one more śruti of ma, thus becoming a note of four śruti. This is the third really new note, antara (medium) ga.

(vi) Ma comes down from its original (thirteenth) śruti to the twelfth, giving at the same time its first śruti to sādhāraṇa-ga and thus becoming a note of two śruti. This is the fourth really new note, called cyuta (fallen) ma.

(vii) Ma remains on its original (thirteenth) śruti, but gives its first two śruti to antara-ga. It is called acyuta-ma, analogous to acyuta-sa.

(viii) Pa cedes its upper śruti to dha (in the ma-grāma) and is called triśruti (three śruti) pa. This is the fifth really new note.

(ix) Pa gives its top śruti to dha, but annexes the top śruti of ma, which thereby becomes cyuta-ma. This pa is called kaiśika (fine as a hair) pa.

(x) Dha annexes the last śruti of pa, in the madhyama grāma, but remains on its original (twentieth) śruti. This is called vikṛta (altered) dha.

(xi) Ni annexes the first śruti of sa. This is the sixth really new note, called kaiśika ni.

(xii) Ni takes the first two śruti of sa. This is the seventh really new note, called kākali (soft) ni.

It will be seen that the alterations follow strictly parallel lines in the two tetrachords of the octave.
The word gráma in its general sense means village or community. In its musical sense it is defined as ‘a collection of notes and the dwelling place of the múrcchanás and their derivations’. Weber suggests in his *Indische Streifen* that the Greek word gamma in its musical sense of scale, is a derivation from the Sanskrit gráma, through some intermediate vernacular form. Certainly the modes in Greek music are derived from the basic scale very much as the múrcchanás are derived from the two grámas. In the Indian theory each gráma gives rise to seven múrcchanás (extensions or gradations) by taking each successive note of the descending scale of the gráma in question as the basis of a new series of seven. Thus the first múrcchaná of the sa-gráma will be sa-ní, the second ni-dha, the third dha-pa, and so on, the seventh being ri-sa. It is expressly stated that the first múrcchaná of the sa-gráma starts on the middle sa, the first múrcchaná of the ma-gráma on the middle ma. It is clear that this procedure changes the relative position of tones and semitones within the octave in exactly the same way as does the Western method of building modes.

In each of the fourteen múrcchanás one can introduce either the kákali-ní or the antara-ga or both kákali and antara, which gives three possible variations to each basic pattern, adding up to fifty-six, i.e. four times fourteen, múrcchanás in all. Apart from these alterations, the Indian theory recognizes not only full, heptatonic (sambáma) múrcchanás, but also hexatonic (sáda) and pentatonic (auḍava) varieties, each again with such alterations as the remaining notes allow. From this substratum the later modal system of rágas and ráginís could develop naturally.

Múrcchanás can be sung in their natural, diatonic order or in meandering sequences. In a detailed text like the *Sángitaratnákara* no possibility of combination or permutation is left unexplored. For the development of the modal system, however, only the basic heptatonic modes with their hexatonic and pentatonic varieties have to be considered, as it is from them that the classical system of rágas and ráginís was finally born.

Játis

There was, however, an intermediate stage in the development from múrcchanás to rágas, namely, the játis. Out of the fourteen múrcchanás

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1 SR, i. 4. 1. SD, i. 68:

grámaḥ svarasamāhah syān mūrcchenādeḥ samārāyāh
tau dvau dharatale tatra syāt śādigrāma adimaḥ.

of the two grāmas only seven assumed the status of jāti or basic mode. Four, those starting on sa, dha, ni, and ri were based on the corresponding mūrcchandas of the sa-grāma; three, starting from ma, ga, and pa, belonged to the magrāma. Contrary to the custom followed with the mūrcchandās, the sequence of the jātis is always given in ascending order: sādji is the first jāti, ṛṣabhī, not niṣādavatt, the second.

In addition to the seven basic jātis, Bharata enumerates the names of eleven more, combinations of two or more of the first seven. Each jāti has its own ‘pillar notes’, incipient, final, and melodic centre, and some additional individual features, which stamp them clearly as the ancestors of the subsequent rāgas. In the Bharatanātyaśāstra the term rāga in its technical sense is yet unknown, but the rāgas incorporate all the melodic permutations and combinations of the older system to which numerous new characteristics have been added. For all its intricacies and delicate refinements, the classical system of rāgas has nothing intrinsically different from the Western modal system of the Middle Ages.

Pitch

One difference of approach to melodic structure in India and the West seems to be due to the fact that at a very early stage the Western systems fixed a definite pitch for each note, whereas everything in the Indian theory points to the fact that pitch was strictly relative and had no connexion with the names of the notes separately. The tendency to identify sa with c, very general in our days, cannot be much more than fifty years old and dates especially from the introduction and virulent spread of the portable harmonium through towns and villages.

The only indication as to pitch in the classical texts is\(^1\) in verses like the following, in which each successive note is identified with the cry of a bird or beast, not always the same creatures in each case.

The peacock utters the note sa;
the cātaka-bird ri;
the goat the note ga;
the kraiñca bird ma;
the woodpecker with its clear voice pa;
the frog, excited by love, the note dha;
the elephant, hit on the head with the driver’s hook, utters the last note (ni) through its nose.

\(^1\) SR, i. 3. 48. SD, i. 152, 153:
ṣadjam vadati mayūraḥ ṛṣabhākhyam cātako brute
gāndhārkhyam chāgo nigadati pakṣi to madhyamam krauñcaḥ
gadati pañcamam ahaṅkāpikāḥ ratati dhāvatam unmadadarduroh
ṣrṇīsamāhatamastakakauñjaro gadati nāsikāyā svaram antīmam.
Now, unless this has some, not immediately apparent, symbolical or mythological meaning, it has little meaning at all. For instance, the cry of the peacock consists of at least two notes which are certainly not even an octave apart; consequently it cannot stand for sa without further elucidation. In the same way anyone hearing the confusion of different noises emerging from a herd of goats would be sorely pressed if he had to determine the fixed pitch of ga.

The current practice—and there is no evidence that things were materially different in former days—is, that a singer chooses his sa according to his convenience, and keeps to it for the duration of the whole performance, irrespective of the number of rāgas he presents. The same is the case with instrumentalists. A change of sa would entail a very laborious retuning of the accompanying drums, one of which usually gives the sa, the other the ma or pa. When more than one musician performs at the same function, each generally has his own drummer, or at least his own set of drums, which are tuned to the sa he has chosen.

**Rāgas**

Clearly this is all that is required in a purely modal system. It is always this relative position of tones and semitones measured against a certain fixed point which determines the character of a mode, whether in the West or in the East, and the rāgas—as the jātis before them—have certain salient points of the scale which serve as a skeleton for their individual structure. These points bear the name of graha, aṃśa, and nyāsa:¹

_**Graha**_ is the incipient note, ‘the note that is placed at the beginning of a song’.

_**Aṃśa**_ is the melodic centre, ‘the note that occurs often in the course of a performance’.

_**Nyāsa**_ is the final, ‘the note that finishes a song’.

In the performance of a mode, whether a jāti or a rāga, the first thing necessary is to establish these three sufficiently clearly, and in the lists of rāgas in the textbooks, the notes of the scale that have these functions are always clearly given. It not infrequently happens that one note assumes two or even all three functions, so that the same note is graha, aṃśa, and nyāsa.

¹ _SR_, i. 7. 30, 33, 38. _SD_, i. 146, 147:

\[ \text{gītādāu śāhātaḥ yas tu sa grahasvara ucyate} \]
\[ \text{nyāsāḥ svaras tu viṣṇeyo yas tu gītasāmāpakaḥ} \]
\[ \text{bahulasām prāyogeṣu sa aṃśāsvara ucyate} \]
It is customary to preface the performance of a rāga—as it must have been with the jātis before—with a prelude, called ālāpa, in which, against the note chosen for the function of sa, the salient points are established, as well as the secondary features, such as hexa- or pentatonicity, frequency or paucity of certain notes or intervals, high, middle, or low tessitura, and so on.

It is the combination of all these secondary characteristics that makes a rāga into something more than a simple mode, and gives it the quality expressed in the word rāga as compared with jāti. The latter means simply genus, the former, however, from the root rāñj (to colour), means everything which that root suggests: colour, emotion, and atmosphere. A rāga is a mode which has developed such a special ethos that it cannot be mistaken for another combination of notes expressing a different emotion. Two rāgas can be based on the same basic mode or jāti, and yet be entirely different in the mood that they convey. There can be several reasons for this effect; for instance, if the first has its amśa—the centre of musical gravity—near the drone, while in the second it soars far away from it, the first will create an atmosphere of sadness and depression, the second one of exuberance.

In this way the variations, permutations, and combinations are endless, especially when existing rāgas are combined to form new, composite ones, partaking of the characteristics of two or even more components. In the classical rāga system such a new creation usually bears the name of its parents, as, for instance, Megh-Malhār, Gauf-Sarang, Mālava-Kausika, or Sindhu-Bhairavi. This tendency is traceable to the oldest times on record. Bharata mentions the phenomenon of jāti-sādhāraṇa (community of jātis) in which one jāti partakes of the notes of the other. One also can link up rāgas by a process comparable to modulation, starting in one rāga and skilfully introducing—after a suitable lapse of time—characteristics belonging to another, thus weaving what is called a rāgamāla (garland of rāgas). At a performance by a famous artist the listeners, that is to say those who have the intimate knowledge of the rāgas performed, without which the refinements and variations of the presentation of the known features cannot be properly appreciated, will be startled and surprised the moment a foreign element is introduced and approve only when this leads towards the shape, feelings, and emotions of the next rāga.

In the later stages of development of the classical system, that is to say, mainly after the influx of Muslim culture, which set the

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1 Songs in the 'pathetic' rāga Todi and the 'devotional' south Indian rāga Begada are recorded in The History of Music in Sound (H.M.V.), i, side 12.
seal on the differentiation between the music of north and south India, we find a tendency in the north to carry the specialization so far that the musical shape gives rise to a physical shape. The Rāgas are depicted as divine or human beings in surroundings that suggest the atmosphere they create. The gender, rāga and rāgini, masculine and feminine, had been established at a fairly early date; connexions with times of day and night and seasons of the year are also enumerated in the older classical texts, both in north and south India, but the paintings, the last possible stage in personification, belong to the north. Thus, for instance, the rāga Megha (cloud) is described as follows in the Sāngitadarpana:¹

Megha is heptatonic, having dha in the three functions of graha, anṣa, and nyāsa, in the mūrechanā uttarāyata (the third of the sa-grāma), to be sung with the altered (vikrita) dha. A gush of erotic sentiment. Rāga Megha, the Youth, having a body like the blue lotus, with garments like the moon, dressed in yellow, implored by thirsty cātaka-birds (who drink only raindrops), with a smile sweet as nectar, is resplendent among heroes, in the midst of clouds.

Only the north Indian system bases its classification on the gender of the rāgas. Usually one finds six rāgas with five wives—rāgini—making a total of thirty-six, with innumerable offshoots classified as children. It is a system that gives room to unbridled flights of fancy in which no measure of uniformity between the different local traditions has been achieved.

Side by side with it we find, however, the system of dividing the rāgas and rāginiś into thatś or groups, more or less along the lines of the different original basic modes, the jātis of the Nāṭyaśāstra. A that groups together those rāgas and rāginiś which have a similar construction. The word² originally applied to the arrangement of the movable frets of a stringed instrument such as the setar, for the playing of one chosen mode, which of course included several rāgas. One generally recognizes ten thatś.

This second and less universal north Indian system, which, however, has gained a much wider popularity with the spread of music-teaching in schools and colleges, is of a later date than the more

¹ SD, ii, 108, 109:
megah pārṇa đhatrayah sydd uttarāyata mūrechanā vikṛtadhāvato geyah śṛngārasa- pūrakaḥ
nīlōtpalābhavapur indusamānacailāḥ pīṭāmbara śṛṇṭatakayācyamānaḥ
pīḷ宇samandahastī ghanamadhyavartī vireṣu rājati yuvā kīla megharāgah

² Fox Strangways, op. cit., p. 106.
(a) INDIAN Vīṇā PLAYER
For further details see page xv.

(b) A BURMESE ORCHESTRA, SAING TYPE
For details of instruments see page xv.
fantastic male rāgas with five wives each, as shown by its name (taken from the technique of an instrument imported from Persia). All the same it has striking affinities with the universal south Indian system, that of the melakartas which may be said to be a modified continuation of the ancient arrangement in jātis.

Melakartas, of which there are seventy-two, are divided into two exactly parallel groups of thirty-six each, identical but for the circumstance that the first group uses natural fourths, the second augmented fourths from sa. The rāgas follow one another according to their gradually increasing number of accidentals in the two tetrachords. The names are arranged according to a definite plan, so that anyone who knows the codeword can tell at once which notes have to be sung in a particular rāga and also what place the rāga occupies in the melakarta scheme.

North and south use different names. The that based on notes corresponding to our major mode is called Bilāval in the north and is the melakarta ‘Śankarābharaṇa’ in the south. The north Indian Bhairavi that (our medieval Phrygian mode) is Hamumantoḍi in the south, and so on. On the other hand, one finds that identical names, such as Hindola, denote different rāgas in north and south. All the same, there is no basic difference between the two systems; one may regard them as two dialects of the same language. Generally speaking, the classifications as well as the system of south India as a whole are more logical and bespeak a more mathematical intellect than the pronouncedly emotional northern traditions.

As mentioned above, accomplished musicians establish the ethos of the rāga they are going to perform in the ālāpa. This unaccompanied prelude in free time may last for an hour or more. Each detail of the rāga that is being presented is minutely illustrated from all possible angles. The accompanying drum comes in fully only when the actual composition begins. In general a complete composition consists of the following four divisions: asthai (the theme), antara (the second subject), saṅcāri (development), and ābhog (oda) which may be replaced by a return to the asthai. The corresponding south Indian divisions are pallavi, anupallavi, caraṇam, and pallavi.

For teaching in schools, the rāgas are somewhat simplified and instead of the improvised ālāpa, the children are taught a short song which incorporates all the characteristics of the rāga in question, as, for instance, the following song, meant to illustrate the pentatonic (auḍava) rāga called Bhūp or Bhūpkaliṇ (Ex. 293).

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1 Fox Strangways, op. cit., p. 139, footnote.
In this song *ga*, the third note of the scale, quite clearly has the functions of *graḥa*, *aṃśa*, and *nyāsa*. According to Fox Strangways¹ this represents the Poona tradition, as *Bhūpkaliān* when sung according to the tradition of Gwalior has *ri*, the second note of the scale, in these functions. *Ma*, the fourth note, and *ni*, the seventh note, are missing, but the former is touched on once in the first bar, which is permissible. The way in which phrases have to be constructed in this *rāga* is exemplified as succinctly as possible. Such an example differs from an *āḷāpa* in two aspects: it has time (*tālā*) and it has words. The words, in this case, are a reminder of the real function of music. They say:

Oh Sāḍhu (wise man), notes open the realm of Heaven.
This *rāga* is pentatonic according to the laws of music:

—*sa*, *re*, *ga*, *dha*, *sa*, *dha*, *pa*, *ga*, *re*, *sa*—. The notes can be sung in a topsy-turvey way, can’t they?

**Tālas**

As for the time (*tālā*) of Ex. 293, this is one of the irregular time-divisions of Indian music, the time of ten, consisting of 4+2+4 beats, the strong beats being one, five, and seven. Consequently this is not a doubling of quintuple time, which also occurs and consists most commonly of 3+2 beats, though sometimes we find 2+3.

¹ Fox Strangways, op. cit., chart facing p. 151.
Just as the time of ten is not composed of twice five, so the time of fourteen does not consist of twice seven. The time of seven is composed of \(3 + 2 + 2\), that of fourteen may be \(4 + 4 + 2 + 4\).

Both these examples are taken from the Kirtan music of Bengal, the devotional music of the Vaishnavas. This time of fourteen bears the name of \(kāṭa-dōśhkhusi\) (the small \(dōśhkhusi\)) and, as the name leads us to expect, we find also a \(madhyam\) (middle) and a \(bōrō\) (large) \(dōśhkhusi\). The \(madhyam-dōśhkhusi\) consists of twice a \(kāṭa-dōśhkhusi\) and has twenty-eight units in a period. The accents in the second half are an exact replica of those in the \(kāṭa-dōśhkhusi\): 1 2 3 4, 5 6 7 8, 9 10, 11 12 13 14, 15 16 17 18, 19 20 21 22, 23 24, 25 26 27 28. The \(bōrō-dōśhkhusi\) is again the \(madhyam dōśhkhusi\) taken twice and consists consequently of fifty-six units. Both derive the right to be called separate \(tālas\) from the fact that their whole length is occupied by one musical phrase. The conception is the full period, not the component parts. Bar lines would give an entirely wrong emphasis.
Such long periods give an ideal scope for interplay between drum and solo instrument, each making its own variations on the underlying rhythmical scheme and both landing triumphantly together on the first beat of the next period which is therefore called sam (together). This contest is followed with breathless attention and suspense by a well-trained audience, who heave a sigh of satisfaction when the tension is over. This enjoyment presupposes an extraordinarily well-developed sense of rhythm and a passion for cross-rhythm which seem to be inborn. Even quite small children are observed beating intricate rhythmic patterns when they get hold of an empty tin or anything that gives sound when beaten. On the other hand, keeping time as we feel it, progressing from stressed beat to stressed beat, seems to be difficult for Indians; one often sees boy scouts being drilled to march in step, but even when marking time they invariably lose the regular swing very soon.

The classical system of tālas embodies both the regular and the irregular times. As a matter of fact, the system is based on the binary principle. The smallest recognized duration in musical time is the anu-druta. Two anu-drutas make a druta. Two drutas make a laghu. Two laghus make a guru, but three laghus a phuta. The laghu is taken as time-unit and is also called mātra or mātrika (measure).

The phuta¹ is said to embody the Hindu Trinity with Brahma presiding. Thus the system embodies the ternary as well as the binary principle. This fact is further borne out by the inclusion of the virāma (rest) in the scheme of calculations. The virāma adds half the value to the note again. The complete list of time-values is thus sevenfold: the anudruta, the druta, the druta with virāma (three anudrutas), the laghu, the laghu with virāma (three drutas), the guru and the phuta (which is equal to the guru with virāma or three laghus).

This system has been preserved almost intact in south India, where it forms the mathematical basis of the current system of music. From the exposition given by Professor Sambamoorthy of the University of Madras,² it appears that the unit is the anudruta and no longer the laghu. This anudruta equals the time-duration of a hand-clap. The druta consists of a hand-clap and a sideward movement of the right hand. The laghu consists of a hand-clap and two or more finger counts (i.e. putting the thumb against the different fingers). The laghu varies in duration according to whether it consists of a clap and two or more than two finger-counts, but in one and the same tāla not more than

¹ SR, v. 258a. SD, vi. 50b: dipte trayo virincyddyā devatāḥ munibhiḥ smṛtāḥ.
² P. Sambamoorthy, The Musical Time Chart (Madras, n.d.).
one species of laghu may occur. Five different kinds of laghu occur, equalling 3, 4, 5, 7, and 9 units, in other words, a clap with two, three, four, six, or eight finger-counts. It appears that the fifth category is not in very frequent use.

The terms guru and pluta seem to have fallen out of use. With the remaining anudruta, druta, and laghu seven principal tālas are constructed:

1. Eka, consisting of one laghu.
2. Rūpaka, consisting of a druta and a laghu.
3. Jampa, consisting of a laghu, an anudruta, and a druta.
4. Matya, consisting of a laghu, a druta, and a laghu.
5. Tripuṭa, consisting of a laghu and two drutas.
6. Aṭa, consisting of two laghūs and two drutas.
7. Dhruta, consisting of a laghu, a druta, and two laghūs.

Owing to the five different values which a laghu can have, these seven basic tālas immediately grow to a set of thirty-five principal tālas. The basic tāla, called Eka, consisting of one laghu only, can thus represent the times of three, four, five, seven, and nine units to a bar. The first variety of the basic tāla called Dhruta, consisting of a laghu, a druta, and two laghūs, gives a total of eleven units to the bar, \(3 + 2 + 3 + 3\). The second variety of the same basic Dhruta gives fourteen units, \(4 + 2 + 4 + 4\), a general scheme not very different from the above quoted kaṭadōṣhkhushi of Bengal.

The time of ten of Ex. 293 would be defined as the second variety of Matya. As a matter of fact, the north and south Indian system of tālas again differ not in kind but in degree, the southern system having drawn the logical consequences of the underlying principles in a much more consistent fashion.

It is clear that this system of musical time has its roots in prosody. None of the irregular times could have sprung up independently of the recitation of poetical metres. Seen in this connexion they present no difficulty. An instance is provided by the Buddhist metre Buddhapiya of nineteen syllables, in which, contrary to the strict classical Sanskrit rules for metres of this class, one long may be dissolved occasionally into two short syllables, and even one short syllable into two ultra shorts:

\[\text{-o-o-o/-o-o-o/o-o-o-o-o-o/-}\]
\[\text{-o-o-o/o-o-o-o-o/-o-o-o-o-o/-}\]

If this metre is recited with a short note to a short, and a long note to a long syllable, with a lengthening of the last syllable of the line
in accordance with the general custom, we see that the time of seven emerges naturally.

Ex. 296

\[
\begin{align*}
\text{Svayambhunāṭh-stotra (Nepal)} \\
\text{man-ju-śrī-ki-tā-ram-ya-par-ba-ta} \\
\text{tri-di-va-dar-pa-su-dā-ra-kāṁ} \\
\text{sa-tya-san-jnā-ka yu-ga-vare kha-lu} \\
\text{pad-mā-pūr-vā-gīr-indra-kāṁ.}
\end{align*}
\]

Considering the intimate connexion of the classical theory with the system of Vedic chanting, and the prevalent custom of never reciting but always chanting poetry, the influence of the metres on the formation of musical times is hardly surprising.

There is little doubt, however, that influences from popular customs, for instance ordinary dances and working songs which demand a strong and regular beat, have also contributed to the actual development of tālas. Sometimes perhaps the musical tradition of invaders has made its contribution as well. Fox Strangways attributes the incidence of the lilting 6/8 time, called dādra, in the north of India, to Muslim influences.¹

In any case it would be surprising, in a country like India where drumming is so ancient and has reached such an astonishing degree of perfection, if there had not been a strong contribution from the purely instrumental side to the system of musical times, quite independently of, and side by side with, the pronounced vocal and literary bias expressed in the official formulation of the system in the classical texts.

CLASSICAL INSTRUMENTS

That instrumental music as a whole retains its character of a secondary art—at least in theory—in spite of the flowering of a very distinct and elaborate solo instrumental style, is proved by the defini-

¹ Fox Strangways, op. cit., p. 300.
tation given as late as the seventeenth century in \textit{Sam\=-gitadar\-pa\=na}:\textsuperscript{1} ‘lending charm to both vocal music and dance.’ At that time instrumental technique was actually at its zenith, and already for centuries before that the voice must have been striving to imitate the intricacy and speed of ornaments devised for solo instruments like the \textit{vīṇā}. The treatment of the voice in modern days is first and foremost a purely instrumental one. In several of the most applauded styles the age-long connexion between word and melody has been greatly weakened and replaced by a show of instrumental agility in which words have no importance, or hardly any, but which for perfection of speed, neatness, and precision of intonation has perhaps no equal anywhere in the world.

The Indian texts divide the instruments into four classes: \textit{ghana}, \textit{avanaddha}, \textit{su\-śira}, and \textit{tata}.

\textit{Idiophones (Ghana)}

Under the first heading fall the percussion instruments which we call idiophones: vibrating pieces of metal, like cymbals, which are beaten together to produce sound. \textit{Ghana} means body, according to the texts,\textsuperscript{2} but it also can mean iron and pewter and anything compact. Its mental association with the root \textit{han} (to strike) probably plays its part in the denomination of this class, but it is not mentioned by way of explanation.

These instruments must have existed in a variety of shapes and forms at a very early date. Even nowadays they have a strong connexion with religion, being employed at religious ceremonies and during processions on account of their spiritually purifying properties. Purely musically, they have no great value although they can have a very important rhythmical function in supporting and accentuating the development of figurations on the drum, whether played solo or as an accompanying instrument. In Kathiawar the playing of cymbals has developed into a separate art requiring great technical skill.

\textit{Drums (Avanaddha)}

The drums are grouped together under the heading \textit{avanaddha}: instruments which have their openings covered with stretched hides.\textsuperscript{3} This class is also very old and comprises a very great number of

\textsuperscript{1} \textit{SD}, v. 1: \textit{vādyam nirūpyate gitaṁtratyor anurāṇjakam}.
\textsuperscript{2} \textit{SD}, v. 4b: \textit{ghano mūrtib}.
\textsuperscript{3} \textit{SD}, v. 3a, 4b: \textit{carm\=ivanaddhamvadanam vādyate pa\-tahā\-dikam avanaddham ca tat proktam}. 
different forms. Anything in India may on occasion serve as a drum, from an earthenware pitcher to a carefully tuned pair of drums like the *tabla*, used for court-performances, or the large metal battle-drums placed on the back of an elephant or a camel to lead troops in battle or to head processions. The last mentioned kind is beaten with sticks, but drums in India are generally played with the fingers and parts of the palms of the hand with such delicacy and skill that it is a joy to listen to a solo performance. In all its refinement the technique takes years of strenuous practice to master. The different strokes of the right and left hand are defined and named, and the combinations and variations of the right- and left-hand strokes, together and separately, give an almost unlimited scope to the artist, especially within the long phrases which the more intricate *tālas* present.

Prominent in our days are the *pakhawaj* and the *tabla*. The former is a descendant of the classical *mṛdanga*, still its present south Indian name, and has a clay body of irregular cylindrical shape, tapering slightly towards the left hand, with a large surface of parchment tuned to the note chosen as a drone for the performance. It tapers much more markedly towards the right hand, with a smaller stretch of parchment, tuned to the fourth or fifth above the drone. The tuning is very accurate and is effected by tightening or loosening the leather straps which hold the parchment in place.

Even more prominent perhaps is the *tabla*, a pair of drums, really the *pakhawaj* divided into two. The drum played by the left hand is made of metal (brass) and is semi-spherical. The drum for the right hand is made of wood and is cylindrical, only the top being open and covered with parchment. The tuning, regulated by blocks between the leather straps that keep the parchment in place, is the same as that of the *pakhawaj* and carefully and painstakingly adhered to. In this way the drums provide not only the rhythmical backbone of the performance, but also a firm basis on which the singer can rely for his pitch, and against which he can build his contrasts.

Considering the variety of indigenous drums, one would not suppose that there was any need for importation; nevertheless names like *nāqqārah* and even *tabla* point in that direction, as they are of Arabic origin.

*Wind Instruments (Sūṣira)*

Among the *sūṣira* (wind instruments), too, we find autochthonous as well as foreign species. The different kinds of bamboo flutes certainly belong to India from time immemorial and also the snake-
classical Instruments

Charmers' pipes, based on the principle of the bagpipes and, most probably, some kinds of real bagpipes such as are found in Kashmir. The conch also, which plays an important part in the majority of religious ceremonies and on all auspicious occasions as well, very likely belongs to the country and travelled from there into Buddhist lands such as Tibet, where it serves the same important religious ends.

Among the imported wind-instruments we may count the different varieties of the oboe class, such as the shannai (surnahi) which spread from the Near East across continents and to the far islands of the Indonesian archipelago. In this class only the flute—apart from the conch—has definite religious associations, being the beloved instrument of Krishna. There are numerous varieties of metal horns and trumpets, such as the sringa (horn) and sarpa (snake).

In modern times the clarinet has been introduced and is played happily in Indian style, to which it lends itself extremely well.

Stringed Instruments (Tata)

The fourth class, tata (stringed instruments) from the root tan (to stretch), again provides a great variety of indigenous and imported species. The most revered of all is the vīnā, a fretted plucked instrument. In its most primitive form the vīnā consists of a hollow bamboo stave with a gourd attached to the underside at both ends. The strings run parallel to the body on the upper side, passing across very high frets fixed to the body with wax. They are attached to the tuning pegs at one end and to a fixed tailpiece at the other. It is played either resting on the ground on its gourds, or held upright against the body, the upper gourd resting on the left shoulder. In another form of vīnā, popular in south India, the lower gourd has coalesced with the bamboo stave, which now rises out of it; the second gourd is loosely attached to the top near the tuning pegs. The frets are fixed in this form, too. The playing is usually done with a triangular plectrum of silver or steel wire slipped over the nail of the index finger of the right hand. The melody is played on the four chief strings. Three more strings run along the right side, tuned to the drone, the fifth (or fourth) and the octave respectively, and are struck intermittently with the other fingers of the right hand to provide the accompaniment. This instrument is capable of giving a wide variety of tone-colour, but its quality is extremely delicate and intimate, so that it is best enjoyed in a small room in which the finely spun ornamentation does not get lost in space. One way of creating these ornaments is to pull the string sideways with the fingers of the left hand after it has been
vigorously struck, and thus to vary the tension, producing various śrūtis as long as the vibration lasts.

The viṇā is one of the constant attributes of the Goddess of Learning, Sarasvatī, and in olden times it was one of the indispensable objects in a decent home for the welcome of a guest.¹ In the course of history the viṇā has had many forms, and it is not at all certain that the viṇā of the centuries B.C. looked like the viṇā of our days. It seems probable that viṇā was originally a generic name for stringed instruments; from ancient sculptures it is certain that a form existed with a boat-shaped body from which an arched neck stuck out, looking very much like the Egyptian harp. That form has now completely disappeared, but kindred forms had until recently survived in Burma. In the texts we find mention of viṇās with one, two, three, seven, nine, and twenty-one strings. (See pl. 7 (b).)

The kinnari has three gourds, one in the middle, fixed sideways. The tambura has only one gourd, incorporated in the body, and has four strings but no frets. It is always played with open strings as an accompaniment, either by the singer himself or by one or two assistants immediately behind him. The tuning is the drone, the fifth (or fourth) and twice the octave, and the strings are sounded uninterruptedly to create an unchanging background for the chosen rāga.

Another favourite plucked instrument is the setar, of Persian origin. It has movable frets which can be adjusted to the varying arrangements of notes within the octave according to thāṭ. It has a layer of sympathetic strings tuned to the notes of the octave, vibrating in consonance with the notes struck on the main strings, which gives a pleasant diffuse echo-effect. The technique of the setar has great affinity with that of the viṇā.

The sarod, played with a plectrum held between the fingers, has no frets. It has a balalaika-like tone-quality and a greater carrying power than most Indian instruments.

A bowed instrument is the sarangi, an instrument with a most pleasing tone-quality and good carrying power, but not in great social favour on account of its association with dancing-girls, in our days not a socially acceptable class. A peculiar legato quality is achieved on this instrument by pressing the nails of the left hand against the

¹ Mahābhārata Udyogyparvan, 40, 10–11:

| ajokṣā candanam viṇā adarśo madhusarpīś |
| viṣam audumbarām sankhaḥ svarnaṇabhā gorocanā |
| grhe sthāpayitavyāni dhanyāni manur abravit |
| devabrāhmānapūjārtham atithīndm ca Bhārata. |

(10) (11)
melody string—not the tip of the finger on it—and sliding them along
the string to the next note.\textsuperscript{1} The \textit{dilruba} and the \textit{esraj}—almost
identical in appearance and technique—are two more bowed in-
struments, each with a layer of sympathetic strings. Both are socially
acceptable, and both are of Persian origin.

In the villages there is a kind of very primitive small violin, made
of half a coconut-shell with a bamboo neck attached to it, and played
with a very arched bow. Skilled players extract a plaintive, but not
at all unpleasant, sound from this toy. The European violin has been
adopted with enthusiasm and serves its new masters very well, since
it has a much more powerful tone than any of the indigenous instru-
ments and is capable of producing all the refined shades of intonation
essential to proper Indian music. It is so much at home in India now
that it is counted as their own by many Indian musicians, especially
in the south.

Unfortunately the Hawaiian guitar has also made its appearance
and makes a powerful appeal, probably through its excessive slurring
power, a continuous tone always being sought after in Indian music.
Unmitigated harm has been done to Indian music by the introduc-
tion, probably through missionaries, of a miniature form of portable
harmonium which, by its fixed keyboard and haphazard tuning—
earnest but not altogether successful attempts at the European tem-
pered scale—plays havoc with the delicate tonal differences essential
to the system of \textit{rāgas} and \textit{rāginīs} and with the accurate aural percep-
tion of the Indian musician. The cheapness and the ease with which
one can master its technique—up to a point—have added to its
dissemination. It can be found in the most isolated and otherwise
unspoiled villages. It is mass-produced in India itself, and it seems
unlikely now that the evil can ever be eradicated.

\textbf{MODERN DEVELOPMENTS}

Indian music is passing through a critical period. The impact of the
West has shaken its foundations more drastically than foreign in-
fluences have ever done before. Mistaken attempts to foist the finished
Western system of harmony on to the perfect modal system of Indian
monophony have been made for the last hundred years, not only by
missionaries but also by enthusiastic Indian admirers of European
culture. In this process the delicate structure of Indian music is
crushed out of existence. Lately the music of the films, and jazz
with its coarse appeal, have not beckoned in vain.

\textsuperscript{1} A specimen of \textit{sarangi} music is recorded in \textit{The History of Music in Sound}, i,
side 12.
In this unfortunate development the radio plays an important part, but it also gives the champions of the severe classical style an opportunity to reach the ears of a great many more people than would have had the opportunity to hear this music in olden days. The medieval attitude of a master teaching only a few chosen pupils and not divulging his best to the uninitiated is still strong. Music for the masses is a very recent trend, and music teaching now tends to move away from the intimate teacher-pupil connexion towards class-teaching in schools and colleges. A certain amount of standardization has been unavoidable in the course of this development. Eminent men such as the late Pandit Bhatkhande—a Mahratta by birth but with enormous influence over the whole of north India, and founder of the Marris College of Music of the University of Lucknow—have striven to find a common denominator of the different current traditions of rāgas and rāginīs and fix them by means of notation, which had not been done systematically in the past. Yet the basis of the present system of notation is very ancient. It is a tonic sol-fa system in which the names of the notes, sa and so on, are used to indicate the melodic line with its time divisions.

This is a very strongly supported movement strengthened also by the growth of nationalistic feeling. But new developments, breaking away from the traditional system, are not lacking. The very perfection of that system precluded further development, and adventurous spirits have had to look for new avenues for their creative impulses. They have but rarely understood that the new developments must have their roots in Indian music itself to be viable, yet there are indications that that understanding is dawning. After a period of Western influence, Rabindranath Tagore turned to the folk-melodies of Bengal for inspiration, and all over India isolated poets and musicians are drawing their strength from the music of the people, often with very felicitous results. For Indian folk-music, which ranges from the primitive two-note sing-song of the Chencus of the jungles of Hyderabad to the stirring war-ballads of the bards of Rajputana and the mystical longing of the princess-saint Mirabai, is an expression of the whole life of the people, with their joys and sorrows. It is the depository of their traditional wisdom and their religious yearnings as well as of the pleasures and pastimes of everyday life.¹ Side by side with this hopeful trend of a group of poet-musicians to get their inspiration from folk-music, classical musicians are

¹ Six examples of Indian folk-music are recorded in The History of Music in Sound, i, sides 10 and 11.
feeling their way to a widening of tonal expression along polyphonic lines, but starting from Indian premises. There is nothing in the Indian system which would prevent a natural development in that direction, provided that the impulses spring not from intellectual curiosity, but from inner necessity.
THE MUSIC OF ANCIENT MESOPOTAMIA

By Henry George Farmer

INTRODUCTION

So far as our present knowledge goes, the earliest civilization was that of Mesopotamia, where an amazingly advanced stage of society existed in the fourth millennium B.C. at the very latest. The centre of this cultural elevation was in southern Mesopotamia, a land often called Babylonia, between 30° and 34° north latitude. In the upper part of this land, later called Akkad, was a linguistically Semitic group, while in the lower part there may have been other Semites. Before 4000 B.C. the latter were supplanted by a people called Sumerians, who spoke a non-Semitic tongue so strange that we cannot even say from whence they came. Their land was known as Sumer. The culture of the newcomers is generally considered to have been far in advance of that of the land of their adoption, so much so that it soon influenced both Akkad in the north and contiguous territories. In spite of this, it seems unwise to refer to the people of either Sumer or Akkad, per se, as the creators or stabilizers of this culture, since we know little or nothing of the earlier history of either.

If we view the movement of history in the light of the conditions which increase men’s knowledge, it seems that the most potent results are to be found where the greatest number of culture-contacts meet. For this reason, it is of Mesopotamian civilization that we speak, rather than of Sumerian or Akkadian. Thus we are compelled to look beyond strictly geographical limits in our survey of Mesopotamian music of the distant past, for indeed all peoples on what Breasted calls ‘the fertile crescent’ and its periphery must come within this purview, because it was by reason of admixture of stock, contrasts in habits, diversities in religion, and even friction of interests, that cross-fertilizations of ideas were produced, which made the supreme greatness and vitality of Mesopotamian civilization possible.

Nowadays, when scarcely a month passes without some fresh archaeological discovery, or a new philological deduction being registered, it is difficult to speak with any chronological certainty. That being so, many of the early dates that will be posited in what follows
must be considered simply as helpful stepping-stones, placed temporarily to accommodate the eye and mind in their stride across the stream of history, until a more durable bridge has been erected. The readjustments so ably determined and summarized by Albright\(^1\) have persuaded us, with some latitude, to draw up the following table which enables the reader to appreciate why certain dates do not synchronize with those of Dr. Curt Sachs and the late Canon F. W. Galpin who have contributed so much to our knowledge of the music of the peoples of the Mesopotamian past.

**FIFTH MILLENNIUM B.C.**

The Sumerians in Babylonia

**FOURTH MILLENNIUM B.C.**

Al-'Ubaid, Warka, and Jamdat Nasr periods

**THIRD MILLENNIUM B.C.**

Early Dynasty I  
Royal Tombs of Ur.  
Akkad Dynasty  
Guti Dynasty  
Ur Dynasty III  

Twenty-eighth century  
Twenty-fifth century  
c. 2360–2180  
c. 2190–2065  
c. 2070–1960

**SECOND MILLENNIUM B.C.**

Babylonian Dynasty I  
Babylonian Dynasty II (Sea Kings)  
Babylonian Dynasty III (Kassites)  
Assyrian Hegemony (Shalmaneser I)  

C. 1830  
c. 1675  
c. 1600  
c. 1270–606

**FIRST MILLENNIUM B.C.**

Chaldaean Dynasty  
Achaemenid Dynasty  
Seleucid Dynasty  

626  
538–331  
312–65

**THE PRIMITIVE ELEMENT IN MUSIC**

What first presents itself in early Mesopotamia is a well-established culture already far advanced, the more glittering features of which have the appearance of an origin elsewhere. Although the older literature of Sumer, such as the Gilgamesh Epic, offers vague hints

\(^1\) *Bulletin of the American Schools of Oriental Research*, nos. 77, 78 (1940), 88 (1942).
of what an earlier culture may have been, we are not able to experience so interesting a panorama as the gradual passage from that community of reed huts at Ur to the civitas. There is, however, abundant evidence of the survival of primitive culture in Mesopotamian civilization, not merely at the dawn of history in this land at the turn of the fifth millennium B.C., but even down to the Christian era.

When we observe that Assyrian bells are embossed with symbols of Ea, the divine Patron of Music, it may be assumed that it is a relic of the animistic past.\(^1\) The skin head of the Babylonian drum (balag) was made from the hide of a bull, and as late as the Seleucid era (312 B.C.) the Temple of Ea (Lumhā) was the place of an elaborate ritual at thefixing of the skin head on this sacred instrument.\(^2\) The image of a bull was also a prominent feature on the sound-chest of the grand kithara (\(\textit{? algar}\)),\(^3\) so that its resonance would be amplified in mind if not in ears. Like those animals who play instruments in Mesopotamian art remains,\(^4\) and those gods, kings, priests, and mummers, dressed in animal or fish-like garb, they recall earlier totemistic conceits.\(^5\) Yet we must not interpret these semeio-lineaments wholly by this cause, since there must have existed a purely naturalistic \textit{raison d'être} sometimes. There are two or three well-known art remains which show animals listening to, or in the presence of, music, in what might readily be considered bucolic scenes.\(^6\) The Mesopotamian psalms and lamentations continually voice complaint against the gods for searing and flooding the land, for the thoughts of the people were ever with their herds and harvests,\(^7\) and they considered the bull in the animal world and the reed in the vegetable world as antithetical. Their psalms tell of strength in the ‘gigantic steer’ and weakness in the ‘crouching reed’. This symbolism of puissance and docility, force and persuasion, was reflected in the deafening roar of the drum (i.e. the bull) and in the plaintive sigh of the pipe (i.e. the reed), for they were the ‘outward visible sign’ of an ‘inward spiritual grace’. Being a highly imaginative people they resorted to symbolism in many ways, but none is more intriguing than their use

\(^{1}\) M. Jastrow, \textit{Bildermappe zur Religion Babylonien und Assyriens} (Giessen, 1912), fig. 70.
\(^{4}\) Ibid., pls. iv, v, vii, viii.
\(^{6}\) Galpin, op. cit., pls. ii, 2; iv, 1; viii, 6, 7.
\(^{7}\) S. Langdon, \textit{Babylonian Liturgies} (Paris, 1913), pp. 1 ff.
of sound for this purpose, as Heuzey, King, and Thureau-Dangin have observed.

A close connexion between gods and music in Mesopotamia is significant. One of the most ancient of the gods, Ea, the ruler of the deep, had his name written with a sign which stood for drum (balag), the dread sound of which was the personification of his essence. Then there was Ramman, who commanded the thunder and the winds. He was conceived as the 'spirit of sonorous voice', which was in keeping with the ancestor of Thor, although it was probably because of its wind-like tone that the reed-pipe (balhallatu) was likened to his breath. One of the names of the goddess Ishtar, the virgin mother, was 'the soft reed-pipe', and her partner, Tammuz, was the 'god of the tender voice', while the name 'singer' (zammēru) was given to another of the immortals. It is such fantasies, 'nothing but vain' perhaps, in which sound, as the anima of all phenomena, was used to adjure and conjure benevolent and malevolent nature, that were the foundation upon which the later elaborate temple services of Mesopotamia were built.

THE MUSIC OF THE TEMPLES

All the cities of the Mesopotamian plains had their temples in the fourth millennium B.C. Within their sacred precincts were worshipped the many gods of their pantheons. Here, priests and liturgists, mathematicians and astrologers, passed their lives in quiet seclusion, for the temple was the centre of the intellectual and cultural life of the day. First among the liturgists was the precentor, known in Sumerian as the gala (Akkadian kalû). Unlike the priest, he was not a consecrated functionary, although it was his duty to intone the liturgic cantillation. There seem to have been three classes of precentor in the Sumerian period, the higher, intermediate, and lower, the last being counted in a menial grade. That many a kalû was only a part-time official is borne out by several contracts, but the existence of the

1 Revue d'Assyriologie, ix (1912), pp. 85 ff.
3 Sumerische und Akkadische Königstexte (1907), pp. 118 ff.
6 C. Viroletaud, Astrologie chaldéenne (Paris, 1908), Adad. xi.
7 Langdon, op. cit., p. 301.
8 C. Viroletaud et F. Pélagaud, in Lavignac and La Laurencie, Encyclopédie de la musique, 1re partie, i (Paris, 1913), p. 45.
11 Langdon, Babylonian Liturgies, pp. x ff.
Sumerian *galamaḫ* (Akkadian *kalamabû*) or chief precentor, who held the highest position in the city, reveals the sacred significance of his office.

These precentors were formed into guilds and they were housed, seemingly, in the temple college, just as were vicars-choral in Christian Europe. Here they were taught the mysteries of their sacred office, including a precise knowledge of the cantillation (*kalûtu*) which, like the *praecantus* of the Christian Church, was an art requiring a long training. The Sumerian language, like the Latin in the Roman Church, was the language of the liturgies although, later, an interlinear Akkadian version existed. As in Christian lands, these precentors of Mesopotamia were well versed in the sciences, and we have an astrological report signed by a precentor. Yet their most important work in this respect was as copyists and editors of the temple liturgies, so many of which have been preserved together with the names of the copyists.

The ordinary temple musician was called in Sumerian the *nar* (Akkadian *nâru*), the Semitic word being also used, probably, for ‘musician’ in the generic sense. We cannot be sure of the *nâru*’s actual duties, but he was possibly a chorister who, with others, made the responses in the liturgies. That the ‘chorister’ also played upon an instrument is well attested. Langdon says that his frequent connexion with private penitential services, especially those connected with magic, led to his ultimate dissociation from public services. At burial services it was the *nâru* and not the *kalû* who contributed to the penitential psalming and wailing. It is certain that the *nâru* was later seen quite frequently in the secular sphere. Equally important was the Sumerian *ilukaka* (Akkadian, *zammêru*), whose specific function is not easy to determine since the term often equates with *nâru*. Virolleaud and Pelagaud opine that while *nâru* signifies the generic term for ‘musician’, *zammêru* stands for ‘instrumentalist’. Yet he was definitely a singer also, and took part in the liturgies. Even Langdon does not help us except to say that the *zammêru* sang to an instrument and that he was distinct from the *nâru*.

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1 Langdon, *Babylonian Liturgies*, p. xii.
3 Langdon looks upon the *nâru* as one who ‘leads the congregation’ in public worship, just as the Presbyterian ‘uptaker of psalms’ did in the Scottish kirk; the same authority identifies ‘the familiar figure on seals, who leads a penitent to his god’ as the *nâru*. See Langdon, *Babylonian Penitential Psalms* (Paris, 1927), p. v.
5 *Op cit.*, p. 44.
The place in the temple and the duties in general of all these temple and extra-mural musical functionaries are nowhere definitely described. One imagines that the precentor specialized in the cantillation (kalātu) and sometimes, if not generally, accompanied himself on an instrument. It is prescribed in some texts when 'he shall sing' (izamur) and when 'he [the patient] shall recite' (imannū). The chorister's business, whether he was a nāru or zammēru, was the chant called in Sumerian sir (Akkadian širhu). Deimel (447b), however, cites the Akkadian šēru as 'a section of a song', a word cognate with the Hebrew šīr. Then there was the penitential psalm (Akkadian zamāru), which has a derived name in the Hebrew mizmôr, and it is possible that the Akkadian zamar tuṣgi (ӈšīgū) and the zamar šēri can be matched in the Hebrew mizmōr šiggaiôn and the mizmôr šīr (Psalms, vii, lxvii, lxviii). Lamentation proper in Akkadian was inhu, and its character is preserved in the nehi of Micah (ii, 4) and the nauh of the Arabs. The cult wail may have been known as alālu, although Deimel says 'shouts of joy'. If correct it may have given rise to the name of the sixth month (elūl), which was the time of wailing for Tammuz, still kept by the Jews.

Of the actual music of the Mesopotamian temples or elsewhere we know but little, although the vehicle by which it was expressed has come down to us in vast treasures by way of liturgies, breviaries, psalms, and songs, edited by Langdon, Reisner, Ebeling, and others. Indeed Langdon has said that a full index of this musical material 'would rival that of the Roman or Anglican books of devotion'. These public services date back to Sumerian days, at which date they consisted of but a single psalm or hymn, generally a lamentation, termed in Sumerian an eršemma, which strictly meant a psalm or hymn set to a reed-pipe. Yet other instruments were also used to accompany the psalm—the flute (tīg), drum (balag), kettledrum (līlis), and tambourine (adapa)—and in the course of time the music came to be known by the name of the complementary instrument. This one-psalm service passed away before the time of the first Babylonian dynasty (1830 B.C.), when the eršemma was supplanted by a complete liturgical service called a kišub. These new services had been compiled by the schools of liturgists who had combined several of the

1 Akkadisch-Sumerisches Glossar (Rome, 1937).
3 Sumerian and Babylonian Psalms, p. x.
4 Ibid., p. ix.
eršemma type of psalms or hymns which had a common appeal. ‘Here’, to quote Langdon, ‘we have extremely long services composed of a succession of melodies characterized by changing refrains and musical motifs.’

Each liturgy was now called a ‘series’ (iškāru), and it is found with as few as five psalms or hymns and as many as twenty-seven. At a later period the term eršemma was revived as an intercessional hymn at the end of a kišub.1 According to Langdon, our foremost authority on the subject, when the public services began to develop in this way, the music, which had hitherto been confined to a single instrument, now became based on what seems to be a wider instrumental conception.2 We read for example, in an addendum to the series called Exalted Heaven:3

The precentors a chant to the drum (balaggū) shall sing.
To the sacred kettledrums (uppū and līlissu) shall sing.
To the reed-pipe (ḥalḥallatu) and tambourine (manzū) shall sing.

Liturgies now came to be known by their first lines,4 and so perhaps their melodies also. Many of the latter are frequently mentioned, and Langdon says ‘that a certain tune was associated with all passages characterized by this refrain’.5 One might be reading an early English psalter when we see a rubric which says: ‘A song to the tune “Thou wilt not cast me down”.’ That the kišub was attended by processional movements on the part of the choir is also stressed by Langdon, who suggests that a ‘choral march’—‘a real recessional’—came at the end of the litany.6 Interludes are also found in lengthy litanies, and one may perhaps see in these an explanation of the much discussed selah of the Old Testament.

That the antiphon (gišagal) was fairly common seems to be accepted by Langdon,7 Cuming,8 and Galpin,9 and it may be mentioned that in later days the Akkadian word enū meant ‘answer’, ‘repeat’. It may have been derived from the Sumerian en (Akkadian šiptu).10 There is a Babylonian antiphonal lamentation in Akkadian

2 Ibid., p. xlii.
3 Langdon, Sumerian and Babylonian Psalms, pp. 70–71; Babylonian Liturgies, pp. viii ff.
5 Langdon, Babylonian Liturgies, p. xxxv.
6 Ibid., p. xlvii.
8 The Assyrian and Hebrew Hymns of Praise (New York, 1934) pp. 72 ff.
of a late period.\(^1\) which is a copy of a Sumerian original of the
time of Naram-Sin (c. 2280 B.C.). In this the women of various towns
participated. Sidney Smith suggests that they were divided into two
groups and that ‘each half-chorus sang alternately’ the lines which
were appropriate to themselves in the destruction of their lands by
the Guti.\(^2\) Perhaps a more moving example of an antiphon is the
Liturgy and Prayer to the Moon God, which dates from the time of
Dungi (twenty-first century B.C.). It is an appeal to the god Sin to
care for flocks and harvests, with twin recurring refrains, seemingly
responsory.\(^3\)

In addition to the instruments mentioned as being used in the
_kišub_ services, the harp (_zagsal_) also had a recognized place.\(^4\) Further,
those epical productions known as the _zagsal_ compositions may very
well have been accompanied by this harp.\(^5\) Galpin says that it was
used during the oracles of the high-priest.\(^6\) Before closing this section
it may be advisable to mention that while Langdon generally refers
to the _kišub_ as being a ‘choral service’,\(^7\) and frequently speaks of
‘melodies’,\(^8\) we must always understand that these terms merely re-
late to what was set to music, since not a solitary note has come down
to us save what may be divined from the so-called ‘notation’ which
will be dealt with later. In any case, Mesopotamian temple music was
_cantus_ in its primitive significance, for the simple reason that the
liturgy demanded a fixed and immutable _chant_, any variation from
which by precentor or chorister would be unthinkable, since its whole
efficacy depended on a rigid interpretation. That a particular chant
had a certain ethos in a theurgic sense is frequently mentioned in
Mesopotamian documents, and we read of the _kalū_ and _nāru_ who
‘know the melodies’ and are ‘masters of the musical movements’,
meaning the appropriate liturgic and ethiodal chants. This was an
absolute desideratum, since the gods were equally skilled, as we know
from the epithet of the goddess Ishtar, the patroness of litanies, as the
one ‘who understands the measures’ of the psalming.\(^9\) As for the
verbal form and content of the Mesopotamian liturgy Langdon has

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1 Cf. Galpin, op. cit., p. 62. Langdon, Babylonian Liturgies, xix; Sumerian and Baby-
lonian Psalms, p. 176.


3 Langdon, Babylonian Liturgies, p. 1. The refrain was quite common (pp. 70–71).


5 Langdon, Sumerian Liturgies and Psalms, p. 233. Cf. his Sumerian Liturgical


7 Sumerian Liturgies and Psalms, p. 245.


9 Langdon, Sumerian Liturgies and Psalms, p. 237.
rightly praised it as ‘the greatest system of musical ritual in any ancient religion’.\(^1\)

**SECULAR MUSIC**

Words alone are sometimes graciously eloquent of purpose, and at the very threshold stands the generic Akkadian word for ‘music’, *nigūtu* or *ningūtu*, which also has the connotation of ‘joy’, ‘merry-making’. *Alātu*, which also meant ‘singing’, had a similar import. This is admirably illustrated on an archaic seal in the Louvre which displays a bucolic scene, seemingly of a peasant playing a flute to one of his flock or herd.\(^2\) Such scenes are not uncommon in the art remains, and whilst they may be mere cameos, we can descry in them the part played by music in the lives of the people. Indeed in some instances it was considered as part of education.\(^3\) It has been said that ‘the old danced whilst the young made music’.\(^4\) One imagines that there were toil songs among the ancient Semites, as we know in the ‘well song’ of Exodus xxii. 17. Singers and drummers, in a picture of Assyrians felling palm-trees, certainly appear to be facilitating labour. Indeed an Assyrian annalist gives a picture of the Arabs who, as prisoners of war, were working as slaves at Nineveh, where they sang their native songs to relieve their sorrows. Their exotic music fascinated the idle Assyrians who begged for more.\(^5\)

One of the oldest Sumerian art remains, the Standard of Ur (twenty-fifth century B.C.), depicts a singer and a performer on the grand kithara (\(? algar\)) at a royal banquet, which was planned to ‘dispel gloom’.\(^6\) Several seals from the same period also suggest that the instruments shown accompany festive scenes, even with dancing.\(^7\) Here, not only the grand kithara, but the harp (*zagsal*), sistrum, and clappers, play their part. Then there are the many representations of animals, or mummers dressed as such, playing instruments of music—kitharas, harps, pandores, tambourines, drums, and the like—which scarcely represent religious scenes.\(^8\) All these bear testimony that from early Sumerian to late Assyrian days, music was part and parcel of social life in Mesopotamia.\(^9\)

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4. Ibid. ii, p. 331.
8. Ibid., pls. v, viii.
Assyria, from quite an early period, was certainly very fond of secular as well as religious music. In the martial moments of Tiglath-pileser I (c. 1113 B.C.) we read of a grand personage in the royal palace named the *rab zammère* ('chief musician'), and we are informed that the royal musicians gave public performances to gladden the hearts of the people of Ashur'. It is worth noting that when the victorious Assyrian generals put a city to the sword, they generally spared the musicians, who were sent to Nineveh with the valuable booty. To the very last days, music played a wholesome part in Assyrian social life, even though most of our testimony comes from regal sources.

From the time of Ashur-naṣir-pal III (c. 883–859 B.C.) we get ample lithographic material of music and musical instruments. First we have the sculptured slabs in the British Museum showing two players on the lower-chested harp (*zagsal*) (pl. 8 (a)). Sargon (c. 722–705 B.C.) also employed the joyous art in the celebrations consequent on his widely trumpeted victories. A probable sidelight on alien influence on Assyrian music is furnished about the year 701 B.C. when Sennacherib invaded Syria, sending one of his generals to lay siege to Jerusalem. To soften the wrath of the conqueror, the king of Judah sent 'his wives and his daughters, his musicians both male and female' as a gift, hoping that he himself might be spared. From this period dates a fine bas-relief in the British Museum showing players on the upper-chested harp and the diagonal kithara. It was the two court functionaries facing them with batons of office in their hands which led Rawlinson to suppose that they were time-beaters.

In the year of the ascent of Esar-ḥaddān (680–669 B.C.) to the throne, we read that when he re-entered Nineveh it was 'with musicians playing the lower-chested harp (*zagsal*)'. The British Museum bas-reliefs also illustrate the artistic interests of Ashur-bānī-pal (668–626 B.C.). When Teumman, the Elamite king, invaded Assyrian territory, Ashur-bānī-pal sought the goddess Ishtar for counsel. She quietened his fears and bade him turn to music and feasting. He obeyed, and in the midst of these pleasures came the news of the defeat and death of Teumman. The joyous scenes of the victory celebrations, with which music went hand in hand, have been recorded

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1. Schrader, op. cit. i, p. 46.
6. Ibid. ii, p. 252.
in stone. The great orchestra and choir of the vanquished king are delineated on another British Museum sculpture (pl. 8 (c)). The former consists of seven performers on the upper-chested harp, one on the lower-chested harp, two on the double reed-pipe, and one on a drum. The choir was made up of six women and nine children, and one of the former indulges in the favourite Eastern vocal practice of squeezing the larynx by the hand, to effect the high notes.

The Old Testament story in the book of Daniel (iii), written in the second century B.C., has an abiding interest, if only because of the instrumentation of that much-discussed orchestra of the Chaldaean king Nebuchadnezzar (604–562 B.C.). It comprised the 'qarnā (horn), mašroqithā (pipe), qithros (kithara), sabbekā (? trigonal lower-chested harp), and psantrīn šimfonyāh (upper-chested 'concord harp'). Although these were for the dedication of 'an image of gold', they were, no doubt, for secular purposes also, if not primarily. Another musical scene of Nebuchadnezzar's time, although not Mesopotamian, is pictured in Judith (iii. 8–10). It represents the Assyrian general Holophernes in his murderous descent upon Syria, where the petty kings and their people, to appease the invader, receive him with 'crowns, illuminations, and dancing to drums (tympana) and reed-pipes (tibiae)'.

Mesopotamian court minstrelsy, even in later Achaemenid days, was usually conceived on a grandiose scale. With the Assyrians the position of the court minstrel was a high one, as his apparel and situation often denote. His place was among the seniores priores, taking precedence of the savants, coming immediately after gods and kings. It may be recalled that it was a court minstrel who warned the Median king Astyages (d. 550 B.C.) of the aims of Cyrus (d. 528 B.C.). Crowds of singing-girls usually graced the palaces at this period, as Xenophon testifies. Yet 'Darius the Mede' (c. 521–485), when he had cast Daniel into the den of lions, was sore distressed and passed the night badly, 'neither were instruments of music brought before him' (Daniel, vi. 18). The singing-girls were the later Arabian qaināt, a term used to denote both female musicians and attendants, and the cognate Akkadian word, kinātī (female attendants), had probably the other meaning also. The Greek historian Ctesias, who was physician

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1 M. Jastrow, Aspects of Religious Belief and Practice in Babylonia and Assyria (New York, 1911), pl. 13.
2 Kinsky, op. cit., p. 3.
3 Schrader, op. cit. vi, pp. 72–73, 386.
4 Athenaeus, Deipnosophistae, xiv. 633.
5 Cyropaedia, iv. 6, 11; v. i, 1; v. 5, 2, and 39.
to Artaxerxes II (404–358 B.C.), tells us that one of the Babylonian king's lieutenants had 150 of these female singers at his table, and we know that when Parmenio, the Greek general, reduced Damascus, he took 329 of these singing-girls from the court of Darius III (d. 330 B.C.). Quintus Curtius (v. 1) has described the triumphal entry of Alexander the Great into Babylon, where he was met by a procession of priests (magi) chanting hymns, followed by Chaldaean diviners and astrologers, and musicians with string instruments, 'whose office it was to sing to their king'.

What secular music sounded like in Mesopotamia in those days we know no more than we do of the actual music of the temples. As with the latter, we only know of the media. Langdon has given some remarkable lists of song titles of purely secular import, although some may have been used in the temples. Among these are workers' and shepherds' songs, youth songs and love ballads, the initial words of which reveal lofty thoughts and passages deeply moving.

INSTRUMENTS OF MUSIC

Of the instruments of music in ancient Mesopotamia we possess a fair store of knowledge through the existence of actual specimens and a multitude of delineations, although much perplexity lies in their names, of which both the Sumerian and Akkadian languages offer quite an assemblage. Among idiophones we possess actual specimens of clappers from Ur (twenty-fifth century B.C.). These consist of a pair of copper blades. Other specimens were found at Kish. We also have them depicted in the art remains, although we do not know their names. Sistra were also discovered at Ur, but all that remains are the jingling plates. Yet we know the complete form from art sources. At a late period (c. 600 B.C.) we have a bell from Assyria, and sonnettes from the same place and period. Cymbals occur in two kinds: the plate type, pictured on a Babylonian plaque (? c. 1100 B.C.), and a cup type of late Assyrian times (eighth–seventh centuries B.C.).

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1 Athenaeus, xii. 530.
5 Woolley, op. cit., figs. 21 ff.
6 Ibid., pp. 260 ff.
7 Ibid., p. 177; G. Loud and C. B. Altman, *Khorsabad*, ii (Chicago, 1938), pl. 60.
8 Ibid. xiii. 608.
9 *A. H. Layard, Discoveries in the Ruins of Nineveh and Babylon* (London, 1853), fig. 70.
10 Galpin, op. cit., pl. iii, fig. 2.
During the Greek, i.e. the Seleucid, period, we also find cymbalists in figurines.¹ Their name has not been revealed, but the Akkadian verb *sanāqu* (to push, press together) reminds us of the Arabic *sanj*, pl. *sunūj* (cymbals).²

Both the texts and the art remains furnish names and delineations of membranophones. The Sumerian *lilīs* (Akkadian *lilissu*) was definitely a kettledrum, and we have a precious description of its composite parts.³ Evidence of a smaller type is quite positive in the Sumerian *ub* (Akkadian *uppu*) which equates with *līls*.⁴ What one may picture from the ideogram to be an hour-glass shaped drum was the Sumerian *balag* (Akkadian *balaggū*).⁵ The temple instrument must have been reasonably large, but there were smaller types as such names as *balag-tur* (small *balag*) may indicate. Such an instrument exists in Susian art.⁶ A grand-daughter of Narām-Sin (c. 2280 B.C.) played on a *balag-di*,⁷ which equates in Akkadian with *timbuṭu* and corresponds with *ṭabāļu*.⁸ The former possibly survives in the Persian *dunbag*, and the latter, certainly, in the Arabic *tabl*; whilst *balaggū* was handed down in the Aramaic *palgah* and the Syriac *pelaggē*. Two unidentified drums, held vertically and played at the waist, occur in late Assyrian art (eighth–seventh centuries B.C.).⁹

Frame drums, ordinarily called tambourines, existed in many sizes. A monster frame drum is delineated on the stele of Ur-Nammu (c. 2070 B.C.), now at Philadelphia.¹⁰ Slightly smaller examples exist in the art remains. One of the time of Gudea (c. 2200 B.C.) is at Paris,¹¹ whilst another, a Carchemish relief (c. 1050 B.C.), is in the British Museum.¹² It is believed to be the Sumerian *alal* (Akkadian *alū*).¹³ A portable tambourine figures in a relief from Tell Halaf (third millennium B.C.),¹⁴ and in other examples.¹⁵ This may have been the

¹ Statuette: British Museum (no. 91794).
⁸ F. Thureau-Dangin, *La Huitième Campagne de Sargon* (Paris, 1912), p. 26, line 159. Galpin suggests that the *timbuṭu* may have been a friction drum.
¹⁰ Galpin, op. cit., pl. iii, fig. 6.
¹¹ Kinsky, op. cit., p. 1, fig. 1.
¹² Galpin, op. cit., pl. iii, fig. 1.
¹⁵ Galpin, op. cit., pl. iii, figs. 3, 5.
(a) Assyrians playing lower-chested harps (883-59 B.C.)
(b) Harp from Ur (25th century B.C.)
(c) The royal Elamite orchestra, showing upper and lower-chested harps, double reed-pipes, and drum (688-60 B.C.)

See pages 237-8.
Sumerian mesi (Akkadian mazû, manzû),¹ a term linked by Langdon with the Sumerian adap (Akkadian? ətāpu)² which Galpin considers to have been a rectangular instrument³ having in mind, probably, the Hebrew toph and the Arabic duff.

Woodwind instruments were the most important of the aero-phones in Mesopotamia. In the Sumerian tīg, tīgi (Akkadian tīgu) we have the vertical flute, the longer instrument being the gigid⁴ (Akkadian malilu). We also read of the Akkadian kanzabu,⁵ a name phonetically reminiscent of the Arabic qaṣaba.⁶ A flute of archaic times is featured on a Sumerian seal at the Louvre, Paris,⁷ whilst there is also a bone instrument, a small whistle, from Tepe Gawra.⁸ There once existed a bone whistle from Nimrod which gave three notes, but it has disappeared.⁹

Among reed-pipes and oboes¹⁰ there existed the Sumerian šem (Akkadian halhallatu)¹¹ which may have been an ordinary reed-pipe. How far it differed from the malilu¹² which, on one special occasion, was made of lapis lazuli, we do not know, although this latter equates with the Akkadian imbu, a word common to all Semitic tongues. Perhaps the instrument is figured in the conical-tubed oboe in Engel.¹³ A double cylindrical reed-pipe in metal is preserved at Philadelphia from the Ur tombs (c. 2500 B.C.),¹⁴ but only one of the pipes is playable, giving four notes of the diatonic scale. The art remains also display examples of the double reed-pipe.¹⁵ We are without evidence of its name but the šinnitu¹⁶ may refer to such an instrument, if it alludes to an accompanying drone-pipe (Arabic tam, tanîn).¹⁷ A Susian figurine (c. 750 B.C.) seems to show a crooked double reed-pipe,¹⁸ and

¹ Langdon, Babylonian Liturgies, p. xxxii.
² Neither in Deimel nor in Muss-Arnolt is ətāpu given as a musical instrument.
⁴ Langdon, Babylonian Liturgies, p. xxxiii.
⁵ F. Martin, Textes religieux (Paris, 1903), p. 196.
¹⁰ Galpin, op. cit., p. 16.
¹² Beiträge zur Assyriologie, v (1906), p. 566.
¹⁴ L. Woolley, Ur Excavations, i, pp. 258 ff.
¹⁵ Kinsky, op. cit., p. 3, figs. 1, 4.
¹⁶ F. Martin, op. cit., p. 196. Another instrument mentioned in this place is the arkâtu which is not known.
¹⁸ J. de Morgan, Délégation en Perse (Paris, 1901), i, pl. viii, figs. 10, 14.
Galpin suggests\(^1\) that this is the *pitu* or *pitū* mentioned by Langdon.\(^2\)

It is doubtful.

So far as horns and trumpets are concerned, we have but few references and illustrations. An archaic Sumerian tablet found at Ur (second millennium B.C.) seemingly describes a wooden horn called in Akkadian *pukku* (Sumerian *ellag*).\(^3\) The Sumerian *karan* mentioned by Galpin is not registered by Deimel who, by the way, says that the *pukku* was a drum. Yet we know that several instruments of the *pukku* and *mikkū* types were presented (c. 1380 B.C.) by the Mitanni ruler under Dushratta to Amen-hotep III of Egypt.\(^4\) We observe a very short trumpet in a religious scene on a Hittite relief from Carchemish (c. 1050 B.C.).\(^5\) The long metal trumpet may possibly be identified in the hands of the kneeling figure on the stele of Narâm-Sin (c. 2280 B.C.),\(^6\) but a shorter type occurs on a Hittite relief (first millennium B.C.).\(^7\) In late Assyrian days a long type is clearly depicted in two examples (eighth–seventh centuries B.C.), whilst an actual fragment of one has been preserved.\(^8\)

The chordophone group of Mesopotamian instruments reveals types of the highest interest to musicologists. Perhaps the most remarkable are of the harp and kithara family; the evolutionary stages of the harp are particularly fascinating. In the lower-chested harp, the generic name for which Galpin has supposed to be *zagsal*,\(^9\) we see three distinct forms. In the first, found on a slab from Khafāja (c. 2700 B.C.), now at Chicago, we have an upright portable instrument, with a neck and sound-chest in one graduated piece.\(^10\) Similar examples (c. 2600 and 2500 B.C.) are at Philadelphia.\(^11\) In all these we can discern that this harp is of the progeny of the warrior's bow. In Sumerian the instrument was possibly called the *ban* or *pan* (bow),\(^12\) a name associated in this way, maybe, from time immemorial.\(^13\) We do not know its later Semitic name in Mesopotamia, although its last

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\(^3\) *Revue d'Assyriologie*, xxx (1933), pp. 138, 153. The word endured for millennia in the Syriac *paqqa* (frasor, creptius).
\(^5\) Galpin, op. cit., pl. iii, fig. 1.
\(^7\) Kinsky, op. cit., p. 1, fig. 4.
\(^8\) Engel, op. cit., pp. 51 ff.
\(^9\) Op cit., pp. 26 ff.
\(^11\) Galpin, pls. ii, fig. 4; v, fig. 5. Galpin's name for it is *miritu*.
\(^12\) Ibid., p. 28.
descendants were the Pahlavi vōn and the Arabic wann. The second form, with a separate bow-shaped neck fixed to a horizontal sound-chest, was not unlike the Burmese saun. It is delineated on a vase from Bismaya (c. 3000 B.C.) at Stamboul, although there is an actual specimen from Ur (twenty-fifth century B.C.) at the British Museum (pl. 8 (b)). The instrument of the foremost player on the Bismaya vase has only seven strings whilst the Ur instrument has eleven. The former may relate to the śībītu (seven [stringed] harp), but no name has come down for the latter instrument, although we seem to have šiššatu (six [stringed]) and ešīrtu (ten [stringed]) as names of instruments according to Langdon. The third form, with a separate vertical neck in the horizontal sound-chest, shows itself on a Nippur plaque (c. 1800 B.C.), now at Philadelphia. It is also recognizable in the hands of one of the Elamite musicians on the Kūl-i Fir‘aun sculptures. In later Assyrian days (eighth–seventh centuries B.C.) we have several examples in art remains. Owing to the reconstruction of a fracture on the British Museum sculpture, where a joint cut through one of the designs of this instrument, the newly imposed position of the strings misled some musicographers to imagine a dulcimer or a psaltery, instead of a harp.

The last-mentioned type of lower-chested harp gave rise to the upper-chested harp, which was, to all intent, the previously described instrument turned sideways. It has been identified with the Akkadian zaggal, a doubtful name which Galpin thought was the parent of the Persian chang. This latter had an acutely angled upper sound-chest with a distinct hump, and when we first espy it on a bronze vessel from Nihāwând (c. 2000 B.C.) this sound-chest is almost vertical but with a sudden bend at the peak. We notice it also on a figurine from

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1 Farmer, Studies in Oriental Musical Instruments, ii (Glasgow, 1939), p. 74.
3 L. Woolley, Ur Excavations, i, pp. 74 ff., ii, pls. 108–10. The British Museum’s reconstruction of its sound-chest was definitely wrong. Even Galpin, with his encyclopaedic knowledge of the morphology of instruments, did not object to this faultily conceived modelling when he reproduced the design in 1929 (Music and Letters, x, pp. 108 ff.). In view of this the present writer made his own reconstruction in 1931, to which Galpin agreed, and in 1933 both Galpin and Curt Sachs made representations to the British Museum for the necessary alteration. However, Galpin remedied the design in his monumental work of 1937.
6 Galpin, op. cit., pl. vi, fig. 4.
7 J. de Morgan, op. cit. iii, pl. 23.
8 Engel, op. cit., p. 49.
9 Ibid., pp. 44 ff.; Rowbotham, op. cit. i, p. 335.
10 Virolleaud et Pélagaud, op. cit., p. 46.
Sippar (c. 1700 B.C.) now at Philadelphia. In later Assyrian scenes the chest has a graduated curve throughout its length. The same is to be seen in Elamite designs.

The kithara family reveals some unique specimens. In late Assyrian times (eighth–seventh century B.C.), one delineated example is a folk instrument. It is of asymmetrical construction, an outline which is maintained in the instruments of professionals. A rectangular type occurs on the Tell Halaf relief (third millennium B.C.), and in Assyrian art remains (eighth–seventh centuries B.C.). Its name is not as yet known to us. The most outstanding instrument of this class was the grand kithara, seemingly known in Sumerian as algar. Langdon said that algar was merely a longer form of the mythical instrument called al, which is the subject of an Enlil psalm, but Galpin insisted that it is the al and the zagsal that are identical. This grand kithara is depicted on the standard of Ur (twenty-fifth century B.C.), and on seals of the same period. A slightly larger example is limned on the Tello relief (c. 2200 B.C.), whilst the plaque from Ur (twenty-fifth century B.C.) is almost the height of a man. Even these representations, expressive though they may be, are not comparable with the actual instruments from Ur (twenty-fifth century B.C.) which are preserved in splendid examples at the British Museum, Baghdad, and Philadelphia.

Our final section concerns the pandore. The Sumerian word pan or ban stood for 'bow', and later perhaps for 'harp' also. If the curved neck of the lower-chested harp were straightened, quite a different

1 V. Scheil, Une Saison de fouilles à Sippar (Cairo, 1902), p. 90, fig. 2; Galpin, op. cit., pl. vi, fig. 6.
2 Kinsky, op. cit., p. 3, figs. 1, 3.
3 J. de Morgan, op. cit., iii, pl. 23. The Arabs of the East and the Moors of Spain appear to have been the last to use this harp (jank, Persian chang). See Farmer, The Minstrelsy of the Arabian Nights (Bearsden, 1945), pls. 4, 5; J. F. Riaño, Notes on Early Spanish Music (London, 1887), p. 122.
4 Engel, op. cit., p. 39, fig. 7.
5 Kinsky, op. cit., p. 2, fig. 3; p. 3, figs. 2, 3.
6 M. F. von Oppenheim, op. cit., pl. xxxviii.
7 Engel, op. cit., p. 38, fig. 5.
8 Galpin, op. cit., pp. 31 ff. In April 1937 I suggested to the late Dr. Langdon that the Akkadian qašru (to strike) or kaššu (to gather together, tie, hence kššu, something tied) might have produced the name of such an instrument, hence kaššu. In reply he informed me that the former word was now known to mean only 'to smoke', but gave no opinion about the latter. Cf. kassar and kásár, the lyre in modern Upper Egypt.
10 Galpin, op. cit., frontispiece, p. 31.
11 Ibid., pl. ii, figs. 1, 3, 5.
12 Heuzey and de Sarzec, Découvertes en Chaldée (Paris, 1884), pl. 23.
14 Galpin, op. cit., pl. vii.
INSTRUMENTS OF MUSIC

instrument would be created, as I have shown elsewhere.¹ This change would produce the Sumerian pantur (small pan), as both Galpin and Sachs suggest,² a name which easily could have been the parent of the Greek pandoura. Julius Pollux said that while the Arabs invented the one-stringed instrument, the Assyrians were responsible for the pandoura of three strings.³ We see an early pandore on a plaque from Nippur (c. 1700 b.c.),⁴ as well as in later designs.⁵ In Assyrian times (eighth–seventh centuries b.c.) it is also featured.⁶ Was this the nebél which Isaiah wished to silence in his denunciation of Babylon (Isaiah xiv. 11)?

There is still that list of instruments of the ‘Golden City’ of Babylon as recorded in Daniel (iii. 5, 7, 10, 15) to be discussed. With one exception—the last-named—they are Semitic by name and origin. The Aramaic qarnā (horn) needs no comment, since we have seen its Akkadian parent. The root of the Syriac mášroqitha (pipe), which is šaraq, is as old as Judges (v. 16), where it more properly refers to the sounds of the shepherd’s pipe, an instrument called šarqōqitha in Talmudic times. The Syriac lexicographers tell us that the mášruqitho is the Arabic sáfārā (recorder), shabbāba (flute), or šīr (horn). Of the qīthros (kithara) we have already spoken. The sabbekā (lower-chested harp) owes its name, in all probability, to the fact that multiplicity [of strings] was confused with multiplexity, as we see in the root sūbaq (to intertwine, interweave), hence sebāq (lattice-work) and sebāqā (net-work), whose kindred still thrive in Arabic. The pšantrin šūmfonyāh (concord harp), reopens an old controversy about the šūmfonyāh being a separate instrument, to wit, a bagpipe or some other instrument, in spite of St. Jerome’s early rejection of such a notion⁷ as pointed out by Pusey.⁸ Since the time of the latter there has been a change of heart, and several attempts have been made to solve the problem, notably in the more recent interpretation by

² Galpin, op. cit., p. 35; Sachs, The History of Musical Instruments (New York, 1940), p. 82.
³ Onomasticon, iv. 60.
⁴ Ibid., pl. viii, fig. 7; Kinsky, op. cit., p. 2, fig. 1; J. Garstang, The Hittite Empire (London, 1929), pl. xxx. In this last, a Hittite example, we see incrustations in the waist of the sound-cast, the parent of the modern guitar.
⁶ The šūmfonyāh is also omitted from the list of Daniel iii in the pseudo-graphic Letter to Dardanus: Patrologiae Latinae, xxx, p. 221.
⁷ The Book of Daniel (London, 1864), pp. 24 ff. In two verses šūmfonyāh and šifonya occur as separate instruments since they are preceded by the conjunctive nav (‘and’).
Galpin.¹ In the above, however, a different solution is offered. The *psantrin* (= psalterion) was, according to St. Augustine, an upper-chested harp. Its wide gamut, twenty strings, perhaps, may have led to it being termed symphonious, in the sense that it could be played in octaves. Because of that the word *sūnfonyah* is used as a noun in apposition to *psantrin*, just as in *nebel āsōr* (decacord harp) in Psalms (xxxiii, xcii).

Thus we see that for 3,000 years before the Christian era at least, ancient Mesopotamia had instruments of music, not only of a most varied character, but of a very high and advanced degree of construction, as the harps and kitharas of Sumerian days alone eloquently testify. Yet although we have so many instruments, and even more names of instruments than we can identify by form or even class, we must ever be cautious in accepting identification except with the greatest latitude.

**THE THEORY AND PRACTICE OF MUSIC**

With the growth of the temple organization, the earlier animistic beliefs in the potency of music had given way to more scientific ideas. The marvels of the heavens became a greater source of wonderment, and this led to the deification of the planets as man’s protectors. Astrology induced mathematics, and since we find that the very gods were subjected to the exact sciences, we can be fairly certain that music also fell under their dominion. Of the attainments of the Mesopotamian peoples in astronomy and mathematics we have ample knowledge from indigenous sources. Of the theory of music, however, nothing on the subject has been unearthed, save what we know from Greek writers. From the latter we learn that the fame of Babylon for mathematical and occult accomplishments had spread to the western world, an esteem which was the means of attracting scholars to the Mesopotamian centres of learning. According to Iamblichus² and Diogenes Laertius,³ one of those so allured was Pythagoras. From Valerius Maximus⁴ we know that he also learned there the motion of the stars, their intrinsic properties, and their effect and influence on mankind. These beliefs seem to have had their origin in Mesopotamia.

Quite early we find the peoples of the ‘fertile crescent’ in the possession of an elaborate cosmic system in which there existed a

² *De vita Pythagorae*, iv, p. 3.
⁴ *Facta et dicta*, vii, p. 7.
spiritual inter-relation between the entire macrocosm and microcosm, a belief which gave birth to tenets which were known later as the ‘harmony of the spheres’, the ‘doctrine of the ethos’, and the ‘theory of numbers’. Censorinus says that Pythagoras taught that the universe was constructed according to musical ratio, and that the seven planets, revolving in the heavens, emitted sounds so consonant as to produce the most exquisite music. One wonders whether the Mesopotamian kalû or precensor petitioned those ‘Lords of the Heavens’, as they called the planets, through their appropriate musical ratios. The teachings of Pythagoras concerning the principles of the ethos have almost a Mesopotamian flavour, in that music, being a cosmic ingredient, possessed qualities and sensibilities which could evoke the like if the appropriate and related kind of music were used. Thus one species would banish depression, another would assuage grief, a third would check passion, while yet another would dispel fear. Although both the above beliefs were connected with the theory of music in a vague way, trust in the efficacy of the ‘theory of numbers’ was an integral part of the theory of music. In Mesopotamia, number was something more than a mathematical unit; it was believed that number in itself possessed an active force, having properties that were sacred attributes. Philo Judaeus writes that ‘the law of the Chaldaeans, taken symbolically, is mathematical speculation’, and he saw that these people, by availing themselves of the principles of music, had imagined the most perfect harmony existing throughout the universe. In this cosmic scheme some numbers had greater efficacy than others, and the numbers seven and four were among these. Nature herself had made both sacrosanct. The potency of seven could be seen in the planetary system, while its sum was apparent in the quadrangle plus the triangle, both of which were used in the auguries. Philo Judaeus appreciated that seven had four boundaries and three interval ratios, i.e. 1:2, 2:3, and 3:4. Is it any wonder that the heptatonic scale was formulated, linked as it was with the planetary system which interpreted the will of the gods?

On the practical side of music our knowledge is equally sparse. Both the late Francis W. Galpin and Curt Sachs have provided

1 De Dei nat., p. xiii.
3 F. Cumont, Astrology and Religion among the Greeks and Romans (New York, 1912), pp. 29 ff.
6 Ibid. ii, p. 82.
8 Diodorus Siculus, ii, 30.
lengthy discussions on the subject, although much of the probing must necessarily be in the land of conjecture. The great enticement to all investigators has been the existence of instruments, either actual or delineated, from ancient days, which have acted as lodestones to the inquisitive. Yet no matter how sedulously we count the cords of stringed instruments, the answer to the computation is always a number, not a gamut. It is true that we possess a real Mesopotamian wind instrument or two, but they are palpably insufficient for our purpose.

On the other hand, both Galpin and Sachs have contrived to elucidate the Mesopotamian scale by other means. The former, under the impulsion of Landsberger,¹ imagined a scale of three octaves, being urged to these dimensions by an endeavour to embrace a supposed ‘ordered arrangement’ of the Semitic alphabet of twenty-one letters into a scale which is said to have been used at the ‘opening centuries of the second millennium B.C.’.² It must be pointed out that there is neither an instrument, nor a delineation of an instrument, from this region and period, which carries so great a number of strings. Incidentally, in this worthy attempt to solve the so-called musical notation on certain cuneiform tablets, to be dealt with presently, Galpin registers his conviction that he could find ‘no trace of harmony’ in this sole exemplar of Mesopotamian music, although such an opinion is obviously conditioned by his own interpretation of the cuneiform signs. It may be stated that others have held opposite views, notably Langdon whose argument was that since there were female as well as male choristers in the temples they must have chanted in four parts, a quite unwarranted assumption.³

Curt Sachs has also stated that harmony was used in Mesopotamian music. He bases his deductions on a series of studies which began in 1923,⁴ were continued in 1929,⁵ and were reaffirmed in 1933,⁶ 1940,⁷ and 1943.⁸ From these he concluded that ‘consonant chords’ were used, i.e. harmony in the accepted sense of the word. Taking the Elamo-Assyrian harpers depicted on the British Museum bas-reliefs, and examining their technique in plucking the individual strings, he

¹ Festschrift Max von Oppenheim, Archiv für Orientforschung, i (Berlin, 1933).
³ Babylonian Liturgies, p. xi.
⁴ Sitzungsberichte der preußischen Akademie der Wissenschaften, xviii (1924), pp. 120–3; Archiv für Musikwissenschaft, vii (1925), p. 1.
⁶ Zeitschrift für ägyptische Sprache, lxix (1933), pp. 68 ff.
⁷ The History of Musical Instruments (New York, 1940), p. 82.
pursued quite an ingenious line of inquiry. From this he believed that the position of the hands and fingers of the harpers showed that 'chords' were played. To the present writer it seems that any attempt to determine, from this bas-relief, which strings are plucked, can be no more than a gratuitous assumption. Sachs supposes that 'each harper plucks two strings' simultaneously. Yet might not one just as readily assume that each harper is plucking one string with one hand, and is preparing to pluck another string with the other hand? Sachs also touches upon scalar theories, and states categorically that there existed in Mesopotamia 'almost certainly a pentatonic tuning', although 'singing', he says, 'at least in the last one thousand years B.C., was heptatonic without any trace of pentatonism'. These theses are palpably dependent upon his own interpretation of the harpers' technique and on his reading of the cuneiform scale. Eighty years earlier the musicologist Carl Engel also held to the pentatonic scale theory,¹ and Langdon, admittedly a non-musician, followed suit.²

NOTATION

Did Mesopotamia possess a musical notation? When texts and translations of certain cuneiform tablets at Berlin were published by George Reisner in 1896,³ they were claimed to reveal a musical notation, a pronouncement which created considerable stir in both the archaeological and musicological worlds. These finds dated from about 800 B.C., although others were discovered later from the sixteenth century B.C. The claims for a notation were based on certain vocalic characters, as well as ideograms, contained in the texts, and Theophilus G. Pinches thought that since the former occurred at the beginning, in the middle (the caesura), and at the end of a line, rather than over words, they represented 'tonalities' rather than 'notes', a judgement which was quite sound.⁴ In 1919, when Erich Ebeling published such texts,⁵ fresh interest accrued, and in 1923 Curt Sachs worked at a musical transcription of the 'notation'.⁶ Benno Landsberger repudiated Sachs's transcription,⁷ and the latter has since admitted that his initial attempt was a failure.⁸ In 1937 Galpin published

² Babylonian Liturgies, p. lii.
³ Sumerisch-babylonische Hymnen (Leipzig, 1896).
⁵ Keilschrifttexte aus Assur religiösen Inhalts, i (Leipzig, 1919), p. 4.
⁶ Sitzungsberichte der preußischen Akademie der Wissenschaften, xviii (1924), pp. 120 ff.
⁸ The Rise of Music in the Ancient World, p. 86.
his noteworthy study of Sumerian music, in which he rebuffed Landsberger’s pessimism regarding a solution, but he too rejected Sachs’s transcription.\(^1\) We have already dealt with Galpin’s proposed scale of twenty-one notes.\(^2\) Sachs, in turn, declined acceptance of Galpin’s scheme, and again set out, but with fresh premises, to solve anew the cryptic signs. The results were published in an article entitled ‘The Mystery of the Babylonian Notation’ which appeared in 1941.\(^3\)

**THE HERITAGE**

The influence exerted by Mesopotamian culture on the western world was far reaching.\(^4\) Unfortunately the glories of the intellectual and artistic conquests of Greece have dazzled the view of our cultural debts to others. Not that the Greeks are responsible for this obscurity. On the contrary, both they and the Romans acknowledged their indebtedness to the Orient. Strabo says that ‘the cultivators of ancient music are said to be Thracians’, and that ‘from its melody, rhythm, and instruments, all Thracian music is supposed to be Asiatic’.\(^5\) The legend of Orpheus, the ‘Father of Songs’, is pre-eminently a Thracian one. It is admitted that it was through Asia Minor that Thrace received these Oriental refinements. The two semi-mythical originators of flutes and reed-pipes, Hyagnis and Marsyas, were both Phrygians.\(^6\) Terpander, the accredited systematizer of Greek music in the introduction of nomoi for the lyre, and Olympus, the founder of the Phrygian school of music, who introduced nomoi for the woodwind (auloi), were also from these parts. What was the nomos? Could it have been a survival of the old Semitic neum or ‘[intoned] utterance of soothsayer and prophet’? Indeed the shades of Babylon, ‘learned and wise’, may be discerned over the shoulders of many of these reputed founders of the arts and sciences in Greece, mythical though they may be. Pseudo-Euclid, i.e. Cleonides, makes Terpander say that the lyre had four strings until he made them seven,\(^7\) which Strabo seems to confirm.\(^8\) Whence did this inspiration come? Could it have been Babylon? If we can trust pseudo-Plutarch\(^9\) it would appear that the Greeks at this time were most conservative in musical matters. Boëthius says that it was the seven planets which suggested

\(^1\) *The Music of the Sumerians* (Cambridge, 1937), pp. 38 ff.
\(^2\) See supra, p. 248.
\(^3\) *The Musical Quarterly*, xxvii (1941), pp. 62 ff.
\(^5\) *The Geography*, x. iii. 17.
\(^6\) ps.-Plutarch, *De musica*, v–viii.
\(^7\) xiii. ii. 4.
\(^8\) iii. 67.
\(^9\) *De musica*, iii. xviii.
this number of strings to Terpander, a statement which agrees with a Mesopotamian origin.

Diodorus Siculus tells us that it was Linus who gave verse and music to the Greeks, and the Linus myth in Greece, which represents this god as a musician and the creator of the Linus song, is simply the older Mesopotamian legend of Tammuz. Euripides judged the cry \( \alpha \dot{\omega} \nu o s \) in the mournful Linus songs to be a Phrygian custom, and indeed we see its fellow in the Hebrew \( a i \ l\text{ānū} \), the like of which we find at the close of some of the psalms. Frazer identifies Linus with Adonis, as did Pausanias, and the Phoenicians called the latter Gingras, a name which was actually given to the wailing reed-pipe, as Xenophon and Aristozenes relate. Curiously enough, Adonis was worshipped in Asia Minor under the name of Abobas, a word strikingly reminiscent of the Syriac \( a bûbâ \), which was the Akkadian \( imbu\text{bu} \).

Instruments of music found their way into Greece from the Orient in great numbers. Strabo says: ‘And those writers who have conscripted the whole of Asia, as far as India, to Dionysus, derive the greater part of music from there. One writer says: “striking the \( \text{asias kithara} \)” ; another calls pipes “Berecyntian” and “Phrygian”, and some of the instruments have been called by barbarian names, \( \text{nablas, sambykē, barbitos, magadis} \}, and several others. Some of these others are quoted by Athenaeus, and among them the \( \text{pectis and phenix (phoinix)} \). The word \( \text{kithara} \) may not be Greek. That it was sometimes called \( \text{asias} \), rather than \( \text{asias kithara} \), is worthy of notice. It is more than strange that ‘to play’ upon the \( \text{kithara} \) is conveyed by the word \( \kappa\rho\acute{e}κω \), and practically the same word, \( \text{harâka} \), has been used in Arabic from time immemorial in connexion with playing the lute (‘\( \text{jūd} \)’), a term which, in its pristine form, means ‘to hasten’, as does the cognate Akkadian \( \text{araḥu} \).

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1 De musica, i. 20. See Bibliothèque archéologique et historique, xxx (1939), pp. 161 ff.
2 Bibliotheca Historica, III. 67. See also p. 378.
4 ix. 29.
5 Athenaeus, op. cit. iv, pp. 174 ff., who said that the gingras was Phoenician.
6 Hesychius, s.v.
7 Strabo, op. cit., x. iii. 17.
8 That the term ‘India’ meant eastern countries much nearer, see the Cosmographia Ethici (p. 28) with the additions by Julius Honorius (p. 7). Even the ecclesiastical historians call the Arabs ‘Indians’.
9 iv. 175–85.
10 ps.-Plutarch, op. cit. 6. Euripides, Cyclops, v. 443. The Trojans used the kithara whereas the Greeks had the phorminx.
The *nabla*, as its name (Hebrew *nebel*) indicates, has a distinct Semitic physiognomy. Indeed it was called the Sidonian *nabla*, which particularly identifies it with Phoenicia. It was known quite early in Greece, since Sophocles (d. c. 406 B.C.) speaks of it, as does Ovid (d. A.D. c. 17 in Rome). For the *trigonon* and/or *sambycē* a Syrian origin is claimed and in Rome it was the *sambuca* which was found in the hands of Syrians in the time of Hadrian (d. A.D. 38). Of course, we recognize this harp immediately in the Aramaic *šabekā* which we read about in Daniel (iii). The *barbitos* (cf. the Persian *barbat*) is attributed to Terpander, and both Sappho of Lesbos (7th cent. B.C.) and Ovid in Rome sang its praises. The *magadis* is acknowledged to be of Lydian origin, as also the *pectis*, while Lydian reed-pipes (*auloi* and *tibiae*) were lauded by both Pindar (d. 438 B.C.) and Horace (d. 8 B.C.). Indeed it is the latter who tells us about Oriental female reed-pipers in Rome. They were the Syrian *ambubaiaē* mentioned by Papias, and their name reveals that they played the Akkadian reed-pipe *imbubu*, in spite of the Syriac equivalent being *abbūba*. As early as Terence (d. c. 159 B.C.) Roman orchestras had players on the *tibiae sarranae*, i.e. the Phoenician reed-pipes. One of the Phrygian *auloi* of the double reed-pipe group was the *elymos*, the drone-pipe of which was turned up with a horn ‘bell’, hence, probably, its name. This was the type of Akkadian pipe which Galpin wanted to identify in the *pitu*. Yet whether it was Phoenicia or Syria, Lydia or Phrygia, that were dubbed the ‘inventors’ of these instruments, the *fons et origo* was Mesopotamia.

Perhaps the most marked impinging of Mesopotamian musical culture on Greece is discernible in Pythagorean traditions. Pythagoras himself is claimed by both Greek¹ and Persian² writers to have been a Syrian born, one making Tyre, and the other Sidon his birthplace. Instructed at first by Sidonian and Phoenician hierophants, he was initiated into the mysteries of Tyre and Byblos. Later he passed into Egypt, where he remained twenty-one years. Taken captive by Cambyses, he was carried to Babylon where, says Iamblichus, he was instructed by the priests ‘in their venerable knowledge, and learned from them the most perfect worship of the gods. Through their assistance likewise, he arrived at the summit of arithmetic, [the theory of] music, and other disciplines.³ After twelve years at Babylon he settled at Samos, where, because of his learning, he was immediately dubbed a *sophos* (Akkadian *āšipu*).

¹ Porphyry, *De vita Pythagorae*, i.
³ Iamblichus, *De vita Pythagorae*, iv.
It was through Pythagoras and his disciples that Greece became acquainted with such doctrines as the ‘harmony of the spheres’, the ‘principles of the ethos’, and that alluring theory of the ‘efficacy of numbers’, which have already been described. It is true that he has been credited as the first to determine the consonances of the fourth, fifth, and octave, but the inherently false accounts of this so-called ‘discovery’, as preserved by Nicomachus, Gaudentius, and Boethius, reveal the improbability of this. There is no reason why the peoples of Mesopotamia who made so creditable an advance in arithmetical and geometrical progressions, and who possessed rules for finding the areas of squares, rectangles, right triangles, and trapezoids, could not have had as complete a knowledge of the speculative theory of music as the earliest of the Greek theorists, Pythagoras.

Plutarch, in his commentary on the *Timaeus* of Plato, informs us that the Chaldaean connected musical intervals with the seasons, i.e. the fourth (3:4) = Autumn, the fifth (2:3) = Winter, the octave (1:2) = Summer, whilst the tonic (1:1) = Spring. This was a cornerstone in the doctrine of the ethos. Actually, it is the most useful reference by the Greeks to the Mesopotamian theory of music that we possess apart from the Pythagorean passages, although we must not forget the statement of Nicomachus, that Iamblichus had testified that it was the people of Babylonia who discovered the harmonic proportion which Pythagoras introduced into Greece. It seems therefore not unlikely that Mesopotamia possessed a theory of music which was actually the starting-point of our present system.

That the peoples of the Mesopotamian plains were the pioneers of civilization, and that they contributed remarkably to the progress of music, must be allowed them. The mere comparison between the advanced structure of Mesopotamian instruments of music, especially in their harps and citharas, with what the Greeks had accomplished, at once proclaims the immense superiority of the former. Although the peoples of Mesopotamia never exerted a permanent hegemony over the lands of the western Mediterranean, their culture dominated Syrian, Phoenician, and Hittite lands, from whence it infiltrated into Greece and Egypt, to become the seed for the intellectual development of the West.

2 Ibid., p. 13.
3 De musica, i. 10.
5 De animae procer. 31.
6 Intro. *Arith.* xxvi, xxix.
In the sphere of religion we can dimly recognize the germ of our own religious practices, not merely in the liturgy, the penitential psalm, the antiphon, the precentor, the incense, and the rest, but in the *mater dolorosa*. As Langdon says, one cannot doubt the great influence of the Mesopotamian temples upon the late Jewish Church and upon Christianity.\(^1\) One recalls that the Mesopotamian *kalû* or temple precentor had to be skilled in an eight-day liturgy,\(^2\) each day of which would have had its appropriate ‘trope’ or ‘tone’. Does not the Hebrew *sheminith* in the captions of the psalms refer to an eighth mode, as Isaac ben Abraham ibn Latif (13th cent.) avers? Could that practice have been the reason for the Syriac *ikhadias* of the Jacobite Church, the *octoëchos* of the Byzantine Church, and the eight Gregorian tones of the Roman Church? Although the Prophet cries ‘Babylon is fallen, fallen’, the plainchant of the Roman Church today carries the titles *Primus gravis*, *Secundus tristis*, and *Tertius mysticus*, which are but ethoidal relics from the ancient Mesopotamian past of probably 6,000 years ago.

\(^1\) *Sumerian Liturgies and Psalms*, p. 238.

VI

THE MUSIC OF ANCIENT EGYPT

By Henry George Farmer

INTRODUCTION

When we approach the history of ancient Egypt we are confronted with a highly developed social and cultural melioration which is already a fait accompli. The previous chapter has described a similar circumstance in Mesopotamia. Yet, as in that land of the 'two rivers', we do not know why, how, or when this surpassing achievement came about. Modern research has revealed abundant proof of the impingement of a 'new culture' in Egypt during the early dynasties—that is, from about the twenty-ninth century B.C.—not unlike that of Mesopotamia and Iran. How far this affected instruments of music is not at present as discernible as it is in other spheres, for the cultural impact must have taken place long before the twenty-fifth century B.C., the date of the Royal Tombs of Ur. Indeed the harps of the 4th dynasty (twenty-sixth century B.C.) delineated at Gizeh reveal a stage of instrumental construction earlier than that of Sumer and Akkad in the twenty-fifth century B.C. This seems to show that whatever initial promptings may have come through Mesopotamian or Iranian migrations, or subsequent influences from these sources, the cultural contacts with the East must have ceased meanwhile.

As in Mesopotamia, we are denied precise dates in the earlier periods; those used in this chapter, like those in the previous one, are based on the readjustments of Professor W. F. Albright,¹ which have brought us very near to what Sir John G. Wilkinson had guessed more than a century before.²

FIFTH MILLENNIUM B.C.

Prehistoric period

FOURTH MILLENNIUM B.C.

Predynastic period

¹ Bulletin of the American Schools or Oriental Research, nos. 77, 78 (1940), and 88 (1942).
THE MUSIC OF ANCIENT EGYPT

THIRD MILLENNIUM B.C.

Dynasty I ........................................ Twenty-ninth century
Dynasty IV ........................................ Twenty-sixth century
Dynasty VII ....................................... Twenty-second century

SECOND MILLENNIUM B.C.

Dynasty XII ...................................... c. 1989
Dynasty XIII ...................................... c. 1776
Dynasty XVIII .................................... c. 1570
Dynasty XX ........................................ c. 1200

FIRST MILLENNIUM B.C.

Dynasty XXI (Tanis)............................... c. 1090
Dynasty XXII (Libyan)......................... c. 945
Dynasty XXVI (Saite) ......................... c. 664
Dynasty XXVII (Persian invasion) ........... c. 525
Greek period ..................................... 332
Roman period ................................... 30

PRIMITIVE MUSICAL SURVIVALS

It is not improbable that music, or at least sound, stood at the cradle of all religion. Animism certainly had its origin in sound, for when primitive man struck a piece of wood, stone, or skin, or blew into a tube or cavity, and contemplated the resultant sound, he naturally concluded that what he heard was the 'voice' of the object struck, or of that into which he blew. He therefore assumed that by awakening their 'voices' he could propitiate unseen nature of which they were all a part. We see this in our first glimpse of Egyptian instruments of music.

Man's earliest instruments were idiophones, and we find them in ancient Egypt. These were clappers, and they are figured in pairs on predynastic pottery (fourth millennium B.C.). 2 Clappers also occur on monuments of the 5th dynasty (twenty-fourth century B.C.) where they were used for animistic purposes. In one instance we seem to see the god of the harvest, Min, being conjured by means of clappers to make fruitful the toil of vintagers. 3 In another example, harvesters

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1 In transliterating Egyptian words the conventional system has been adopted with the following exceptions: \( s = \text{'s'} \); \( c = 'a' \); \( l = 'l' \). The use of the vowel \( e \) between the consonants is quite arbitrary, and has been introduced, together with the above modifications, solely for the convenience of the general reader.


perform a dance of appeasement to Ia’ru the god of the reeds, or to Nepri the corn spirit, perhaps, to the accompaniment of clashing sticks. The application of like to like in this fashion is patent magic, rhythmical application still more so, for man saw measured motion in nature itself. This is precisely what Plutarch detected in the four jingling metal bars on the sistrum, presumably linked with the four elements, which immediately became active forces because, he says, ‘all things are subject to motion’.

Plutarch has also handed down a pretty conceit of Egypt’s archaic musical past. Before the days of Menes, its first king, Egypt was ruled by gods, and one of these, Osiris, was responsible for teaching the world the arts of civilization. What enabled him to accomplish this was his ‘persuasive discourse, combined with song, and all manner of music’. (That gods were ever musically inclined is, of course, a universal tale.) Osiris was the ‘Lord of the sistrum’, an instrument specially dedicated to the goddess Ḥathor, the later Isis. The dwarf god Bes was supposed to be the ‘god of music and dancing’, and in art remains he is delineated with either the harp or kithara in hand, while ‘singing gods’ and ‘dancing gods’ were innumerable in the Duat or land of the dead. Indeed there were ‘choirs of angels’ in the latter abode. Thoth was presumed to be the ‘god of knowledge and wisdom’, but as Hermes Trismegistus he was the ‘inventor of music’ and the author of books of chants to the gods. Indeed there is no end to the legends of the harmonious attributes of Egypt’s deities.

That many of the gods were of totemistic origin is generally conceded. When we discern birds, animals, and reptiles figured on instruments of music, or playing them, let us not attribute the circumstance to aesthetic fancy alone; it was due to a much more hallowed incitement. In the Book of the Dead the animal world, with man, laud god together, and Maspero has referred to predynastic chants or songs to animals. As in Mesopotamia mummers, probably for secular as well as sacred purposes, assumed masks or other disguises as animals in ancient Egypt. Sacred masking, so as to represent deities, was hinted at by Maspero in 1899, but M. A. Murray developed the

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1 Lepsius, Denkmäler aus Ägypten, ii (Berlin, 1859), pl. 56a.
2 Isis and Osiris, 376.
3 Ibid. 356.
4 C. Sachs, Die Musikinstrumente des alten Ägyptens (Berlin, 1921), figs. 59, 60, 104.
5 Plutarch, Isis and Osiris, 352.
6 Clement of Alexandria, Stromateis, vi. 4.
7 The Cambridge Ancient History, i (Cambridge, 1924), pp. 328 ff.

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theme in 1934.¹ We have several examples of animals performing on instruments of music,² but equally important is their occurrence as figures on these instruments. All nature was one by the banks of the Nile, and this is patent in the sphere of religion. Goddesses were generally symbolized by the serpent and the latter was connected with the sistrum down to the Roman period (30 B.C. onward).³ Hathor (Isis) and Nephthys are delineated on sistra,⁴ in which the very jangling bars are fashioned as serpents.⁵ A similar interpretation may be placed on the falcon’s head and the goose’s head on the scrolls of harps and citharas, since they symbolized the gods Month and Amen respectively.⁶ Then there was the cat on sistra typifying Ba’stt, the goddess of fire, while the jackal on kitharas was emblematic of Anubis.⁷ These features were of far deeper significance than mere emblems or symbols. They were a constant reminder that the voice of deity was ever present in their tones; it was not only ears in tonal appreciation that listened, but rather minds in transcendentanalogue that understood.

Music therefore had a twofold influence on man in ancient Egypt; one brought about by a purely physical sensation, and another created or sustained by a power known as heka’ or hika, which was something like, and yet different from, what we understand by ‘spell’. It may be difficult to appreciate this hyperbole, and yet we still say ‘enchanting’ (∼cantus) and ‘charming’ (∼carmen) in our praise of music today without ever thinking that we are speaking in precisely the same way as did the ancient Egyptians, although they meant what they said.

RELIGIOUS MUSIC

All through the history of music in ancient Egypt, modulated sound itself was an arcanum. The name for sound was herw (lit. ‘voice’), and the word had an esoteric import in the cults.⁸ One recalls its omnipotence in Mesopotamia where Ramman, for instance, was the ‘spirit of sonorous voice’. We read of the Egyptian god Thoth who made Osiris ‘true of voice’. The amulet which Isis hung about her neck was interpreted as ‘a true voice’. One of the special parts of the temple liturgy was ‘the going forth of the voice’, but, as Alan H. Gardiner has shown, it is not easy to apprehend what was actually performed

¹ Mélanges Maspero: Orient ancien, i (Cairo, 1935), pp. 251 ff.
³ Sachs, Die Musikinstrumente, fig. 22.
⁴ Wilkinson, op. cit. ii, p. 323.
⁵ Ibid. ii, pp. 293, 326.
⁶ Plutarch, Isis and Osiris, 376.
⁷ Ibid. ii, pp. 275, 280, 287, 291.
⁸ See Plutarch, Isis and Osiris, 355.
in this symbolic act. Certain it is that 'such ceremonial utterance had magical power'.\(^1\) Here is what Maspero has said of its conjurative potency in the Egyptian temple:\(^2\)

The human voice is the instrument *par excellence* of the priest and enchanter. It is the voice that seeks afar the Invisibles summoned, and makes the necessary objects into reality. Every one of the sounds it emits has a peculiar power which escapes the notice of the common run of mortals, but which is known to and made use of by the adepts . . . But as every one [of the notes] has its peculiar force, great care must be taken not to change their order or substitute one for the other.

Herodotus says that there was a college of priests in each temple,\(^3\) and although there was an ‘hour priesthood’ of laymen, who may have been something like the secular priests of the Christian west, the temple ecclesiastics were few in number, generally about five, including a high-priest and a lector-priest or precentor (*heru-heb*). Like the Mesopotamian *kalû* (‘precentor’), some of these priests were ‘scribes of divine books’, and Clement of Alexandria has described, at a very late period, some of these writings. Speaking of the service he says: ‘First comes the Singer, bearing one of the symbols of music, for they say that he must learn two of the books of Hermes, the one comprising the hymns of the gods, the second the regulation for the king’s life.’ There were also ten books devoted to hymns, prayers, processions, festivals, first fruits, and other constituent parts of temple worship.\(^4\) It was a part of the regular duties of the priests to extol the god in songs in the daily ceremonial as well as at the great festivals, but Erman remarks that we do not know whether these songs were merely recited or whether they were sung.\(^5\) This incertitude is of little import because, in these early days, whatever was recited was done so in a chant. Philology often confirms this, and the Arabic equivalent to the Egyptian *šedi* (‘to recite’) is *shadâ* (‘to sing’).

Many of the rituals, liturgies, hymns, and lamentations have been translated for us, and in these we are able to grasp the abiding significance of the solemn temple services. Among the above translations are two by Raymond O. Faulkner, the ‘Songs of Isis and Nephthys’ in *The Papyrus Bremner-Rhind*, and the ‘Lamentations of Isis and Nephthys’ in *Mélanges Maspero*, which have passing interest because the first was part of a ritual spread over five days, while the second was what one might term a breviary for one day, and the two were

\(^2\) *Études de mythologie*, i, p. 106.
\(^4\) *Op. cit.* vi. 4,
\(^5\) *Life in Ancient Egypt* (London, 1894), p. 47.
musically distinct. Of the ‘Songs’ Faulkner says: ‘Apart from a hymn to Osiris sung by the lector-priest in the middle of the ceremony, the songs consist of alternate duets by the two priestesses and solos on the part of her who represented Isis.’ In this, Osiris is invoked as ‘the fair sistrum player’, and the priestesses carry tambourines. In the ‘Lamentations’ we do not find any of these things, and in the place of tambourines other sacred tokens are carried.

When the New Kingdom arose (c. 1570 B.C.), the female temple musician began to make her appearance. She was the šem'ayt who was already a feature in secular life. Many of these were wives and daughters of the priests, although other classes were also represented. They were looked upon as inmates of the harem of the god, in which they held nominally the same position they would have held in real life. For this reason the highest ladies of the land took these sacred offices in the cults, being known as the ‘wife of the god’, ‘chief of the singers of the table of Amen’, or ‘songstress of Amen’.

These came to be a powerful corporation, and their lady superior, the ‘divine adorer of Amen’, shared sovereignty with the kings during the Saite period (c. 664–525 B.C.). Their instrument of sacerdotal potency and ecclesiastical authority was the sistrum, or sistra rather, since we more frequently see one of each kind, the šeḥem and seššet, being used, one in each hand. The word šeḥem itself meant [‘divine] power’, but its metallic ‘voice’, i.e. its jingling apparatus, was made mute since its form was sufficiently symbolic of its potent sound. Precisely the same metamorphosis came to the clapper called menyıt which, after the rise of the New Kingdom, is generally found folded in the hands of the priestesses or divine singers.

Under the Old and Middle Kingdoms, the court musicians held high positions, and were considered as ‘near relations’ of the king. Under the New Kingdom their significance was just as weighty, and the actual names of several have been preserved who held the position of ‘chief of the singers of Pharaoh’. He was the nominal head of all musicians since he is designated ‘chief of the singers of all the gods’. When we get glimpses of the royal family at worship, sistra predominate, and these are often in the hands of princesses.

1 Wilkinson, op. cit. i, p. 260; G. Fouchart, Tombes thébaines (Cairo, 1932), p. 35.
3 Lepsius, op. cit. vii, pls. 175, 186, 193; viii, pls. 247–50.
4 V. Loret, ‘Égypte’, in Lavignac and La Laurencie, Encyclopédie de la musique, 1re partie, i (Paris, 1913), figs. 20–24.
5 N. de G. Davies, The Rock Tombs of El Amarna (London, 1903–8), iv. pls. xv, xxxi, xlii; v, pls. iii, xxvi.
6 Ibid. vi, pls. xxviii, xxxvi.
clappers\(^1\) and tambourines\(^2\) found a hallowed place in adoration or supplication in the temples, possible because, like the sistra, their ‘voices’ were in monotone, a something nearer to the womb of things.

Yet temple music consisted of much more than chanting, jingling, rattling, and drumming. From early times quite a variety of other instruments found acceptance in worship, except perhaps in that devoted to Osiris at Abydos where, says Strabo, neither singer, piper, nor kitharist was allowed.\(^3\) We see a royal family in adoration of deity [i.e. the sun’s disk] with a harpist and three singers,\(^4\) and in one of the art remains at Leiden, there are delineated a harpist, pandorist, and two flautists accompanying the chanting of an incense-sprinkling priest.\(^5\) Indeed in every representation of religious life and practice in ancient Egypt, music and musical instruments play a prominent part. Even in the funerary proceedings we not only hear the gruesome lamentation (\textit{neḫwt} = Arabic \textit{niyāḥat}) of more primitive animistic times, but also the joyous sounds of singing, harping, fluting, and dancing, not merely delineated on the tomb walls but in actual practice.

Music in the temples continued to be of the utmost importance even throughout the Greek and Roman periods. Among the numerous art remains revealed in the Greek city of Naukratis is a figure of Apollo with a harp,\(^6\) and at Arment of Roman times, the sistra still found a place in the hands of goddess and priestess.\(^7\) The flute or reed-pipe was certainly still attached to the service of Amen, and Apuleius and Claudian both testify to its presence in the temple.\(^8\) Of course it was the emblem of fertility, and indeed the ‘field of reeds’ was one of the promised scenes in Elysium.\(^9\) The common people were certainly attached to it when they entered into the spirit of open-air worship. Once a year they ‘joined their priests in a melancholy procession through the streets, singing a doleful ditty called the \textit{Manerōs}’;\(^10\) and Herodotus also affirms that at the festival of Osiris they had processions, the women carrying images preceded by an \textit{aulos} player (reed-piper).\(^11\) In his account of the crowd of 700,000 [sic]

\(^1\) A. M. Blackman, \textit{The Rock Tombs of Meir} (London, 1914), pl. xviii.
\(^2\) E. Naville, \textit{The Festival-Hall of Osorkon II} (London, 1892), pp. 14, 24, 26; pls. xi, xvi.
\(^3\) Strabo, \textit{Geographus}, xvii. i. 43.
\(^4\) N. de G. Davies, op. cit. i, p. 33; pl. xxxiii.
\(^7\) R. Mond, \textit{Temples of Arment} (London, 1940), p. 180; pl. xcii, 16.
\(^8\) \textit{Metamorphosis}, xi.
\(^9\) A. Erman, op. cit., p. 306.
\(^11\) ii. 48.
pilgrims who journeyed to the Bubastis festival, we see the flute or reed-pipe players leading the semi-hysterical multitude. Some of the women jingled their sistra in frenzied excitement, while others, in greater abandon, exposed themselves;¹ as Curt Sachs has shown in his Geist und Werden der Musikinstrumente, the flute has ever been considered the sexual instrument *par excellence*. Strabo tells of similar scenes among the visitors to the temple of Serapis at Canopus, where there was fluting or reed-piping with dancing and ‘extreme licentiousness’.² It is no wonder that Aristotle considered that the *aulos* did not improve morals.

**SECULAR MUSIC**

All music, whether in the temple, the palace, or the street, was called *hy*, which meant primarily ‘joy’, ‘gladness’. It was sometimes written with a hieroglyph which represented a fragrant lotus in bloom. A musician was known by a genuine Semitic word *šem’a* (Hebrew *šamā*, Arabic *samā* = ‘music’), as well as by other names. The word for ‘praise’ was *henw*, and it probably meant ‘song’ also (cf. ‘aānn ‘to sing’), in which case we would have cognates in the Hebrew ‘ānāh and the Arabic *ghamma* (‘to sing’). The Hebrew word (cf. the Egyptian ‘*an*) came to mean ‘to answer’, and we have seen that the Akkadian word *ēnā* implied this also.³ Perhaps *henw* was only used when the strophe and antistrophe were employed, and we have seen that the antiphon existed in the Egyptian temple liturgy. On the instrumental side we also find a few provoking technical terms, e.g. *teḥ* or *tehen* (‘to beat’, ‘to play’), of which the Hebrew *tāqa* and the Abyssinian *take*’ may be kindred.

The male musician is a familiar figure in the art remains from the 4th dynasty (twenty-sixth century B.C.).⁴ Here he is to be seen in all phases of professional activity: singer, instrumentalist, and dancer. Erman held the view that the singers waved their arms when performing,⁵ which is also the opinion of Blackman.⁶ On the other hand, Curt Sachs avers that the delineations do not merely indicate arm waving. He thinks the positions of the hands and fingers of the singers reveal certain manual and digital movements by which definite indications were communicated to the accompanists.⁷ Yet it is not improbable

that the conjunction of the finger and thumb in the so-called ‘hand-signs’ may be no more than the physical prelude to the ‘tick-tack’ or finger snap.\(^1\) It is likely, however, that Sachs rightly interprets the position of the hand of the singer which is placed at the side of the head\(^8\) as the Eastern custom of compressing the larynx so as to force the high notes,\(^9\) as we have seen in Mesopotamia,\(^4\) and the shrill high-pitched voice (\(hy\)) was much admired in the East.\(^5\)

In 1949 and 1952 Hans Hickmann developed this chironomic theory. In his first paper, *Sur les survivances de la chironomie égyptienne dans le chant liturgique copte*, he shows that a system of chironomy exists today in this church, but no evidence is produced of its earlier usage by this church. In the second paper, *La Musique polyphonique dans l’Égypte ancienne*, the author demonstrates the probability of ‘accords’—the octave and dominant—on the harp by other means than those mentioned by Sachs. Further, he shows that the chironomic conjunction of the thumb and forefinger by the singer conveyed to the accompanist on the flute or harp that he was to play the tonic, whilst the vertical open hand signified the dominant. Why a singer should have to convey such signs to an accompanist to obtain such elementary musical accomplishments is not explained.\(^6\)

Besides these performers there were the female musicians who swarmed into social life soon after the rise of the 18th dynasty (c. 1570 B.C.). The court of the king and the palaces of the nobility were replete with these newcomers from Syrian and other Semitic lands; they belonged to the harem. Under the Old Kingdom we read of the ‘chief of the singers’ who was also ‘chief of the harem’, and we even know their names, but under the new dispensation their responsibilities must have been far greater in this control of what was known as the ‘beautiful pleasures of the king’\(^7\). A most intimate scene is revealed during the 18th dynasty in a bird’s-eye view of a palatial academy of music, with harps, kitharas, and pandores crowding out the furniture of the apartments. Here we espy these ‘singing-girls’ being instructed in the vocal and instrumental art.\(^8\) There were

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\(^1\) L. Borchardt, *Denkmäler des alten Reiches*, i (Berlin, 1927), pl. 47.

\(^2\) M. E. Grébaut, *Le Musée égyptien* (Cairo, 1890–1900), p. 25, pl. xxvi.


\(^5\) *Revue égyptologique*, xii, p. 8.


\(^8\) N. de G. Davies, op. cit. vi, p. 20; pls. xxviii, xxxvi.
even independent academies of music, since we are told that the finest of these was at Memphis.¹

What it was that these damsels of the 'beautiful face' sang we know in one respect, for thanks to the labours of Maspero, Max Müller, and Baillet, we are at least able to scan the lines of the verses, though not a note of music is vouchsafed to us. If the music were comparable to the verse, then it was most praiseworthy, since almost every human chord is touched in these beautiful songs, and with an artistry of expression that is superb. The 'Song of the Harper', first crooned at the funerary rites of the priest Nefer-ḥetep millennia ago, is known the world over. Who can forget the lines:²

Let there be music and singing before thee,  
Cast behind thee all cares, and mind thee of joy,  
Till there cometh that day,  
When we journey to that land that loveth silence.  

There were instruments in abundance to accompany singers and dancers. Every conceivable type known in the ancient world found its place in ancient Egypt. Kitharas and harps of all shapes and sizes, with flutes and reed-pipes of equal diversity, and manifold drums, tambourines, and crotala. When the world was young, under the Old Kingdom (third millennium B.C.), a harp, a flute, and a reed-pipe, handled by males, were deemed sufficient with singers,³ but with the bevies of Oriental singing-girls that had been brought into Egypt, the male performer seems to have been overshadowed. Still, the latter remained, it would seem, the mainstay of the music of the people, as the picture of the blind harper and his seven blind singers seems to prove.⁴ From the time of the Saite period, the male musician probably regained his prestige.

Herodotus visited Egypt about 440 B.C. The Egyptians, he says, like the Spartans, followed the trades and professions of their fathers, so that a musician would naturally be the son of a musician.⁵ Another statement concerns a national song called the Manerōs which, he said, had been known to the Egyptians from time immemorial. 'It was the first and only song that they used at that early period of their

³ Lepsius, op. cit. iii, figs. 35–36.
⁴ Wilkinson, op. cit. ii, p. 239; fig. 193.
⁵ vi, 60.
history.’ It was identical with the Linus song which he had heard in Phoenicia, Cyprus, and elsewhere, and he was surprised to find it in Egypt. Of supreme importance is the testimony of his later contemporary, Plato, who is said to have studied in Egypt. It will be recalled that the Athenian guest in Plato’s Laws, in laying down plans for the education of youth, pointed out that in Egypt only the highest art and the best music were permitted, and that such were approved by the temple. No deviation, it was said, was permitted from the established forms in art and music, to which principle Plato heartily subscribed. The statement reveals that in spite of its political troubles, Egypt still maintained a musical standard that was marvelled at by others.

However far-fetched the lengthy panegyric of Callixenus of Rhodes may be, as retailed by Athenaeus at a later period, one cannot forbear to cite that ‘choral band of six hundred men’, among whom were 300 harpers performing together on gilded harps. That was in the days of Ptolemy Philadelphus (285–246 B.C.). Nor was the flair for music to be found only in courtly and patrician circles, since one of the interlocutors in the dialogues of Athenaeus remarks:

I would have you know... that there is no record in the history of other people more musical than the Alexandrians, and I am not speaking merely of singing to the harp, for even the humblest layman among us... can immediately detect the mistakes which occur in striking the notes,

He then goes on to dilate on the number of flutes and reed-pipes, four at least, with which the Alexandrians were familiar. One of Egypt’s later rulers, Ptolemy Auletes (81–52 B.C.), the reputed father of the great Cleopatra, was addicted to piping, hence his name. In the palace concerts he contested with the professional musicians for supremacy.

Diodorus Siculus, writing a few years later, avers that music was not, in those days, a part of normal education, since it was thought not only useless but morally injurious, in that it created effeminacy. Whether this is strictly true of the classes as a whole is doubtful. Yet that such a puritanical view existed in Egypt at this time is not improbable. Indeed the word šem‘ (‘to sing’) came to mean something unrighteous (‘to be perverse’, ‘to corrupt’). Such protests, probably by the few, would have had little sway with the people at large.

1 ii. 79. Strabo says (xvn. i. 52) that Herodotus talked ‘much nonsense’. Cf. Plutarch, Isis and Osiris, 379.
2 Laws, 657.
3 Athenaeus, v. 201–2.
4 Ibid. iv. 176.
6 Strabo, op. cit. vii, i. 11.
7 i. 81.
8 Journal asiatique (Mars-Avril, 1908), pp. 263, 266. Cf. the Coptic ṫchoome.
Whether it was taught or not, music was the heritage of all, and social life, from the cradle to the grave, called for it. Between those two events, almost every phase of life demanded music of some sort, and we still possess the papyrus contract of a musician who was engaged in Egypt, nearly 2,000 years ago, to play with his fellows for the delight of those who cried: ‘Let there be music and singing!’

If we turn to military music, we see the trumpeter and drummer at their duties, summoning the troops, sounding them past the saluting point, or inciting them to battle. If we look at the toilers, we have the opportunity of reading the words at least of a shepherd’s song of the twenty-fifth century b.c., a thresher’s song of the sixteenth century b.c., as well as the sedan-chair bearer’s song, and others. We probably see what sufficed for the crowd on a papyrus in the British Museum which depicts a ‘march of the animals’ to the droning of a double reed-pipe, whilst one of the Tell al-Amarna scenes shows us what joy emerged in country dancing, all of which may be seen today by the banks of the Nile. Not a note of the actual music that was played or sung has come down to us.

Under the Old Kingdom, perhaps the days of a more indigenous art, dances were possessed of a gravity and seriousness that does not appear in those of the New Kingdom, which had been spiced with Oriental fashions. One of the most expressive dance scenes in Egyptian art remains is that reproduced by Champollion, Rosellini, and Wilkinson, in which the graceful attitudinizing shows an unmistakably spacious solemn rhythm. How different is the tempo on the Saqqara bas-relief, now at Cairo. Here the pace of the dancers is fast and furious. The larger deep-toned tambourine of rectangular shape has been cast aside, and its place has been taken by a smaller circular instrument, of which the higher-pitched ‘tap’ is more in accord with the sharper click of the accompanying clappers.

INSTRUMENTS OF MUSIC

Idiophones occur in the earliest Egyptian art remains. On archaic pottery (fourth millennium b.c.) are delineated clappers with curved

1 Journal of Egyptian Archaeology, x (1924), p. 145.
2 Wilkinson, op. cit., pp. 260–9; Champollion, op. cit. iii, pls. ccix, ccxviii.
6 Erman, op. cit., p. 369.
7 Lepsius, op. cit., vi, pl. 104.
9 I Monumenti dell’ Egitto (Pisa, 1832–4), pl. xcviii.
11 L. Borchardt, Kunstwerke aus dem Ägyptischen Museum zu Cairo (Cairo, n.d.), pl. 28; Erman, op. cit., p. 249.
blades, and these persist as late as the 18th dynasty (c. 1570 B.C.) at least. The wand type of clapper is observed in the 5th dynasty (twenty-fourth century B.C.). What we nowadays call the 'bones' are to be seen under the New Kingdom (c. 1570 B.C.). Another kind, clashing maces, were popular during the 6th dynasty (c. 2300 B.C.) and later. These concussive instruments may have been called iy and na’tahi, the latter word being possibly cognate with the Hebrew nāṣach. In addition to these were artificial hands and feet in bone, wood, or ivory, which were beaten together in the same way as hand-clapping, a practice known in Egyptian as ma’h, a word identical with the Hebrew māṣḥa. Innumerable specimens of these artificial hand and feet clappers are to be found in museums.

Sistra of various kinds were known, and in these particular types we may have indigenous productions. One kind, the šeḥem, had a body of pottery or wood with jingling plates inserted. We see it in the 6th dynasty (c. 2300 B.C.). A more sonorous kind was the šēš, seš, or sešset, which had a metal body with jingling metal bars inserted. Both types are to be seen in museums, and in art remains, down to Roman times. Cymbals of the plate type were of late intrusion, although the cup type is probably to be recognized on a figure of the Greek period (332–30 B.C.). Clapper cymbals also occur in actual specimens of the Graeco-Roman period. Bells of all kinds are plentiful.

Membranophones are well represented in actual specimens and art remains. Cylindrical, as well as squat and elongated barrel-shaped

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3. Lepsius, op. cit. ii, pl. 56a.
6. J. de Morgan, Fouilles à Dachour en 1894–95 (Vienna, 1903), pl. xxi.
7. Loret, op. cit., p. 5, figs. 10–12.; Sachs, Die Musikinstrumente, pl. i.
10. Champollion, op. cit. iii, pl. cclxxi.
12. Lepsius, op. cit. vii, pls. 175, 186, 193; viii, pl. 247.
14. Loret, op. cit., p. 7; Sachs, Die Musikinstrumente, pl. i.
15. Sachs, Die Musikinstrumente, pp. 23 ff., pl. i. Cf. Hickmann, Catalogue général des instruments de musique du Musée du Caire (Cairo, 1949), pp. 1–103 for all idiophones. This author has also made a separate study of bells in an article entitled 'Zur Geschichte der altägyptischen Glocken' in Musik und Kirche (Kassel, 1951), Heft 2.
drums,¹ are preserved at Cairo and Paris, the former dating from the 12th dynasty (c. 1989 B.C.). The elongated form persisted up to the Saite period (c. 664–525 B.C.), if not later.² There was also a hand kettle-drum, so well known from Champollion’s design,³ which dates from the 18th dynasty, as well as the vase-shaped darabukka type, and the cylindrical body form, often found in the hands of the god Bes, which was probably the drum called gempem.⁴ The generic name for the drum was teben (Akkad. ṭabalu). Budge thought that a’seh stood for the squat barrel-shaped drum. The tambourine or frame drum was known as the ser or šer, a large example of which, not unlike the supposed alal of Mesopotamia, was used in Egypt at the Temple of the Sun at Abusir (twenty-sixth century B.C.). Even later, at the time of Osorkon II (c. 800 B.C.), we see a tambourine over 2 feet in diameter being used,⁵ although Borchardt, who devoted an article to the tambourine, suggested—wrongly—that this was a gong.⁶ A more portable instrument of the 18th dynasty is shown by Champollion in the picture just mentioned, while an even smaller specimen found favour during the Greek period.⁷ Under the New Kingdom (c. 1570 B.C.) a large rectangular tambourine, with concave sides, appeared.⁸ It is also seen in a bronze figure of the time of Amen-ḥetep IV (c. 1377 B.C.).⁹ Specimens are conserved in museums.

Among the woodwind, the earliest example of the upright, end-blown flute is figured on a predynastic (fourth millennium B.C.) palette.¹⁰ In spite of opinions to the contrary, the flute may have been known as the seba’ or seby, in which case we recognize its progeny in the Coptic sēbe and sēbi.¹¹ Normally seb or seba’ means ‘to play [a flute or reed-pipe]’. This instrument is often found during the Old

² G. Maspero, Le Musée égyptien (Cairo, 1907), pls. xi, xlii.
³ Champollion, op. cit. ii, pl. clxxxvi.
⁶ Borchardt, Mélanges Maspero, Orient ancien, i (Cairo, 1934), pp. 1–6.
⁸ Champollion, op. cit. ii, pl. clxxxvi; Kinsky, Geschichte der Musik in Bildern (Leipzig, 1929), p. 5.
¹⁰ J. E. Quibell and F. W. Green, Hierakonpolis, ii (London, 1903), pl. 28.
and Middle Kingdoms (third–second millennia B.C.). Some of these flutes were from 4 to 5 feet in length. Two other types of flutes, doubtless of Semitic origin, were the wa’yr and the wa’dī, mentioned in connexion with Ptolemy Aletes (81–52 B.C.). The wa’yr, wa’ra’, or wa’r, is possibly cognate with the Arabic yarā’, which was a recorder. The wa’dī, wa’d’ai, or wa’deni is likely to have been the instrument called by the Greeks the photinx.

The reed-pipe seems to have been known as the ma’ (Old Kingdom), met or ma’, although the term was applied to any woodwind instrument. This reed-pipe may be discerned as early as the 4th dynasty (twenty-sixth century B.C.). The double reed-pipe is shown in both the parallel and the angular forms. Loret once hinted, that this instrument may have been the is or isit (lit. ‘reed’), but he later abandoned this identification. E. Brunner-Traut has now given the name a’a’t to this type. Under the New Kingdom the parallel form was superseded by the angular, most likely under Oriental prompting. It frequently appears in the art remains, and on a wall painting in the British Museum one can plainly distinguish the embouchure reeds. Actual specimens are fairly plentiful in museums, and their scales have been made the subject of special studies by several musicologists. Statuettes demonstrate the popularity of the instrument down to the Christian era.

The animal horn was the ‘ab, ‘abw, and deb, but there is no evidence of its use under these names as a wind-instrument, although we have seen wooden horns or trumpets being presented to Amen-ḥetep III by the Mitanni ruler Dushratta (c. 1380 B.C.). On the other hand,

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1 Lepsius, op. cit. ii, pls. 36, 52, 61, 74; A. M. Blackman, The Royal Tombs of Meir (London, 1915), p. 12; pl. xxi, 2. See pl. 9 (a).
2 Erman, op. cit., p. 516.
7 Lepsius, op. cit. iii, pl. 36.
8 Journal asiatique (juil.–août, 1889), p. 133.
9 Encyclopédie de la musique, 1er partie, i, p. 15.
10 Ibid., p. 16.
12 Erman, op. cit., facing p. 250.
13 See Bibliography.
the straight metal trumpet is well represented in military and pro-
cessional scenes during the New Kingdom and earlier.\textsuperscript{1} It was also
used in the cults; Eustathius (\textit{Ad Iliadem}) attributes its invention to
Osiris, and it was used in his worship as late as the third century A.D.\textsuperscript{2}
We cannot be sure of its Egyptian name but Eustathius says that the
Greek \textit{chmoue} was sounded to gather the congregation for the sacrifi-
cence, and this may well be the Greek pronunciation of the Egyptian
\textit{\textsc{sn}eb}. It has been assumed that the Egyptians ‘were not very success-
ful’ in making trumpets, the apparent authority being Plutarch;\textsuperscript{3} yet
the author of \textit{De Iside et Osiride} merely states that the inhabitants of
Busiris and Lycopolis did not permit the use of the trumpet because
its sound resembled the braying of an ass.\textsuperscript{4} This veto had nothing to
do with any supposed Egyptian imperfection in the trumpet as such;
it was because the evil god Typhon was considered to have all the
attributes of the ass. Cairo possesses among its museum treasures a
silver and a copper trumpet, both with gold mountings, from the
tomb of Tut-anh-amen,\textsuperscript{5} which have been played in modern times and
sound quite brilliant.\textsuperscript{6}

The \textit{hydraulus}, the so-called water organ, was invented by Ctesibius
of Alexandria (fl. 246–221 B.C.),\textsuperscript{7} the son of a barber who lived in the
quarter of the Aspendia. Clément Loret’s researches on the \textit{hydraulus}
are summarized in his son’s study of the musical instruments of
ancient Egypt in Lavignac’s \textit{Encyclopédie de la musique},\textsuperscript{8} but the
instrument is usually allocated to colonial Greece, which also claims
another Egyptian writer on the hydraulus, Hero of Alexandria
(fl. A.D. 150).\textsuperscript{9}

The chordophones of ancient Egypt are even more interesting than
those of ancient Mesopotamia, because their morphological develop-
ment can be discerned with greater clarity over several millennia.
The upright lower-chested harp goes back iconographically to the 4th
dynasty (twenty-sixth century B.C.) at the very least. At Gizeh we

\begin{itemize}
  \item[1] Lepsius, op. cit. ii, pl. cxii; iii, pls. ccix, ccxviii.
  \item[4] \textit{Isis and Osiris}, 362.
  \item[6] See Hickmann, \textit{La Trompette dans l’Égypte ancienne} (Supplément du Service des
  \item[7] Paul Tannery in \textit{Revue des études grecques}, ix (1896), pp. 23 ff., xxi (1908),
  pp. 326 ff.
  \item[8] \textit{1re} partie, i, pp. 30-34.
  \item[9] For the most complete description, see H. G. Farmer’s \textit{The Organ of the Ancient}
  (London, 1931).
\end{itemize}
espy the identical bow-harp predicated in Mesopotamia as the *ban* or *pan*, but in a form much nearer its days of puberty. At this early date, when it was known in Egypt as the *ben*, *bent*, or *bin*, *bint* (cf. Coptic *boini*, *oyoini*), it had a narrow and perfectly cylindrical crescent-shaped body with six strings (but seemingly seven pegs). By the 5th dynasty, the lower end of this narrow cylindrical body had developed a definite hemispherical sound-chest. From the 6th dynasty (c. 2300 B.C.) onwards, these forms seem to continue with but slight deviation, until we perceive the gradual widening of the body and sound-chest, from top to bottom, which became the recognized structure about the 12th dynasty (c. 1989 B.C.), although earlier forms still appear from time to time even until the seventh century. With the rise of the 18th dynasty a melioration and refinement of structure and purpose are clearly revealed, until by the time of Rameses III (c. 1200 B.C.), we have the superb so-called Bruce's harps. In these two instruments, which stood over 6 feet high, furnished with ten (?) eleven) and twelve (?) thirteen) strings respectively, handsomely ornamented, we reach the apogee of harp construction in ancient Egypt, although even taller instruments (7 feet high) had existed earlier.

Meanwhile (c. 1989 B.C.), the ordinary smaller harps had changed their outline from the crescent to the semicircular, a contour which lasted until the Christian era. All the foregoing were played in the conventional way, i.e. standing on the ground, although in a few instances we find stands being used to raise the sound-chest from the floor. By the late Middle Kingdom (c. 1776 B.C.) a portable shoulder harp made its appearance, the raised sound-chest of which, although seemingly a novelty, dated back to early days.

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1. Lepsius, *op. cit. iii*, pl. 36. In the art remains, strings and pegs often disagree.
2. Flinders Petrie, *Dedasheh*, p. 8; pl. xii; Kinsky, *Geschichte der Musik in Bildern*, p. 4.
8. Sachs, *Die Musikinstrumente des alten Ägyptens*, p. 66; figs. 95a, 96.
Among other Oriental borrowings under the 18th dynasty was the upper-chested harp. This, as we have seen in Mesopotamia, was simply the horizontal lower-chested harp turned sideways and with the angle made semi-acute. We cannot be sure of its name, but it may have been the instrument called the da' da't, with a possible variant da' da'newt. Delineations also date from this period, and it continued to enjoy popularity right through the Greek period (332–30 B.C.). Like the lower-chested harp, the face of the hollow sound-chest was covered with leather or parchment, a feature which may be noted in actual specimens or reproductions at Paris, Cairo, and New York, on the first of which are twenty-two strings, while a small wooden figurine in the British Museum carries but six strings on the instrument. By the time of Euergetes II (second century B.C.) the sound-chest had become an acute angle.

Older still was the kithara, which was also of exotic origin. We first discern it in the 12th dynasty about the year 1890 B.C., in the famous Beni Hasan pictures. These represent Bedouin called the 'Aa'mu (Arabic 'amm = 'men of a tribe') who, under their shaikh, Abšai, i.e. Abū Shahī, go to Egypt to pay tribute to a certain Prince Henem-ḫetep. Among the shaikh’s retainers is a kitharist, and perhaps the shaikh himself was called Abū Shahī (‘Father of Pleasantry’) because of his esteem for music, since the Arabs give this nickname to the lute itself. This scene shows a plain, rectangular folk kithara which is played with a plectrum. It is held with the strings lying horizontally, a custom which continued for centuries, even when an

1 Erman, op. cit., p. 253.
4 N. de G. Davies, The Rock Tombs of El Amarna (London, 1903–8), vi, pls. 6, 28.
5 C. M. Kaufmann, Graeco-ägyptische Koroplastik (Leipzig, 1915), pls. 5, 58.
6 Loret, op. cit., p. 29; Catalogue of the Crosby Brown Collection of Musical Instruments, iii (New York, 1906), p. 3.
7 Wilkinson, Engel, and Chappell show the instrument with twenty-one strings, but with twenty-two tassel string ends.
8 Champollion, op. cit. i, pl. li. Wilkinson’s picture of this harp is given upside down, obviously the way in which it was displayed at Paris (cf. the tassels). This was copied by musicologists, including Engel and Chappell, for three-quarters of a century. Further currency was given to the blunder when Sir Laurence Alma-Tadema represented it thus in his well-known painting ‘Pastime in Ancient Egypt’.
9 Erman, op. cit., p. 253.
The derivation of ‘Aa’mu is not settled.
10 Jon Ma’ruf, Kanz al-lughha, s.v. shahī.
11 Lepsius, op. cit. iv, pl. 133; Wilkinson, op. cit. ii, pl. xiv; Rosellini, op. cit. i, p. xxviii.
asymmetrically shaped kithara had been adopted in the 18th dynasty (c. 1570 B.C.). After a while, larger and more imposing instruments came into use, some with as many as fifteen strings, as in the satirical Turin papyrus (20th dynasty) and other delineations. Some were standing types as large as those of Mesopotamia. A few portable specimens exist in museums at Leiden, Cairo, and Berlin. Being a harp-like instrument, it was probably counted generically as a ben or bent, yet about 1200 B.C. it seems to have been given a distinctive name in kena’na’wr, a word strongly suggestive of the Hebrew kinnôr and the Arabic kinnâra, which possibly survived in the Coptic qinêra. There is no evidence of lyres, as distinct from kitharas, being adopted during the Greek period.

Lastly comes the pandore or long-necked lute, whose Egyptian name has been the subject of so much pother (see pl. 9 (b)). Tempted by the ideogram nefer (good), which resembled the form of the pandore, and by the fact that ‘f’ and ‘b’, and ‘r’ and ‘l’ were interchangeable, some authorities considered the Egyptian nefer and the term nebêl (instrument) of the Old Testament to be identical; ergo, the nefer was the pandore. Although much has still to be said for the claim of identity, the theory has been abandoned. The pandore may be of Oriental origin, since it does not occur prior to the New Kingdom (c. 1570 B.C.). The sound-chests show the short oviform, the long oviform, and the periform, with a belly of skin or parchment perforated with one large and several smaller sound-holes. The strings were not attached to pegs as in the harps, but to tasselled tuning thongs. The pandore continued to be favoured until the Graeco-Roman periods, and the old Egyptian types are still popular in North

3 Sachs, Die Musikinstrumente, figs. 53, 63.
7 This was Burney’s premise, which was accepted everywhere after Champollion (Dictionnaire égyptien, 1841) had laid it down that nefer was ‘une sorte de Théorbe’.
8 Scepticism began with Petrie (Medum, 1892, p. 29); he was followed by F. Ll. Griffith, N. de G. Davies, and Loret, until Petrie (The Wisdom of the Egyptians, London, 1940, pp. 59 ff.) himself gave the coup de grâce.
10 Wilkinson, op. cit. ii, pl. xii; figs. 187–8, 191, 205, 222–3.
Africa today under the name ganābīr (sing. gunbri), with two or three strings as in ancient Egypt.

Looking back over nearly three millennia of iconographic material, in which instruments of music have been delineated so profusely with such great care, one cannot help being amazed by the diverse structures, the neatness of design, the clearness of detail, and the almost methodical portrayal of instrumental technique in ancient Egypt. In the wider use of these instruments, Egypt surpassed Mesopotamia a hundredfold and it is no wonder that Greece sang its praises.

THE PRACTICE AND THEORY OF MUSIC

As we saw at the outset, what was envisaged by the Egyptians when they listened to music was affected by, or was subject to, the influence of ḥeka or ḥīk (‘spell’). Like the sūfī of medieval Islam, or the Maulawiyya dervish fraternity at Cairo today, the Egyptians of old did not hear ‘music’, but only ‘sounds’, and the latter were but a symbol of something else. One imagines that this interpretation obtained generally, even under purely festive conditions. Music, as we understand it, was simply one of the concomitant joys of life inseparable from floriage, feasting, and fragrance. A sidelong on this collateral appreciation is thrown by the sound-chest of the harp, which is sometimes fashioned to represent a lotus in bloom. Thus, before a note was struck, the instrument spelt ‘joy’. Yet in spite of these esoteric doctrines, the practice and technique of music seems to have been quite exoteric, seemingly very little different from our conceptions.

A few instrumental features deserve notice. The large plectrum for the cithara in use by the badāwi ‘Aa’mu must be compared with the delicate implement between the finger and thumb of the graceful pandorist on a tomb picture, or the even smaller one, no larger than that of the modern mandoline, at another tomb. These plectra are attached to a cord lest they be lost. Observe also the seeming affectation of the pandorists who occasionally strike the strings above the

3 The Egyptians used up to four strings. See Champollion, op. cit. ii, pl. clx, and Wilkinson, op. cit. ii, pl. xii. For the ‘accordage’ of Egyptian stringed instruments see Hickmann, ‘Miscellanea musicologica’ in Annales du Service des Antiquités de l’Égypte, xlviii (Cairo, 1947), pp. 646 ff.
4 Erman, Life in Ancient Egypt, p. 214.
5 N. de G. Davies, The Tomb of Nakht at Thebes (New York, 1917), frontispiece and pp. 57 ff.
EGYPTIAN INSTRUMENTS

(a) Lower-chested harp and flute (18th Dynasty, 1570–1310 B.C.)

(b) Harp, lute, and double reed-pipe (c. 1475 B.C.)
sound-chest instead of at the bridge, in order to obtain a subdued effect, a custom still practised in the Occident. Tricks or dexterities were also indulged in, and a wall-painting in the British Museum shows a female reed-piper fingerling the dextra pipe with the left hand and the sinistra pipe with the right.

The gradual development of the sound-chest in the harp shows early recognition of the principle that loudness equates with amplitude. The adoption of a taut skin, later parchment, as the belly of the sound-chest of the harp and pandore, reveals the taste of the Egyptians for what we should term a 'banjo timbre'. The strings of different lengths on their harps were the natural outcome of the adoption in primitive times of the bow-harp, which we know existed in Mesopotamia and Egypt in the third millennium B.C. Obviously these people must have recognized that the length of a string, other things being equal, determined the pitch of the sound, a principle which Pythagoras is said to have introduced into Greece. Yet Helmholtz once remarked that 'if, as is possible, his [Pythagoras's] knowledge was partly derived from Egyptian priests, it is impossible to conjecture in what remote antiquity this law was first known'.\(^1\) We have seen, however, from the above dates, that this principle was recognized by both Mesopotamia and Egypt at least two millennia before the dawn of Greek civilization, and it was in these lands that Pythagoras had studied both mathematics and musical theory.\(^2\)

How much of this knowledge of the theory of sound, and its application to vibrating string lengths and a column of air in tube lengths was indigenous? Carl Engel once said: 'There can scarcely be any doubt that the Egyptians, like the Greeks, possessed written dissertations on the theory of music.'\(^3\) In the absence of documents this attitude is quite inadmissible. Yet it is pardonable for several reasons. That there existed a Greek or Syriac version of a treatise on the theory of music attributed to Hermes, which was known in an Arabic translation during the Middle Ages, is hinted by Arabic and Persian authorities;\(^4\) and while 'Hermetic' works were not necessarily from the hand of Hermes, or the person to whom this name was given—the label was attached to any anonymous Pythagorean, Neoplatonic, or similar writing—still, Hermes was a name with which to conjure in the realm of music, since he was claimed as the 'inventor

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2 Tamblichus, De vita Pythagorae, iv.  
3 Op cit., p. 237.  
4 Farmer, The Sources of Arabian Music (Bearsden, 1940), p. 29 (= Records of the Glasgow Bibliographical Society (1939), vi.)
of music\textsuperscript{1} and the 'first to observe the orderly arrangement of the stars and the harmony of musical sounds and their natures',\textsuperscript{2} which was the very pivot of the religious conceptions of the ancient Egyptians. However, no such books on the theory of music have come down to us from ancient Egypt. Whether those 'Egyptian books' which were among the original Alexandrian libraries of Ptolemy Philadelphus (309–246 B.C.) and Ptolemy Euergetes I (246–221 B.C.) contained treatises on music, we have no knowledge. However, it is clear enough that Egyptians had such knowledge of musical theory, as we shall see presently.

Just as in ancient Mesopotamia apparently, music was thought to belong to things that were anterior to experience. As a result of this belief, each note of music not only had a particular cosmic value,\textsuperscript{3} but a magic potency,\textsuperscript{4} a circumstance which almost implies the existence of modal formulas. It will be recalled that Plato's Athenian guest said when commenting on the educational system of the Egyptians:\textsuperscript{5}

What they ordained about music is right; and it deserves consideration that they were able to make laws about things of this kind, firmly establishing such melody as was fitted to rectify the perverseness of nature.

From the whole passage one may readily conclude that a modal system was in vogue in Egypt which was approved by the temples and so became a fixed and immutable law. We know that certain modes or modal motives of a fixed character called \textit{nomo\imath}, (lit. 'laws') were current in Greece, the strict use and interpretation of which were rigorously enforced. By Plato's time, the 'pleasure-seeking' crowd were setting these at naught, and that was why Plato praised the Egyptian practice of strict adherence to what was 'lawful' in music. It must be admitted, however, that the tenets of Plato and the Egyptians were prejudicial to the progress of art but, as the former says, they were beneficial to the State, since where there was licence in music there was likely to be laxity in morality.

What these modalities or modal motives were in ancient Egypt there is no record, no more than there is of the \textit{nomo\imath} of Greece. One is inclined to believe that if music was regularized by the priests there must have been a norm, since no canonical standard could have

\textsuperscript{1} Plutarch, \textit{Isis and Osiris}, 352.
\textsuperscript{2} Diodorus Siculus, i. 16.
\textsuperscript{3} Maspero, \textit{Etudes de mythologie}, i, p. 106.
\textsuperscript{4} Cumont, \textit{Astrology and Religion among the Greeks and Romans} (New York, 1912), p. 30.
\textsuperscript{5} \textit{Laws}, 657.
existed without rule. Yet rules can be observed without being written. On the other hand, the rather late testimony of Clement of Alexandria (second century A.D.) may not come amiss, for his authorities may have been early. He says that among the innumerable books of the ‘thrice greatest Hermes’ were two for the ‘Chanter’ in the Egyptian temple which dealt with hymns of the gods and the regulation of the king’s life. These may have contained modal directions, seeing that such were obvious desiderata in temple chanting, and some of the art remains show the lector-priest (‘precentor’) with such a book in his hand.

In recalling the view of Maspero that each note of music possessed an inherent character, one is reminded of the assertion of pseudo-Demetrius Phalerius (first century A.D.) which almost confirms the above. He says: ‘In Egypt, the priests hymn the gods through the seven sounds [lit. “vowels”] in direct succession.’ The perpetual iconographical incidence in the early period of seven-stringed harps, and the occasional occurrence of seven harpists and seven flautists may have significance as cosmic affinity. Indeed the earliest hint of music theory per se in ancient Egypt, which occurs in Dio Cassius (c. A.D. 150–235), most certainly has an astrological bearing. He tells us, in his usual credulous way, that it was the tetrachord which gave birth to the names of the days of the week. A series of fourths, he says, were taken from Saturn thus: \( E \) [Saturn] to \( A \) gave the Sun; \( A \) to \( d \) gave the Moon; \( d \) to \( g \) gave Mars; \( g \) to \( c' \) gave Mercury; \( c' \) to \( f' \) gave Jupiter; \( f' \) to \( b' \) gave Venus; and thus it was that the names of the days of the week, Saturday, Sunday, Monday, and so on, came to us. This recital, of what Dio Cassius calls the ‘musical connection with the arrangements of the heavens’, would be hardly worth the telling did he not state that the idea originated in Egypt, ‘but is now found among all mankind, though its adoption has been comparatively recent; at any rate the ancient Greeks never understood it, so far as I am aware’. In any case, this proceeding is just what one would expect from the Egyptian priests who, as Diodorus Siculus affirms, were the first to make a scientific observation of the stars. Indeed, if the origin of the mathematical arts, especially geometry, is to be allowed to Egypt, and if a high skill in arithmetic

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1 Much of his other material can be traced to older sources.  
2 Stromateis, vi. 4.  
3 Erman, op. cit., pl. between pp. 320–1; Rosellini, op. cit., pl. cxxxii.  
5 De Elocutione, 7.  
6 Encyclopédie, t. i, p. 25. xxvii. 18.  
7 i. 50.  
8 Aristotle, Metaphysics, 981.  
9 Proclus, Commentary on Euclid, bk. i.  
10 Plato, Laws, 819.
is also to be counted to her credit, it would certainly be passing strange that the fourth group of the *quadrivium* should not have thriven as vigorously there also, as one is tempted to believe from the remarks of Philo Judaeus.\(^1\)

From Dio Cassius it is clear that Egypt was conversant with the so-called Pythagorean system in the second century A.D., and there is no reason why it should not be assumed that it was practised there before the time of Pythagoras who was *in statu pupillari* possibly when he studied in this land c. 547–525 B.C. That Josephus says that the Egyptian temple harpists were using a *trigōnon enarmonion* in his day (first century A.D.) is no argument against this assumption.\(^2\)

Musicologists have tried to decide this question by appeal to the actual instruments that have come down to us, and much patient research has been made in this territory. Victor Loret investigated the string lengths on harps, though these by themselves (as he recognized) are insufficient data;\(^3\) on the other hand, his contribution to the study of the digit holes on the woodwind is useful,\(^4\) as are the researches of his confrères in this field.\(^5\) Yet so far as one can see, the results lead us only into generalizations. Out of thirty-six instruments examined, dating from the 12th to the 22nd dynasty, only one could be classified as a ‘many-toned’ flute or reed-pipe, which the *Onomasticon* tells us the Egyptians possessed.\(^6\) Erich von Hornbostel took pains to measure the frets on a pandore which had been delineated with such, but again the results were practically negative.\(^7\)

Though we cannot solve the problem of the theory of music in ancient Egypt, we may still be able to answer the vexed question: ‘Did harmony exist in ancient Egypt?’ Many writers have answered in the affirmative. James Baikie says that ‘it seems out of question to suppose that these aggregates of instruments were designed only to multiply the melody’, and so concludes that the existence of harmony is proved.\(^8\) To this one can only reply that we see the same ‘aggregates of instruments’ which are ‘multiplying the melody’ in every Arabic-speaking land from the Pillars of Hercules to the Tigris without a vestige of harmony, as we understand the term, discernible.

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1. *Moses*, i. 23.
To more purpose are the studies made by Curt Sachs who, in furtherance of his thesis of the pentatonic tuning of Mesopotamian harps, has adopted similar criteria in his study of the technique of Egyptian harpists. Taking seventeen representations of these harpists, he found that ‘seven are striking a fourth chord, five a fifth chord, and five an octave chord; that is, taking for granted that the accordatura was pentatonic’.\(^1\) From this it is argued that ‘simultaneous consonances’ and a ‘pentatonic accordance’ are indicated.

It has already been demonstrated:\(^2\) (1) that simultaneity cannot be accepted as a criterion from the mere position of the digits on the strings; and (2) that arguments for a pentatonic tuning based on the assumptions of (1) are invalid. It is true that in many delineations of Egyptian harpists we are confronted with hands stretched far apart over the strings, a circumstance which prompts one to conclude that the notes played, whether simultaneously or otherwise, must be far apart in the intervallic sense. But what inferences are we to draw from those pictures in which the hands are shown to be close together, with digits on adjacent strings? To draw positive conclusions from either of these facts, especially when based on preconceived notions of tuning, is extremely hazardous if not fallacious.

In conclusion it may be said that, while harpists in Egypt may have sounded fourths, fifths, or octaves in playing, the practice was probably merely a heterophonic device, just as it is today in Islamic lands where it has been practised since the time of Al-Kindī (d. c. A.D. 874) if not earlier; but heterophony does not constitute harmony in the accepted connotation of the term.\(^3\) The pentatonic system was pre-Pythagorean. That the former persisted after the latter had been established in Greece is quite understandable, but the heptatonic principle must have prevailed in Egypt long before it was accepted in Greece; at least that is what the Greeks themselves would lead us to believe. In any case, in historic (post-Pythagorean) times there is not the slightest indication in literature that there was any dissimilarity in this respect between the music of Egypt, Syria, and Greece.

THE LEGACY

Egyptians had a wide reputation as educators. Menecles, the historian of Barca (third century B.C.), recorded that ‘the Alexandrians were the teachers of all the Greeks and barbarians at a time when the

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\(^1\) *The History of Musical Instruments* (New York, 1940), pp. 82, 94.


entire system of education had broken down by reason of the continually recurring disturbances which took place in the period of Alexander’s successors [post 323 B.C.]. ¹ Herodotus (ca. 484–425 B.C.) states that ‘the Egyptians were the first to introduce solemn assemblies, processions, and litanies to the gods, all of which the Greeks were taught by them’. ² Indeed, Diodorus Siculus would have us believe in even greater borrowings when he says that ‘in general, . . . the Greeks appropriated to themselves the most renowned of both Egyptian heroes and gods’. ³ By the third century B.C. the spread of the cults of Isis and Serapis in Greece was vast. ⁴ The craze was extended to Rome where Tibullus the poet (fl. 54–19 B.C.) questioned the efficacy of the ‘brazen sistra’. Yet Isis worship found votaries by the Rhine, the Danube, and the Seine, while even the Anglo-Saxons recognized the ‘Egyptian days’. With these Egyptian cults went the liturgy, hymns, chanting, and above all the ‘grief-compelling’ sistra of which Lucan writes, ⁵ and it is from the western use of the latter that so many specimens have been preserved. Indeed the Isis temples in Europe continued a liturgy which was just as elaborate as in Egypt, ⁶ since both sistra and tibiae were still in use, although Clement of Alexandria adds harps (psalteria), cymbals, and drums. ⁷

When the Greeks borrowed the Egyptian seššet they called it the seistron which, in turn, became the Latin sistrum. Among the woodwind of Egypt, one or two found acceptance in Greece. Julius Pollux says that the Greek giglaros was an Egyptian kind of aulos. ⁸ Athenaeus tells us much about Egyptian flutes and pipes and says, on the authority of Juba, that ‘the Egyptians call the monaulos an invention of Osiris, just as they do the plagiaulos which is named the photinx . . . which is peculiar to our country’ [it is an Alexandrian who is speaking]. ⁹ Later we are told that the ‘lotus pipes’ are what the Alexandrians call ‘photinxes’; ‘they are made of lotus, as it is called, which is a wood that grows in Libya’. ¹⁰ Yet Euripides, several centuries earlier, reveals that the ‘sweet-sounding lotus [flute]’ was a sacred instrument even in those days. ¹¹

There is also a slight suspicion that the ‘foreign’ harp used by the Greeks under the name of phoinix may have been the Greek vocaliza-

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¹ Athenaeus, iv. 184.
² ii. 58.
³ i. 23.
⁴ W. H. Roscher, Ausführliches Lexikon der griechischen und römischen Mythologie (Leipzig, 1884–1901), s.v.
⁵ Pharsal. viii. 832.
⁷ Stromatels, ii. 4.
⁸ Onomasticon, iv. 10.
⁹ Ibid. 182.
¹⁰ Ibid. 175.
¹¹ Bacchae, line 160.
tion of the Egyptian *bainit (= bint)*, rather than the accepted meaning of Phoenician [harp]. In Athenaeus, after the mention of several ‘foreign’ stringed instruments catalogued by Aristoxenus, the interlocutor referred to above boasts that ‘the Alexandrians are well acquainted with all these instruments’, and says that a fellow citizen of his, Alexander of Alexandria, ‘gave a public recital with the instrument called the *trigon*, and sent all Rome into such a state of music-madness that most Romans can repeat his tunes’. That Egyptian musicians, like the Syrian, were to be found in both Greece and Rome, is well evidenced. In later years this was partly due to the persecution of the Alexandrians by Ptolemy VII, when ‘not a few’ of them were sent into exile: philosophers, mathematicians, musicians, and other men of skill in their professions, who ‘instructed many distinguished men’ in the lands of their refuge, where they were the means of bringing about a rejuvenation of culture which had fallen to a low ebb.

Indeed we must not forget that some of the greatest names in the history of ancient music belong to Alexandrians and other Egyptians: Ctesibius of Alexandria (*fl.* 246–221 B.C.) the presumed inventor of the hydraulics, Claudius Ptolemy of Canopus (*fl.* A.D. 127–51) the famous mathematician and musical theorist who wrote the weighty *Harmonica*, Hero of Alexandria (*fl.* A.D. 150) who presented a later account of the hydraulics in his *Pneumatics*, and Athenaeus of Naucratis (*fl.* A.D. 180–230) whose chatty *Deipnosophistes* tells so much about instruments of music and other neglected musical lore.

All this may be but a scant indication of the musical heritage of Egypt to the rest of the world, and it may come from even comparatively late sources; for when history strides over millennia, the earlier footprints are not easily discernible. So, ultimately, one is compelled, in the earlier period, to fall back on the general cultural impingement of Egypt on Aegean civilization. As Breasted has shown, the Aegean world was influenced by the Orient from two directions. Just as Asia Minor was the cultural bridge connecting Greece with Mesopotamia, so Crete, the centre of the Aegean, was the half-way house which passed on Egyptian civilization to the Hellenic mainland. Of the reality of the latter inducement we have ample evidence, and in the sphere of music there is that archaic Cretan stoneware vase which shows a harvest thanksgiving procession headed by a head-shaven

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2 Athenaeus, iv. 184.
3 Ibid., loc. cit.
priest with sistrum in hand;¹ the motive and craftsmanship tell their own story. Alan J. B. Wace has said that it was from this impulse to Cretan culture that sprang the Minoan and Mycenaean civilization, "from the ashes of which there rose Phoenix-like in the first millennium B.C. the brilliance of Hellas, which was in its turn the forerunner of European culture".²

¹ Breasted, Ancient Times, p. 285.
VII

MUSIC IN THE BIBLE

By Carl H. Kraeling and Lucetta Mowry

Among the world’s books few can lay claim to greater importance for the history of music than the Bible. Its religious lyrics have not ceased to be sung in divine worship throughout the many centuries since they were written. The words of some of these lyrics, like many of the stories of the Bible, have been a source of inspiration for generations of composers, particularly in western Europe, down to modern times, and have found an echo also in the folk-songs of many lands. In the more recent past the book and its lyrics have come to be recognized by scholars as a treasure-house of information about the history of music in antiquity. Through the Old Testament it provides a partial record of the music of the Hebrew nation during the many centuries of its existence. Through the New Testament it gives at least a rudimentary acquaintance with the music of a nascent religious community, the early Christian Church, in the crucial formative years of its life.

LIMITATIONS OF BIBLICAL INFORMATION

As a source for the history of Hebrew music the Bible has certain limitations and presents certain problems. Being a sacred book, it provides only incidental witness to the range and character of Hebrew secular music. Being a collection of ancient literary documents, it gives the words of many ancient Hebrew religious lyrics—together with scattered references to the occasions on which they were performed, the instruments employed in accompaniment and even the names of some of the tunes used—but not the actual melodies to which the songs were sung. Since the Bible draws its materials from the entire range of Hebrew religious literature, and since in any such literature the use of the lyric form is by no means limited to the song proper, it is sometimes impossible to say whether a given composition was or was not intended to be sung. Lastly, since the documents are arranged according to categories—Law, Prophets, and Writings—and, what is more troublesome, are often either pseudonymous or composite or both, it is not always immediately evident to what
particular period of Hebrew history the songs contained in them and the historical information conveyed by them actually belong. Of the limitations mentioned, some are today being surmounted with the help of a growing body of information about the music of the ancient Orient generally, while others are yielding to a fuller understanding of the music of the later Synagogue. What is known about the music of ancient Egypt, Babylon, and Persia—their lyrics, their instruments, and even their melodies—has already been summarized (Chaps. V and VI). The music of the Synagogue is discussed in the next chapter. As to the problems mentioned, these may be said to have been brought nearer to solution, at least in broadest outline, by the literary criticism which in the last century has applied itself successively to the historical, the prophetic, and the lyric elements of the Biblical record, clarifying the stratification of the materials and determining the basic forms and categories of Hebrew poetry. The most immediately pertinent of the critical works produced in the course of these labours, together with those treating the music of the Bible directly, are listed in the Bibliography (pp. 493–4).

THE NOMADIC PERIOD

Reconstructed with the help of literary criticism and comparative materials, the history of Hebrew music develops in several stages, beginning with the earliest days of Hebrew tribal life and extending through the periods of the occupation of Palestine, the monarchy, the exile, and the post-exilic community respectively. Throughout the many centuries embraced in this development, music, and especially song, played an important part both in the secular and in the religious life of the Hebrew people, testifying to the high order of the nation’s intellectual gifts and to its emotional and aesthetic sensitivity. In the earliest known phase of their history the Hebrews were apparently nomads. To interpret correctly the nature and range of their music in this period recourse must be had to the information supplied by our knowledge of primitive migratory groups. What European travelers in the Near East have reported about the music of the Bedouins and what early Islamic authors tell us about the music of the Arabs in the ‘period of ignorance’, is particularly helpful in this connexion. The chants which the nomadic Hebrews, like their successors, undoubtedly sang to while away the monotony of the long desert

marches, the songs they once had for special occasions in the life of the individual and his family, were not remembered in the days of the Biblical writers. But of the songs that are associated with the life of the tribes and reflect the nomad's bitter struggle against the forces of nature and the claims of rival groups a few snatches have been preserved. One of these, connected with the desert travellers' eternal quest for the means of survival, is the Song of the Well:

Spring up, O well;  
Sing ye unto it:  
The princes digged the well,  
The nobles of the people digged it,  
By the direction of the lawgiver,  
With their staves. (Num. xxi. 17–18.)

Probably sung in response to the invitation of the precentor by the members of the clan as they approach a tribal watering-place, the theme and refrain of the song has its counterpart in the repertory of the Bedouins even today.¹

Characteristic of the group movements of desert tribes are the shouts associated with the Hebrew banner (‘The hand upon the throne [read: the banner] of the Lord’, &c., Exod. xvii. 16), with the Ark (‘Rise up, O Lord, and let thine enemies be scattered. . . .’ Num. x. 35–36), and in a later period with individual leaders (‘For the Lord and for Gideon!’, Jud. vii. 20). Such shouts are still used by Bedouin groups, their set tonal forms making it possible to identify the tribe to which the group belongs.² More distinctly lyric in character are the songs of vengeance and triumph preserved in the early historical books of the Bible. It is the thirst for blood revenge that echoes in the Song of Lamech:

Hear my voice,  
Ye wives of Lamech;  
Hearken unto my speech:  
For I have slain a man to my wounding  
And a young man to my hurt  
If Cain shall be avenged sevenfold,  
Truly Lamech seventy and sevenfold. (Gen. iv. 23–24.)

It is deliverance from the hand of the enemy that comes to expression in the tumultuous refrain and invitation of the song of triumph that

¹ Musil, op. cit., p. 9, quotes three examples, of which the simplest is the brief couplet:  

Spring, O water,  
Flow in plenty.

² See Musil, Arabia Petraea iii (Vienna, 1908), pp. 386 ff.
Miriam sang and the women of the Hebrew camp repeated at the shore of the Red Sea:

Sing ye to the Lord,
For he hath triumphed gloriously;
The horse and his rider
Hath he thrown into the sea.  (Exod. xv. 21.)

Other lyrics of this type from the same period of Hebrew history were contained in the lost ‘Book of the Wars of the Lord’ mentioned in Num. xxi. 14, where a few lines are quoted. With Bedouin music in its simplest forms these remains of early Hebrew song share certain formal traits. They are marked by conciseness and simplicity and by strong accentual rhythm, implying that the tonal patterns in which they were rendered were brief and that the rendering was strident and staccato. At least in the case of Miriam’s song of triumph we hear that the singing was accompanied by the beating of percussion instruments (timbrels) and by rhythmic motions of the body. 2

EARLY PALESTINIAN PERIOD

When in the course of the second millennium B.C. the Hebrew tribes made their way into Palestine, this was in all probability a matter of great consequence for the nature and development of their music. Here they began a new sedentary phase of their national history, entered upon a new agricultural form of life, and came into close contact with peoples of different racial stocks and varied social and cultural antecedents. Their first effort was naturally to make a place for themselves in the new land by conquest. In the circumstances they naturally perpetuated some of the musical forms belonging to their earlier repertory, especially the war songs. A particularly brilliant song of triumph from the period of the conquest of Canaan is the Song of Deborah (Judges v) containing the familiar lines:

The kings came and fought,  
Then fought the kings of Canaan  
In Taanach by the waters of Megiddo;  
They took no gain of money.  
They fought from heaven;  
The stars in their courses fought against Sisera.  
The river Kishon swept them away,  
That ancient river, the river Kishon.  
O my soul, thou hast trodden down strength.  
(Judges v. 19–21.)


2 For Bedouin analogies see Bertram Thomas, op. cit., pp. 381–4.
Its length and scope reveal an advance in the powers of sustained composition, while the statement with which the prose writer introduces the song suggests that different sections of it may have been sung by singers of opposite sex (historically Deborah and Barak: Judges v. 1), no doubt with the use of a large variety of tonal patterns. Two verses quoted from the ‘Book of Yashar’ is all that remains of an analogous song about the battle at Gibeon in the prose narrative that has replaced it (Joshua x. 12–13).¹

Echoes of the shorter, simpler lyrics celebrating the deeds of individual heroes appear in the texts dealing with the period of the Judges and the early monarchy—for instance, in the familiar couplet celebrating Samson’s victory over the Philistines:

With the jawbone of an ass, heaps upon heaps,
With the jaw of an ass have I slain a thousand men.

(Judges xv. 16.)

and in the song with which Saul was welcomed at his homecoming in 1 Sam. xviii. 7:

Saul hath slain his thousands
And David his ten thousands.

It will be noted in the last passage that the song welcoming the triumphant hero was sung by the women with the accompaniment of the dance and the use of various instruments.²

To the songs of war belong also those mourning the death of the fallen hero, the dirges. As a literary form the dirge appears in many parts of the Old Testament, but the first examples are from the period of the early monarchy. The earliest, quoted from the ‘Book of Yashar’ (perhaps to be translated, ‘Book of Songs’), is the lament of David for Saul and Jonathan, beginning with the words:

The beauty of Israel is slain upon thy high places

and containing the familiar refrain:

How are the mighty fallen.       (2 Sam. i. 19–27).

The second is the brief lament of David over Abner found in 2 Sam. iii. 33–34. The typical dirge, particularly in its later form, is marked by a peculiar ‘limping rhythm’, which must have been reflected also in the melodic phrases to which such songs were sung.³ Originally the singers were probably the battle companions of the

¹ For a related taunt song, perhaps from the period of the early monarchy, see Num. xxi. 27–30.
² Cf. Exod. xv. 20 and Judges xi. 34, where only percussion instruments are mentioned.
³ See infra, p. 295.
deceased, the women accompanying the singing by sounds of wailing and weeping (2 Sam. i. 24), but 2 Chron. xxxv. 25 suggests that in later times lyrics lamenting the death of kings were performed publicly by male and female singers.

With their entry into Canaan the Hebrews undoubtedly added to their musical repertory the songs normally associated with the labours and joys of agricultural life. How large was the variety of such songs in the ancient Orient we learn from a cuneiform text giving an inventory of the titles (or first lines) of songs, listing them under various headings, including the songs of the workman, of the shepherd, songs of love, of youth, &c., and specifying the instrument to which they were sung, in the manner of the Biblical Psalter.1 Presumably the Babylonian lyrics were not fundamentally different from the songs of the shepherd and of the thresher, the texts of which are recorded in ancient Egyptian inscriptions. Those that the Hebrews sang once they had settled in Palestine were probably analogous to both. The joyous celebration of the harvest in field and vineyard was proverbial for the later writers of Hebrew religious literature ( Isa. ix. 3; Jer. xxv. 30; Ps. iv. 7, cxxvi. 6), and of sufficient importance for Isaiah in one of his oracles against Moab to say:

And gladness is taken away,
    And joy out of the plentiful field;
And in the vineyards there shall be no singing,
    Neither shall there be shouting:
The treaders shall tread out no wine in their presses;
    I have made their vintage shouting to cease. (Isa. xvi. 10.)

But the songs of the Hebrew vintner and of those treading the grapes have long since disappeared, unless Isaiah has quoted or parodied a harvest song in the familiar parable beginning with the words:

    Now will I sing to my well-beloved
    A song of my beloved touching his vineyard.
    My well-beloved hath a vineyard
    In a very fruitful hill. (Isa. v. 1.)

The ‘shouts’ of those who trod the grapes (Jer. xxv. 30) may well have been single words repeated ad infinitum with the use of a simple melodic phrase, like the ḫādandēlī ḫādandōl still used by the Arabs of Palestine.2

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2 G. Dalman, Palästinischer Diwan (Leipzig, 1901), p. 28.
In Palestine the Hebrew tribes found also well-established shrines sacred to diverse Canaanite and Egyptian deities. How extensive was the use of music and particularly of song in such temples and how varied the repertory we learn from the hymns inscribed on the walls of Egyptian sanctuaries and from the lyric prayers, the liturgies, litanies, processions, offerings, hymns, and penitential psalms preserved in the cuneiform texts of Babylonia. Very shortly after their entry into the land the Hebrews also created for themselves local shrines—for instance, at Shechem and Shiloh. It had long seemed probable that the practices of contemporary oriental cults gave a strong impetus to the development and use of the religious lyric among the Hebrews in Palestine. The suggestion was verified by the discovery at Ras Shamra in Syria of a body of epic texts reflecting a form of religious belief and observance allied to the Canaanite worship of Baal.¹ The poems, including at least one hymn, are closely related to the Psalms of the Old Testament in vocabulary, phrases and even thought patterns, a relationship illustrated by the analogy between the Ugaritic

Behold thy enemies, O Baal;
Behold thy enemies thou shalt smite,
Behold thou shalt destroy thy foes.

and Psalm xcii. 9:

For, lo, thine enemies, O Lord,
For, lo, thine enemies shall perish;
All the workers of iniquity shall be scattered.²

The fact that such analogies appear in lyrics of quite different periods—the earliest of the extant Hebrew Psalms being a good deal later in date—makes the inference confirmed by them the more significant.

Upon their entry into Palestine the Hebrew tribes probably came to know and use also a larger variety of musical instruments, their types being essentially those portrayed in the art of Egypt and Babylonia. The passage in Gen. iv. 21 speaking of Jubal as the father of those who 'handle the harp (kinnôr) and the pipe ('yügâbh)', is among the earliest to mention such instruments and, what is more important, suggests the appearance of families or guilds of professional musicians among the Hebrews at this time.³

¹ See in general J. Obermann, Ugaritic Mythology (New Haven, 1948).
² For the Ugaritic text see Syria, xvi (Paris, 1935), p. 32; the translation is that of J. H. Patton, in Canaanite Parallels in the Book of Psalms (Baltimore, 1944), p. 29, where a detailed comparison of the two bodies of material is made.
³ H. Gunkel, Genesis (3rd ed. Göttingen, 1910) ad loc., and others associate the passage with the nomadic phase of early Hebrew history.
MONARCHIC PERIOD

With the period of the monarchy, that is, from the beginning of the first millennium B.C., the Hebrew nation takes its place among the established peoples of the ancient Near East, the general pattern of its life for upward of three centuries being approximately that of the many lesser states lying between the great empires of Egypt and Assyria. As the foci of its national life the court, the Temple, and the large urban communities of the land are henceforth of outstanding importance. Trade, the crafts, and the fine arts thrive, historical literature begins and music can scarcely have lagged far behind, though our knowledge of its development remains very defective.

At the court, music played a well-defined and familiar role. Already in the days of Saul we find the young David serving as musician to the king, playing ‘with his hand’ and soothing the ruler’s violent temper (1 Sam. xix. 9). Tradition has it that he not only performed and composed music—the entire Psalter being subsequently credited to him—but that he also invented musical instruments (Amos vi. 5). What we read in the Bible about instrumental music at the Hebrew court, and what we learn incidentally about the vocal music performed there by male and female singers (cf. 1 Kings x. 12; Amos viii. 3, reading ‘songstresses’ for ‘songs’, and for the later period Sirach ix. 4), serves only to reflect the palace usage of the Orient as a whole. That this usage should have spread from the court to the houses of the wealthy, so that Amos (vi. 1–5) could speak of those ‘that are at ease in Zion’ singing ‘idle songs to the sound of the viol’ (nebbel, ‘instrument’, probably a harp) is but natural.

Special events in the life of the court required and produced special music. The accession of a new monarch was celebrated with ceremonies involving the blowing of trumpets and the shouting of formulas of acclamation (1 Kings i. 34). The analogy of the enthronement ritual found in Babylonian texts suggests that songs were sung by the rejoicing populace and by choirs of professional singers at the occasion. The Biblical Psalter contains a whole category of lyrics, the ‘royal psalms’ so-called, that scholars have associated directly or indirectly with events in the life of the court, with the enthronement of the king

or the anniversary of this event (Ps. xxi, lxxii, cx), with the marriage of the king (Ps. xlv), with his departure for and victorious return from war (Ps. xviii, xx, cliv. 1–11), and with his consecration (Ps. ci). So noteworthy were the singers of the Hebrew court that Sennacherib specifically mentions their removal to Nineveh in recording the booty taken from King Hezekiah.¹

MUSIC IN THE TEMPLE

Alongside the court, the Temple was all-important in the monarchical period as a centre of Hebrew music. Familiar in this connexion are the stories of how David brought the Ark to Jerusalem with dancing, with shouting, and with the sound of the trumpet (2 Sam. vi. 14–15), and how Solomon dedicated the sanctuary in which it was housed (1 Kings viii and 2 Chron. v. 11–14). The music of the Temple ceremonial was undoubtedly not as elaborate in Solomonic times as the Chronicler later imagined, but it probably followed the general lines he develops, and was associated with both the regular morning and evening sacrifice and with the important festivals of the religious year. Apart from the blowing of trumpets (Num. x. 1–10, cf. Ps. xcvi. 6) it consisted largely of the singing of religious lyrics and the accompaniment of them with stringed instruments (cf. the protest of Amos v. 23). As in the later period the musical part of the service probably followed the performance of the sacrifices.²

Literary criticism having shown that most of the Psalter belongs to a later period, individual psalms can no longer be used with absolute confidence as sources for the knowledge of temple music in the monarchical period. But types of lyrics tend to perpetuate themselves, and recent typological studies of the Psalms make it possible at least to say what kinds of lyrics were sung in the Solomonic Temple, and with what occasions they can legitimately be associated.³

Biblical psalms connected with public rather than private devotions give evidence of the continuous existence in later times of three important types, namely, songs of praise (e.g. Ps. cxlv, cxlvi, cxlvii, cxlxxiii, cl), songs of petition (e.g. Ps. xlv, lxxiv, lxxix, lxxx, lxxxiii) and songs of thanksgiving (e.g. Ps. xxx, lxvi, cxvi, cxvii, cxxviii). These types the music of the Solomonic sanctuary can scarcely have lacked. Those of the first type are properly hymns celebrating the majesty of the deity, for instance, as the Lord of creation, have at least partial

³ See especially H. Gunkel, Einleitung in die Psalmen (Göttingen, 1933).
analogies in the temple lyrics of the ancient Orient generally, and associate themselves naturally with the performance of the regular cult acts. The penitential psalms of petition, to which there are counterparts at present only in Babylonia, seem particularly adapted to the ritual of stated or especially instituted fast days of national calamity and repentance. The songs of thanksgiving have been connected with the performance of the thankoffering (cf. Jer. xxxiii. 11) and thus with the annual observance of one of the great Hebrew festivals, the Feast of Tabernacles, at which such offerings were commonly made.

Still other classes of the Biblical psalms give indications of their one-time use. The royal psalms, sung at occasions when special honour was done to the king, have already been mentioned. To these may be added a well-defined category of processional psalms (e.g. Ps. xxiv, xlviii, lxxxvii, xcv, c), also connected no doubt with festival usage. Still other songs (especially Ps. xlvii, xciii, xcvi-xcix) are believed to be associated with a festival supposed to have been celebrated annually at Jerusalem in the period of the First Temple, namely, that of the enthronement of the Lord upon his holy hill.

In the period under discussion here the lyrics used in the Temple were probably sung largely by the priests themselves. Some may have had instrumental interludes, if that is what the enigmatic ‘Selah’ frequently found in the text of the Biblical psalms (cf., for example, Ps. iii. 2, 4, 8) really means, as the Greek translation diapsalma suggests. In others the congregation may have participated, but this was probably limited at first to the singing of a simple Amen or a Hallelujah, there being a goodly number of psalms beginning or ending with the latter formula (Ps. civ-cvi, cxi-cxiii, cv-cxvii, cxxv, cxlv-ccl). Songs connected with religious pilgrimage (e.g. Ps. lxxxiv, cxxi) were naturally sung by the pilgrim bands, but at least one processional psalm (Ps. xxiv) seems to have been rendered antiphonally. The ritual enacted with the use of this lyric involves the presence of a choir outside the Temple seeking entrance to the sacred precincts and being required by another to identify the object of its faith before being admitted. Twice repeated, the familiar exchange between the two groups runs as follows:

_I Choir:_ Lift up your heads O ye gates;
Even lift them up, ye everlasting doors;
And the King of glory shall come in.

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1 See S. Langdon, _Sumerian and Babylonian Psalms_ (New York, 1909), and H. Zimmern, _Babylonische Hymnen und Gebete_ (Leipzig, 1905).

2 See particularly S. Mowinckel, _Psalmenstudien II_ (Christiania, 1922).
MUSIC IN THE TEMPLE

II Choir: Who is this King of glory?
I Choir: The Lord of Hosts,
      He is the King of glory. (Ps. xxiv. 9–10.)

So well established is the relation of Temple worship and music that the psalmists naturally associate the act of coming into the divine presence with that of ‘making a joyful noise to him [the Lord] with psalms’ (Ps. xcv. 2) and of singing ‘praises unto Him with the timbrel (tōph) and harp (kinnōr)’ (Ps. cxlix. 3).

THE PROPHETS AND MUSIC

Prophecy and the prophetic movement throw interesting sidelights on the association of religion and music in the period of the early Hebrew monarchy. Originally, it would seem, instrumental music was used to further prophetic inspiration and ecstasy. The prophets of whom Samuel spoke to David when telling him where to find his father’s asses are described as having ‘a psaltery (nebhel) and a tabret (tōph), and a pipe (hālīl), and a harp (kinnōr), before them’ (1 Sam. x. 5). Similarly Elisha, on being required to give an oracle to Jehoshaphat, demands of the king a minstrel, and we hear that when the minstrel played ‘the hand of the Lord came upon Elisha and he prophesied’ (2 Kings iii. 15). In the later period the relation between prophecy and music changes. Of the prophets whose oracles are recorded in the Bible none is known to have used instrumental music for inspirational purposes, and some like Amos reacted violently against even the use of song in the Temple (Amos v. 23). Yet many of the greatest among them used lyric forms in their pronouncements. This was not because the words were to be sung but because the forms were congenial to the thought to be conveyed.

Prophetic poems that can only be regarded as psalms and are sometimes explicitly described as such are to be found, for example, in Isa. xii. 1–3, 4–6; xxv. 1–5; xxvi. 1–6; xxvii. 2–11; xlviii. 20–21; lii. 7–10; Mic. vii. 8–10, 14–17, 18–20; Nah. i. 2–10 (acrostic). Hymns in praise of the deity appear, e.g. in Isa. xlii. 10–13; xlv. 23; one and the same pilgrimage lyric can be read in both Isa. ii. 2–4 and Mic. iv. 1–3, and a penitential psalm in Jer. xiv. 19–22. For those who in later times collected and codified the prophetic writings, the association of prophecy and the religious lyric was apparently so close that they incorporated in the prophetic books still other, later psalms, for example, those found in Hab. iii; Jonah ii. 3–10, and Isa. lxiii. 7–14. Another type of lyric that appears frequently in prophetic writings is the dirge or lamentation. Examples are to be found everywhere,
for instance, in Amos v. 2–3; Isa. xiv. 4–21; Mic. i. 8–16; Jer. viii. 18–ix. 3; and of the later period in Isa. lvii. 1–6; Ezek. xix. 1–14. Of the Book of Lamentations in the Biblical canon at least chapters two and four are dirges belonging to the period under discussion. The lyric form has in these instances undergone a literary development, for the verses are so arranged as to form an alphabetic acrostic. For our knowledge of the contemporary religious lyric of the Hebrews the study of its echo in prophecy is of the utmost importance, providing a check on the inferences drawn from the Psalter.

SECULAR MUSIC

What we know about the secular music of the urban and rural communities of Palestine at this time is pitifully meagre. No doubt it was analogous in type to that in use elsewhere and continued the patterns of the previous period though on a richer scale. Amos’s allusion to the association of feasts and song has already been mentioned (Amos viii. 10). Isaiah says of the inhabitants of Jerusalem that ‘the harp (kinnór) and the lute (nebhel) and the tabaret (tōph) and the pipe (ḥālīl) and wine are in their feasts, but they regard not the work of the Lord’ (Isa. v. 11–12). He counsels Tyre to follow the example of the harlot, and to ‘take an harp (kinnór), go about the city, . . . make sweet melody, sing many songs’ (Isa. xxiii. 16). Songs of the bridegroom and the bride are mentioned repeatedly, for instance in Jer. vii. 34. Funerals had their own proper type of music. As in the Orient generally, professional mourners, particularly women, expressed in wailing and in songs of lament the emotions of the bereaved (e.g. Amos v. 16 and Jer. ix. 17–18, the latter apparently parodying a song of lamentation). For all else, evidence is wanting save where it can be conjectured that the prophets have on occasion parodied secular songs, as in Isa. xxi. 11–12 and xxii. 13.

LYRICAL METRES

From the character and form of the lyric material preserved in the Hebrew Bible as a whole it is possible to draw limited inferences about the nature of the music used to accompany it. Hebrew poetry throughout its earliest history is accentual. Its form is determined not by the number of the syllables or the quantity of the vowels in a given structural unit, but by the number of accented words the unit contains. As for the basic structural unit, this may be regarded either as a couplet of two lines or as a single poetic line divided into two halves by a weak or a strong caesura. The number of accents to the half-
couplet or half-line varies from two to four, with three the most common. Normally the number of accents or beats is the same in both halves of a couplet or line, the exception being the so-called qināh ‘metre’ used in dirges, where a combination of three and two beats is commonly used, giving the structural unit its typical ‘limping’ or elegiac character. Halves of structural units commonly correspond to each other also in sense, exhibiting what is known as ‘parallelism of members’, a parallelism that may be synonymous, antithetical or progressive (step-parallelism). The accentual pattern (3:3) of a single structural unit whose halves exhibit synonymous parallelism may be illustrated by the passage:

O come, let us sing unto the Lord:
Let us make a joyful noise to the rock of our salvation

(Ps. xcv. 1.)

Most lyrics are made up of an unspecified number of such units, but whether groups of these units may be said to form strophes is not clear save in the case of the more stylized acrostic compositions.¹

Using the information collected by those who have studied Oriental and particularly Oriental Jewish music in its later phases, it is possible to conjecture how lyrics constructed in this fashion were actually performed. The basic elements were apparently not the single note and the melodic phrase but a number of short patterns or motives each developing a musical interval. More than one pattern was required to sing a single line or couplet of a song, and all patterns must have been subject to variation to allow for the changing number of unstressed syllables in each structural unit. In successive lines or couplets the patterns could be repeated or changed, depending upon established usage, changes in the subject matter of the lyric, and the extent of the singer’s repertory.²

INSTRUMENTS

At least in Biblical times Hebrew song was normally accompanied by instrumental music (1 Kings x. 12; 1 Chron. xvi. 42 et al.). Of the instruments themselves not a single example has as yet come to light, and from the pre-Hellenistic period no native representation of a Palestinian instrument survives.³ For our knowledge of the types used we are therefore thrown back largely upon the names applied to them

³ Asiatics bearing instruments of the type probably in use in Palestine are portrayed in the art of the ancient Orient. See, for example, Meissner, op. cit., p. 332.
in the Bible, upon the rendering of these names in the ancient versions of the Biblical text, and upon probable analogies in the literature and on the monuments of contemporary Oriental cultures. That there should be a measure of uncertainty about the identity of some of them is quite intelligible under the circumstances. In general it can be said that the three basic types of instruments, string, wind, and percussion, were each represented by one or more examples. Among the stringed instruments the kinnor, a lyre of the kind known to the Greeks as the kithara, and the nebel, probably a harp with as many as ten strings, were the oldest and most important. (The fact that the latter was commonly rendered ‘psaltery’ in the ancient versions has led to the confusing translation of the Hebrew nebel and kinnor by ‘psaltery and harp’ in the King James Version, for example, in Ps. cl. 3). Except for the shophar, a ram’s or goat’s horn, and the hazozerah, a metal trumpet, both of which were blown rather than played and that apparently only on special occasions, the important wind instrument is the hallil, probably a double oboe. Less frequently mentioned is the ‘ugabh, apparently a vertical flute or pipe used mainly in connexion with secular music. Percussion instruments include the top, a tambourine or hand-drum, the zelelim or meziltayim, that is cymbals, and the menadan’im, probably a sistrum.1

AFTER THE CAPTIVITY

The destruction of the Temple and downfall of the Jewish state in the sixth century B.C. marks a significant break in certain aspects at least of the life of the Hebrew people. We cannot follow the exiles themselves into Mesopotamia or reconstruct with any measure of assurance that part of their life that would be of importance in the present context. A gifted singer of the later period has described the effect of the exile upon the musical life of the people in the immortal words:

By the rivers of Babylon, there we sat down,
Yea, we wept, when we remembered Zion.
We hanged our harps upon the willows in the midst thereof.
For there they that carried us away captive required of us a song;
And they that wasted us required of us mirth, saying,
Sing us one of the songs of Zion.
How shall we sing the Lord’s song in a strange land?

(Ps. cxxxvii. 1–4.)

With the return of some of the exiles to Palestine in the Persian period, the corporate life of the Jewish community was resumed, albeit on a greatly reduced scale. The royal court, once the centre of so much of the nation’s cultural life, was no more. Jerusalem, inhabited by but a small handful of folk, no longer boasted its urban luxury. Economic and political difficulties beset the community on every hand. Yet in Jerusalem a modest successor to the Temple of Solomon was erected, and with the High Priest assuming administrative responsibility for the direction of the community the Temple and the Law became the foci of Jewish religion and corporate life. It is natural, therefore, that the worship at the Temple and the effort of the individual to live in accordance with the demands of the Law serve as the occasion for the best known of the later developments in the history of Biblical and Jewish music. For the knowledge of these developments the work of the Chronicler and the Psalter are the outstanding sources.

Using the Chronicler’s historical narrative as a source of information for conditions in his own day, it would appear that in the fourth century music played an even greater part in the worship at the Temple than in the earlier period. The vocal and the instrumental music at the shrine was now performed by families or guilds of professional musicians who associated themselves by descent with Heman, Asaph, and Jeduthun (and Korah), and thus ultimately with Levi, and claimed that they had been commissioned by none other than David (1 Chron. vi. 16–32; xv. 16–24; xvi. 41–42; 2 Chron. xx. 19). One of the Chronicler’s sources gives their number as 4,000 (1 Chron. xxiii. 5), while another divides them into twelve courses of twenty-four persons each (1 Chron. xxv), the courses presumably taking turns at the services.¹ That they were under the direction of a ‘chief musician’, as the traditional translation of the titles of certain Psalms (e.g. Ps. iv; see also the LXX of 1 Chron. xv. 22) would suggest, is extremely doubtful.² About the ‘psalteries (nēbhālîm), harps (kinnōrōth) and cymbals (mēzīltāyîm)’ that are commonly mentioned in Chronicles as the instruments accompanying their songs (e.g. 1 Chron. xv. 16), it is recalled in Mishnaic times that they were used in large numbers, but they can scarcely be said to have formed an ‘orchestra’.³

Undoubtedly vocal and instrumental music had by this time been given a fixed place in the order of worship, but the descriptions of

³ Cf. Mishnah, ‘Arakhīn ii. 3, 5; Sukkah v. 4.
services to be found in 2 Chron. xxix. 20–30 and Sirach i. 11–21 indicate only that the musical part followed the sacrificial, a fact which the fuller Mishnaic description bears out (Tamid v. 6). Once the place of music in the order of worship had been established, the development of musical propria for the daily and the festival services was inevitable. The Psalter itself reflects the beginning of this development, the titles of Ps. xcii and xxx indicating that they were used on the Sabbath and at the Feast of the Dedication of the Temple respectively. Titles in the Greek Psalter associate still other Psalms each with a day of the week. Mishnaic and Talmudic traditions embodying the recollections of men who had participated in the worship at the Second Temple and inferences drawn from the study of the liturgy of the Synagogue suggest a much fuller development of lyric propria than these scattered references demonstrate. That other prose elements of Scripture found a place even in the worship of the Temple and that eventually they were rendered in musical form, seems entirely likely. As for the psalms, the congregation probably participated by joining in refrains such as ‘For his mercy endureth for ever’ (Jer. xxxiii. 11; 2 Chron. vii. 3; Ps. cxviii, cxxxvi), and in doxologies such as those now appended to the several ‘books’ of the Psalter (Ps. xli. 13, lxxii. 18–19, lxxxix. 52, cvi. 48; see 1 Chron. xvi. 36).

The establishment of the musicians’ guilds was of great importance not only for the rendering but also for the composition of Jewish music, the post-exilic period being that in which the largest proportion of the lyrics contained in the Biblical Psalter was produced. Various collections of psalms seem to have sprung up at this time, each representing the repertoire of a different guild. These were eventually merged to produce the Biblical Psalter, leaving only the

1 See further A. Z. Idelsohn, Jewish Music (New York, 1929), pp. 18–19.
2 In the order of their Hebrew numbering Ps. xxxviii and xcii are assigned in the LXX to the Sabbath, and Ps. xxiv, xlviii, xciv, xclii, and xcii to the first, second, fourth, sixth days of the week. The full list for the entire week beginning with the first day is given in the Mishnah (Tamid vii. 4) as follows: Ps. xxiv, xlviii, lxxxii, xciv, lxxi, xclii, xcii.
3 See, for example, the various Mishnaic tractates of the Seder Mo‘ed, the extra-canonical tractate Sopherim of the Babylonian Talmud, and for the regular and festive usage of the Synagogue I. Elbogen, Der jüdische Gottesdienst in seiner geschichtlichen Entwicklung (Leipzig, 1913). Among the lyrics associated with festival usage, the Hallel (Ps. cxiii–cxviii) was perhaps the first to be used regularly. Cf. the allusion to its use in the home at Passover in Mark xiv. 26. The evidence is conveniently summarized by Oesterley, op. cit., pp. 133–45.
5 For differences of usage in the responsive rendering of the Hallel (Ps. cxiii–cxviii) see Mishnah, Soṭah v. 4.
divisions of the book and the titles ‘A Psalm of David’, ‘A Psalm of Korah’, &c., to testify to their existence.¹

The titles of the Biblical Psalms yield yet further information about the music of the post-exilic Temple, though many of the expressions used in them are still quite obscure. Some of the titles appear to indicate what the song was used for: namely, for pilgrimage (e.g. Ps. cxx ff., A.V.: ‘Song of Degrees’), for instruction (?) (e.g. Ps. xxxii, A.V. ‘Maschil’), for atonement (?) (e.g. Ps. xvi, A.V.: ‘Michtam’) and for sickness (?) (e.g. Ps. v, A.V.: ‘upon Nehiloth’). Others suggest that the lyric was to be accompanied by one or more stringed instruments, so the expression binégnóth (e.g. Ps. iv, A.V.: ‘on Neginoth’) and the word mizmôr (e.g. Ps. iii, which, being translated psalmos in the Septuagint, has given rise to the name ‘Psalm’ applied to the lyrics of the Psalter generally). Still others give the names of the ‘tunes’ to which the lyrics were sung, as, for instance, ‘The Hind of the Morning’ (Ps. xxii, A.V.: Aijeleth Shahar), ‘Lilies’ (Ps. xlv, A.V.: ‘Shoshannim’), ‘The Dove of the Distant Terebinths (?)’ (Ps. Ivi, A.V.: ‘Jonath-elem-rechokim’), and ‘Destroy not’ (Ps. Ivii, A.V.: ‘Al-taschith’).²

Among the lyrics produced in the post-exilic period and included in the Biblical Psalter are many that answer to the religious needs of the individual rather than the congregation (e.g. Ps. xvi, xxxii, xxiv, xlili-xlili, cxvi). Appealing to God for succour from affliction and from the malice of the wicked ‘enemy’, these psalms express the individual’s abiding faith in God and in the moral order and indicate how deeply the prophetic spirit and the zeal for the Law had entered into the religious life of the common people. In the present context they are important because they show the religious lyric in transition from the sacrificial cult and its personnel to the private devotions of individuals and smaller groups, paving the way for important later developments.

What we know about the secular music of the Jewish community in the post-exilic period is at once more limited and more precise than in the preceding period. It is said that the returning exiles brought back household singers with them, both male and female (Ezra ii. 65; Neh. vii. 67), and of the services of such persons at festive occasions evidence is naturally not wanting in the later period (Sirach xxxii. 4–6; xlix. 1). Allusions to the songs of workers, such as the ploughman

¹ On this see, for example, Oesterley, op. cit., pp. 58–67.
² See, in general and on the obscure expressions not treated here, Oesterley, op. cit., pp. 75–115.
(Sirach xxxviii. 25, § mg.) and the builder (Job xxxviii. 6–7), appear on occasion, but suggestions about the nature of any of these songs are lacking, in large measure because later prophecy and the apocalyptic that followed it abandoned increasingly the use of genre-forms taken from contemporary folk-song. At the same time the Bible supplies us with one whole book that is nothing more or less than a collection of secular lyrics, namely, the Song of Songs. Admitted to the canon on the strength of an allegorical interpretation of its material, it is in fact a compilation of love lyrics of the third century B.C., comparable in their passionate character and their flowery language to the love songs of ancient Egypt and contemporary Arabia.\footnote{1}

**GRAECO-ROMAN PERIOD**

In the Greek period, after the conquest of Alexander, new influences made themselves felt in Palestine. The Jews become familiar for the first time with the music of the Greek world and with the instruments in use in that area. Instructive in this connexion are the lists of instruments associated by Daniel with the performance of pagan acts of worship (iii. 5, 7, 10, 15). They not only provide new names for instruments of Oriental origin but list in addition at least three that are Greek, the qitháris (Greek kitharís, a lyre), the pësanterín (Greek psaltérion, a harp [?]), and the súmpónyáh (Greek symphonia: possibly a bagpipe). Josephus reports that Herod the Great, in instituting quinquennial games in honour of Augustus, caused Greek choral singers (Thymelici) to enter the competition (*Antiquities* xv. 8, 1 = § 270), following the example of the Hellenized monarchs and cities of the Orient generally.\footnote{2}

Yet the impact of these foreign instruments and modes upon Jewish music was anything but profound, at least in Palestine. Josephus himself describes the hostility with which Herod’s innovations were received, and Talmud and Midrash echo the opposition to Greek song, which intensified itself after the destruction of the Second Temple, when all instrumental music even for religious purposes was prohibited by the sages as a sign of national mourning.\footnote{3} More important in this connexion is the reverence in which the writers of the Biblical lyrics were held (Sirach xlv. 5) and the fact that during the Greek and

\footnote{1} On the Song of Songs see, for example, M. Jastrow, *The Song of Songs* (Philadelphia, 1921), and such general compends as that of R. H. Pfeiffer, op. cit., pp. 708–16.


the Roman periods of Jewish history the production of religious lyrics continued, the vein being largely that of the older compositions. Examples of these later lyrics are to be found scattered about in the prophetic books of the Biblical canon, into which they were introduced by zealous editors, and in the Apocrypha and Pseudepigrapha, e.g. Sirach 51, Judith 16, Tobit 13, The Song of the Three Children in the supplements to the Greek Daniel, and the Prayer of Manasses, written by a Greek Jew and preserved among the Canticles that were added to the Greek Psalter in later times. More important than any of these is the collection of Psalms produced in the middle of the first century B.C. and known as the Psalms of Solomon. In them the fervour of the post-exilic psalmists lives on, applying itself to the comfort and inspiration of pious folk who saw in the more secularized and pro-Roman elements of the community a threat to Jewish religious ideals and traditions. Recent manuscript discoveries in caves by the Dead Sea have provided elements of further collections of Psalms—Psalms of Thanksgiving—and other liturgical materials. They imitate the poetic writings of the Old Testament but represent part of the religious literature of a separate Jewish (Essene?) sect of the first century A.D. From them we should eventually learn more about the music and liturgy of Jewish groups looking toward the fulfilment of the eschatological hope.

SERVICES OF THE SYNAGOGUE

For the later history of Jewish music no one institution was of greater importance than the Synagogue. Whenever and wherever it began, it was already a regular feature of the scene both in Palestine and in the Dispersion in the first century of our era. By this time, too, the basic elements of its regular services of worship, comprising particularly the confessional shéma', the scripture lessons, and the Prayer (těphillāh), had undoubtedly been fixed. How music came to play a part in these communal services of worship is not entirely clear, though the natural presumption is that it was carried over

1 See Pfeiffer, op. cit., p. 632; on the apocryphal Baruch and its liturgical use, see the interesting suggestions of Thackeray, op. cit., pp. 80–111.
directly or indirectly from the worship of the Temple. Tradition has it that Levites going in groups from the Temple services to those of the Synagogue were the link between the music of the two institutions (Babylonian Talmud, 'Arakhin 11b). Scholars have suggested that the custom of groups of laymen in the several parts of Palestine to gather for local worship synchronously with the performance of Temple sacrifice may have contributed to the development.¹ Of some importance, it would seem, is the further fact that in the post-exilic period the singing of psalms had become a part of the natural self-expression of the devout people, whose institution the Synagogue was. Paul singing hymns to God at midnight in Philippi (Acts xvi. 25), and the Jews of Alexandria spending the night after the arrest of their enemy Flaccus in the singing of hymns and songs of triumph (Philo, In Flaccum 14, §§ 121–2), is a part of this larger picture. Precisely at what points and in what form music entered into the worship of the early Synagogue is quite uncertain. The religious individualism of which the Synagogue was an expression undoubtedly led to the development of varieties of usage in this matter, particularly in the earliest period. Within the framework of the regular service it is the doxological elements and the benedictions that would have lent themselves most readily to musical rendering, perhaps with melismatic embellishments.² To the essential nucleus of this type of service there may often have been added the singing of stated or desired psalms, festival usage being known to have involved such practice, above all in the responsive singing of the Hallel (Ps. cxiii–cxviii).³ How the Jewish communities of the Dispersion that used the Greek version of the Scriptures sang their ‘hymns and songs’, whether according to the old ‘tunes’, supposing that they could be adapted to a translated text, or with the use of Greek modes, is, unfortunately, not known.⁴ Both at home and abroad, the music of the early Synagogue was exclusively vocal, whether because of opposition to pagan custom or as a sign of mourning for the destruction of the Temple.

¹ See, for example, Elbogen, op. cit., pp. 237–9. The reference is to the institution known as that of the maʾāmdhōth, described in the Mishnah, Ta'anith iv. 2.
² On the doxologies of Synagogue and Church cf. the article of E. Werner, ‘The Doxology in Synagogue and Church, a liturgical-musical Study’, Hebrew Union College Annual, xix (1945–6), pp. 276–351.
³ See in the Babylonian Talmud 'Arakhin 10a and Ta'anith 28b, where the difference between the number of times the Hallel is used each year in Palestine and Babylonia is reported. The differences and the extent of the usage suggest ancient practice.
⁴ In a familiar statement Clement of Alexandria compares the chanting of Hebrew psalms as he had heard them to that of the Greek drinking song called Skolion (Paeda-gogos ii. 4). Cf. on this see Werner, op. cit., pp. 333–5.
MUSIC IN THE NEW TESTAMENT

As a source for our knowledge of the music of the early Christian Church the New Testament has its own limitations and problems. Far smaller in compass than the Old and lacking anything comparable to the Psalter, its documents are so closely associated with the practical purposes of the Christian missionary enterprise and so sharply delimited in their historical interest that they contain but little material bearing directly upon the question at issue here. Yet critical scholarship, applying itself to the study of the incidental information that does emerge, and keeping in mind both the background out of which Christianity came and the development of hymnody and liturgy in the later Church, has been able to reconstruct tentatively at least certain of the broader outlines of the use of music in the crucial formative years of the Christian movement. So far as we can tell the music of the early Church was almost entirely vocal, Christian usage following in this particular the practice of the Synagogue, in part for the same reasons.¹

Like that of John the Baptist who preceded him and those of others who followed, the movement initiated by Jesus was rooted in the traditional piety of the Jewish people, bringing the search for individual acceptability before God to renewed expression within the framework of the conviction that the religious hopes of the Prophets, so intensely meaningful to the people of his day, were about to come to fulfilment. From the outset, therefore, both movements were pitched at that high level of spiritual exaltation for which the use of lyric material and form was both natural and traditional. Jesus’s predecessor John, being of priestly descent, came of circles well acquainted with the music of the Temple. Jesus reflected more nearly the piety and worship of the Synagogue, and addressed himself commonly to the circles whose prayers for personal deliverance had been embodied in so many of the latest of the Biblical psalms, and who in the Psalter as in the New Testament are called ‘the poor’ (cf. Ps. lxxvi. 1 and Matt. v. 3). It is not strange, in the circumstances, that echoes of the psalms appear in the sayings ascribed to him.

Both movements tended to create circles of faithful adherents in whose religious life certain of the elements of Jewish observance and the hope of an imminent deliverance were kept continually alive. To

what extent vocal music, particularly psalmody, played a part in this during the lifetime of the two founders is quite unknown, save for the incidental mention of the use of the Hallel (Ps. cxiii–cxviii) by Jesus and His disciples at Passover (Mark xiv. 26). From the period after the death of John the Baptist we possess a hymn of praise probably sung at one time by his disciples and later placed in the mouth of John’s father Zacharias in the Baptist nativity story. The hymn is the canticle familiar to all as the Benedictus (Luke i. 68–79), beginning with the words so familiar also from the language of the Psalter:

Blessed be the Lord God of Israel;
For he hath visited and redeemed his people.  

Among the groups of disciples who in ever-increasing numbers perpetuated and proclaimed the faith in Jesus, the use of psalmody was from the outset of no small importance. The background for this is provided by what we hear in Acts of their constant participation in the worship of the Temple (e.g. Acts ii. 46; v. 12, 42) and of their attendance upon the services of the Synagogue (e.g. Acts vi. 9; ix. 2; xiii. 5, 14). When the Christian believers established themselves as independent groups, they frequently organized themselves after the Synagogue pattern (see e.g. Acts xiv. 23), and, judging by the structure of the later services of worship (see Justin Martyr, Apology, i. 65–67) that eventually produced the proanaphora of the Mass, they commonly followed the outline of Synagogue observance in at least one part of their worship. That psalmody played a part in Synagogue observance we have already seen. How important it was in the worship of the Christian communities throughout the ancient world can be judged from the statement of Paul, addressed to the Corinthians, ‘when ye come together, every one of you hath a psalm’ (1 Cor. xiv. 26). In large part the psalms used in the churches must have been the lyrics of the Biblical Psalter, for among the books of the Old Testament quoted in the New none occurs more frequently than the Psalter itself. Yet there is good reason to believe that the exaltation associated with the belief in the coming deliverance, the imminent

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1 See H. Gunkel, ‘Die Lieder in der Kindheitsgeschichte Jesus bei Lukas’, Festgabe von Fachgenossen und Freunden A. von Harnack zum 70. Geburtstag dargebracht (Tübingen, 1921), esp. pp. 56–59. The assumption is that the hymn was composed in Aramaic.
return of Christ and the gift of the Spirit, produced from the outset new Christian lyrics analogous to those of the Biblical Psalter and the Psalms of Solomon and rendered no doubt in the same fashion. Two early examples translated out of the original Aramaic are sometimes said to be preserved in the Magnificat and the Nunc Dimittis of the Nativity story of Luke (i. 46–55; ii. 29–32), where they are placed in the mouth of the Virgin Mary and the aged Simeon respectively.¹ Both express in traditional language the confident assurance that salvation has come to the distressed. The same confidence is reflected in the ‘song’ of thanksgiving that the writer of the Book of Revelation has apparently translated and put into the mouth of those who have overcome ‘the beast’.

Great and marvellous are thy works,
   Lord God Almighty;
Just and true are thy ways,
   Thou King of Saints.
Who shall not fear thee, (O Lord) and glorify thy name?
   For thou only art holy:
For all nations shall come
   And worship before thee;
For thy judgments are made manifest.  (Rev. xv. 3–4.)²

A peculiar feature of Gospel record may be of importance in this connexion. It is the fact that many of the sayings of Jesus reported in the Synoptic Gospels, when turned back into the Aramaic in which they were spoken, give indication of possessing the accentual rhythm typical of Hebrew poetry.³ Some of them, particularly those of a Sapiential character, may have been uttered in poetic form, others, however, may have received their rhythmic form in the period before the existence of written Gospels, when they were recited in Christian assemblies whether as ‘oracles’ or as parts of a new Law.

It is important even in this context to realize that the earliest places of specifically Christian worship were the ‘house-churches’ (Philemon 2) as the earlier synagogues were ‘house-synagogues’.⁴ In this

¹ See the article of Gunkel in the *Festgabe . . . A. von Harnack* previously cited. Harnack himself has suggested that the Magnificat was originally assigned to Elisabeth, which might imply that it was a Baptist rather than a Christian lyric. See his article ‘Das Magnificat der Elisabet nebst einigen Bemerkungen zu Lk. 1. u. 2’, *Sitzungsberichte der kgl. preuß. Akademie der Wissenschaften zu Berlin, 1910* (Berlin, 1910), pp. 538–56.

² On this and other ‘songs’ of Revelation see C. C. Torrey, *Documents of the Primitive Church* (New York, 1941), pp. 210–12.


type of setting there were brought into close connexion not only the devotional practices of the family and the local religious community but also the observances which the Church shared with the Synagogue and those which it had in excess of the Synagogue, particularly Baptism and the Eucharist. That psalmody had come to play a part in the private life of the pious Jews of the post-exilic period has already been indicated, and this together with the use of prayers and blessings in the home was not without meaning for the development both of Christian usage and of Christian music. That it played a part also in the baptismal and eucharistic rites at very early times can be seen from the collection of Paul’s letters, particularly in the familiar passages Col. iii. 16 and Eph. v. 19, where the Apostle encourages the faithful in the use of ‘psalms, hymns and spiritual songs’. The immediate context of each of these passages is full of sacramental allusions, the one to Baptism, the other to the Eucharist.

Of the part that music played in the baptismal practice of the early Palestinian Church we have no further evidence in the New Testament. For the Eucharist there may be information in Rev. v. 8–14 and xix. 1–7, where the Seer is describing acts of adoration in Heaven and seems to be paraphrasing and adapting forms actually in use in Christian circles. The worship in Rev. xix. 1–7 turns about the use of Alleluia hymns in which God is praised by the assembly of the saints and to which there are responses of ‘Alleluia’ and ‘Amen’. The first begins with the words:

Alleluia!
Salvation and glory and honour and power unto the Lord our God:
For true and righteous are his judgments. (Rev. xix. 1.)

The second celebrates the imminent marriage of the Lamb:

Alleluia!
For the Lord God omnipotent reigneth.
Let us be glad and rejoice,
And give honour to him.
For the marriage of the Lamb is come,
And his wife hath made herself ready. (Rev. xix. 6–7.)

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1 Cf. on this Clement of Alexandria, Paedagogos 2, 4, and Tertullian, *ad uxorem* ii. 9, and Quasten, op. cit., pp. 158–79.

2 The categories ‘psalms, hymns and spiritual songs (literally, odes)’ are not to be distinguished too sharply from each other. ‘Spiritual’ as applied to odes may mean ‘religious’ in contra-distinction to ‘secular’, though it is the opinion of Paul that all the lyrics mentioned are ‘inspired’. See, however, Vol II, Chap. I, p. 2.

What seems to be parodied or quoted here is a Christian Hallel sung in responsive form, as Ps. cxiii–cxviii were sung in Jewish usage. The hymn follows the traditional pattern, praising God for his deliverance, but substitutes for the association with the Passover meal that with the marriage supper of the Lamb, thus adapting it to a eucharistic context. With the type of eucharistic observance reflected in these hymns we should perhaps connect also the Trisagon (Rev. iv. 8) and the invocations ‘Hosannah to the God of David’ and ‘Maranatha’ that are reported in the Teaching of the Twelve Apostles (x. 6) and 1 Cor. xvi. 22, assuming that the exclamations were rendered melismatically.

The order of worship in Rev. v. 8–14 begins and ends with acts of prostration by the Elders, and includes ‘songs’ sung by the Elders and by the angelic host respectively, a doxology said by the multitude of created beings, and a concluding Amen by the four beasts. The general analogy to the order described in Sirach i. 16–21 is evident, but the songs are of a new type, echoing the praise of the Lamb as in the words:

Worthy art thou to take the book
And to open the seals thereof;
For thou wast slain and hast redeemed us to God
By thy blood
Out of every kindred and tongue
And people and nation
And hast made us unto our God
Kings and priests,
And we shall reign on the earth. (Rev. v. 9–10.)

The form of the song, a declarative statement introduced by the word ‘Worthy’ (Greek: axios; Latin: dignus), is that of the acclamations that formed part of the ceremonial of oriental courts and pagan temples.¹

THE CHURCH OUTSIDE PALESTINE

Except for the last item, the material discussed up to this point illustrates the use of music by the Jewish-Christian churches that existed in the earliest period of Church history, particularly in Palestine. In these congregations we must assume there were in use not only lyrics of the type familiar from the Old Testament and the post-canonical literature of Judaism, but also the modes of performance traditional in the Oriental, and particularly in the Jewish, environment.

Perhaps the only departure from Jewish standards in these circles was added importance given to the inherited melismatic forms in which the Alleluias and other liturgical exclamations may have been sung. The spiritual exaltation characterizing the beginnings of the Christian movement makes such departures entirely intelligible. Once the Church had expanded beyond the Palestinian scene and particularly when it struck new roots in the Greek world, it inevitably developed musical forms of expression in keeping with other musical traditions. Precisely when this happened it is no longer possible to say. At present the earliest example of a Christian hymn using the quantitative metrical form of the Greeks is the hymn to Christ attached to the end of the Paedagogos of Clement of Alexandria, and the earliest known to have been sung according to the Greek tonal system is the Oxyrhynchos hymn, recorded in a script of the third century A.D. ¹ Such hymns may have existed even in earlier days, but in the New Testament no trace of them exists and in general the development of Christian hymnody and liturgy follows other lines than those of specifically Greek music.

More important for the interpretation of early Christian music as reflected in the Bible are the mixed forms that developed from the fusion of oriental and Hellenistic elements. Of such fusions the hymns from Rev. v that use the acclamation form are one example. Since they can be translated without difficulty into Aramaic, they may have originated in Jewish-Christian communities of the Near East and have been rendered in the traditional way in spite of the slight departure from Jewish tradition that their form implies. An analogous departure in another direction is to be seen in the fragment of a confessional hymn preserved in 1 Tim. iii. 16:

[Who] was manifest in the flesh,
Justified in the Spirit,
Seen of angels,
Preached unto the Gentiles,
Believed on in the world,
Received up into glory.

Here the structure is still oriental, and the music to it must have been oriental, but the parallelism is that of Hellenistic rhetorical construction.²

² On the passage cf. the commentary of M. Dibelius on 1 Timothy in H. Lietzmann, Handbuch zum Neuen Testament, ed. 2 (Tübingen, 1931), and E. Norden, Agnostos Theos (Berlin, 1923), pp. 254–63.
Another type of departure is to be found in the hymn quoted by Paul in Phil. ii. 6–11. As read in the original Greek the lyric celebrating him who 'emptied himself' and took upon himself 'the form of a servant' has a regularity of construction hardly to be imitated in translation, and consists apparently of five stanzas of three lines each. The absence of parallelism, the brevity and equality of the lines and the stanza-form shows that we are dealing here with a composition even more remote from Jewish psalmody. The lyric is in fact a hymn to Christ as Kyrios or Lord, and hence quite out of keeping with Jewish tradition. Yet the rhythm is not quantitative but accentual, with three beats to the line, which suggests that it must have been sung in oriental fashion and not in one of the Greek modes. Similar mixed types also arising from the early Christian use of music in the regular Lord's Day services are perhaps to be found in the Prologue of the Gospel of John and in a passage in Ignatius of Antioch. That the Prologue of the Gospel of John particularly John i. 1–18 embodies a hymn to the divine Logos constructed in the same way as Phil. ii. 6–11, has long been evident. Less familiar, perhaps, is the hymn that seems to be quoted by Ignatius in his Epistle to the Ephesians vii. 2:

One is the Physician,
Both flesh and spirit,
Born yet not born,
God in man,
True life in death,
Both of Mary and of God,
First possible and then impassible,
Jesus Christ our Lord.

Here again rhetorical parallelism and a hieratic style are to be noted, but the rhythm continues in the accentual pattern of oriental lyric.

For the antecedents of the song represented by this type of lyric it is useless to go either to native Greek or to Hebrew musical tradition. The former could supply only the language and some associations with the rhetorical structure, the other chiefly the accentual rhythm. Even what is known about the music of the official state cults and the

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1 See the commentary of E. Lohmeyer on Philippians in Meyer's Kritisch-exegetischer Kommentar über das Neue Testament (Göttingen, 1928).
mystery religions of Roman times, their hymns, their use of congregational responses and acclamations, does not supply complete parallels at the present time.¹ Two facts should be noted in this connexion: first, that the accentual rhythm is not exclusively Hebrew or Jewish but common in all forms of early Semitic lyric poetry; and second, that, so far as our evidence goes, the theology of the mixed types of Christian hymns is to be associated less with Jewish-Christianity than with that of Churches in the Eastern provinces of the Roman empire. In all probability the antecedents of these hymns are to be found in the hellenized pagan cults of the Orient, particularly those of Syria. The importance of Kyrios, Lord, as the designation of Christ in many of them suggests the environment of the traditional ruler cults of the Orient in the form in which they and their liturgy were adapted to the services of the Hellenistic Diadochoi.² The Ignatian hymn to Christ as the Physician suggests environment of the cult of Asclepius.³ Which, if any, of the peculiar features of such Oriental cult music had already come to play a part in the life of the Greek synagogues of the Dispersion at an earlier date, it is difficult to say, but certainly the Jews in the world at large must have modified their traditional music somewhat in order to sing their psalms in Greek, and may even have used acclamation formulas such as have been noted above in connexion with Rev. v.⁴ Whatever be true of the origin of these Christian hymns from the period of the New Testament writings, they already contain the germs for the development of certain types of Byzantine hymns, particularly of the kontakion,⁵ where, if Wellesz is right, tonic rhythm is still normative for the development of the melody and where groups of short sense lines arranged in strophes set forth the thought.⁶ In fact what has been said above about the use and rendering of acclamations and about cantillation suggests that all three of the major types of melodic formulation known in the cultural centres of the Orient had already come to expression in the

¹ See in general, Quasen, op. cit., pp. 3–68, and the important article by Werner, ‘The Conflict between Hellenism and Judaism in the Music of the early Christian Church’, Hebrew Union College Annual, xx (1947), pp. 407–70, where the whole question is considered in its broadest outlines.
² See above all W. Bousset, op. cit., and its sequel Jesus der Herr (Göttingen, 1916).
³ See E. J. and L. Edelstein, Asclepius, 2 vols. (Baltimore, 1945), where the use of hymns is amply documented.
⁵ But see also Vol. II, p. 21.
early Christian communities of the Near East before they can be documented in the liturgical literature of the established Church.¹

EARLY CHRISTIAN ANTIPHONY

Certain aspects of the early Christian use of music can be understood only if brief consideration is given also to the immediately post-Biblical period in the life of the Church. Relatively unimportant in this connexion are the statements of Pliny the Younger, that 'on a stated day they [the Christians] were accustomed to gather before daybreak and to utter responsively a song (?) to Christ as to a god' (Epistulae x. 96: 'quod essent soliti stato die ante lucem convenire carmenque Christo quasi deo dicere secum invicem'), and that of the Church historian Socrates (b. about A.D. 380) suggesting that Ignatius, the bishop of Antioch in Syria, introduced antiphonal singing into the Church as the result of a vision (Historia Ecclesiastica, vi. 8).² The former may be less significant than is often imagined because it must be interpreted in the light of the terminology of a Roman official and need not say more than that a formula (be it prayer, invocation or song) was used.³ The latter ascribes to a specific person at a late time a practice so common in both Judaism and in the responses of pagan cults that no special revelation is needed for its inauguration in Christian usage.

GNOSTIC HYMNS

Far more important in this connexion is the evidence for the existence of large collections of lyrics produced in the second and third centuries of our era by the Christians and Gnostics of Syria and the Near East. Of these collections two have in recent years become directly available, namely, the Odes of Solomon and the Manichean Psalter.⁴ Other collections known largely or entirely from hearsay include those of Valentinus, Bardesanes, and Marcion, the two last mentioned representing attempts to create a substitute for the Biblical Psalter.⁴ Individual lyrics by unknown authors are

³ For the former see R. Harris and A. Mingana, The Odes and Psalms of Solomon, 2 vols. (Manchester, 1920), for the latter C. R. C. Allberry, A Manichean Psalm Book (Stuttgart, 1938), representing the Psalter of the Coptic Manichean Church. The bibliographical information about the extensive body of Manichean hymns from Turkestan published largely by the Prussian Academy will be found in C. F. Burkitt, The Religion of the Manichees (Cambridge, 1925), and in the article of H. J. Polotsky s.v. Manichäismus in Pauly–Wissowa, Real-Encyclopädie, Supplementband vi (Stuttgart, 1935).
⁴ The sources of information are listed in A. V. Harnack, Geschichte der altchristlichen Litteratur bis Eusebius (Leipzig, 1893), esp. pp. 171, 183, 185–6, 197.
scattered about in the apocryphal acts (e.g. the Syriac Acts of Thomas) or quoted in the writings of the anti-heretical Fathers (e.g. Hippolytus). The material is important in this connexion for various reasons. It shows how extensive was the production of Christian hymns in the early days, particularly in the regions of Syria, Egypt, and Mesopotamia, and thus shows in proper perspective the scattered fragments surviving from the period of the New Testament writings, when the fires of inspiration burned even brighter. It indicates that in addition to the groups producing hymns of the mixed types already examined, there were those for which the traditional forms of Hebrew and Jewish psalmody continued to be largely normative (for instance, the authors of the Odes of Solomon). Finally, it exhibits for the period before Ephraem and Narsai the use of the isosyllabic form of verse construction, a form that subsequently became of the utmost importance for Byzantine hymnody. This form, in which the traditional accentual rhythm is adapted to the use of homogeneous melodic patterns by a principle of line construction that demands an equal number of syllables (seven or eight) in each line, appears in the extra-Biblical material for the first time in the poems of Bardesanes (A.D. 222). It should be noted, however, that this principle of construction is not necessarily a late feature of oriental poetry, but possibly indigenous in the tradition of Aramaic literature, as an inscription of the fifth century B.C. has been taken to imply. Indeed, it has been suggested that the Lord’s Prayer, in its Lukan form, was arranged in accordance with the principle in question.

In both its parts, therefore, the Bible is a treasure-house of information for the knowledge of ancient music. The limitation that it shares with so much ancient literature, namely, the absence of specific information about the musical patterns used by singers and instrumentalists, is offset by the strategic nature of the lyric material it has preserved. This material in its developing form and character provides the bridge that connects the music of the ancient Orient with that of the Middle Ages and thus with that of the western world.

1 For the former see Apocryphal Acts of the Apostles, ed. W. Wright, ii (Edinburgh, 1871), pp. 150–1, 238–45 (Hymn of the Soul), 245–51; for the latter see Hippolytus, Philosophoumena v. 5 (Naasene Hymn).

2 See also Vol. II, pp. 19–32.

THE MUSIC OF POST-BIBLICAL JUDAISM

By Eric Werner

INTRODUCTION

Three facts have to be taken into account in attempting to give a survey of the music of post-Biblical Judaism. In the first place the subject is connected with the religious and political history of a wandering people whose migrations brought it into contact with all the nations of Europe and most of the nations of Asia. Secondly, the liturgical music of Judaism, from the destruction of the Temple (A.D. 70) onward, had to take a place between genuine folk-lore and art music, yet—until the nineteenth century—belonged to neither of these categories. The Jewish centres of the Orient, however, underwent a decline to a kind of standardized folk-lore, a change from a genuine flexibility to an almost petrified musical system. In this respect the Oriental Jews are in no way different from their Christian and Moslem neighbours since they, too, show no signs of musical development since the ninth century (Christian) and the fourteenth century (Moslem) respectively. It remained the particular excellence of European culture that its churches were always and everywhere capable of stimulating, assimilating, and integrating new attitudes of thought, and this is equally true of European Jewry. Since such living development is completely absent in the Near East, we shall have to distinguish between the history of Oriental and European Synagogue music from the tenth century onward. Finally, the growth of Synagogal music is intrinsically connected with the development and gradual change of Jewish liturgy. Therefore it will be necessary to refer to the field of liturgy.

We must bear in mind that the natural heritage of the Temple's levitical psalmody constituted the nucleus around which the new synagogal chant evolved. Here it is important to decide whether the original performance of the psalms was metrical. This question, however, can be answered only if we know for certain that parts of the Scriptures, e.g. the psalms or certain hymnical passages of the Pentateuch, were understood or performed metrically. Unfortunately, we are far from any definite answer to the problem. E. Sievers, D. H.
Müller, and many other scholars have most carefully investigated the possibility of a metrical structure in the Scriptures; but their results are vague, controversial, and by no means conclusive. Only two facts stand out as established principles: (1) the parallelism of Scriptural poetry, sometimes called 'dichotomical structure', which divides almost every poetical sentence into two parts, similar or antithetic in thought; (2) strophic structure, especially in certain prophetic 'songs', e.g. Isa. v; Jer. xxxii; Ezek. xxxvii, to name only three of the most famous instances. Nevertheless, quite a few famous historians such as Josephus, Jerome, and other Church Fathers insist that certain passages of Scripture were written in strictly metrical form. Again, since there is no positive evidence for metrical performance of Scripture, we have to assume that the music of the Temple was non-metrical, i.e. polyrhythmic, and that its rhythm was entirely dependent upon the accentuation of the text. The principle of parallelism has to be considered the origin of all dichotomic systems of performance, such as the responsorium, the strict antiphona and the responsorial psalmody, both in Judaism and in Christianity. The strophic or refrain structure may have played a part in the 'Songs of Ascent' (Pss. 120–34), although modern scholars have replaced the old Christian concept of these psalmi graduum by either the Talmudic interpretation of 'Songs of Pilgrimage' or by a reference to a rhetorical device of these psalms, the so-called anadiplos (chain-figure).

CONTINUITY OF JEWISH TRADITION

It is of paramount importance to the study of Jewish music to determine whether its tradition was continuous in general, or interrupted by the frequent disasters and migrations that have been the lot of the Jewish people. If we search for an answer to this question in other fields of Jewish civilization—philosophy, theology, literature—the continuity of its development is assured beyond doubt. Yet some writers have drawn a sharp line across the musical tradition of Judaism, separating the culture of 'the Bible from that of the Ghetto'. Only if there had been a danger of a radical rupture at any time after the fall of the Temple, should we have reason to assume a new untraditional beginning. The historical facts, however, speak unequivocally. The Temple services were regularly attended by divi-

1 Notably L. Saminsky in The Music of the Bible and of the Ghetto (New York, 1937), which is a collection of more or less aphoristic and apodictic statements, most of them without historical foundation.
sions of ‘standing-men’ from the various provinces of Palestine. These men had a synagogue in the Temple area at their disposal—the so-called ‘Hall of Stones’ (Luc. ii. 46; Acts iii. 11; v. 12)—and the priests were entitled to conduct the services there, thus linking the rural communities with the tradition of the central sanctuary. One of the numerous personalities who endeavoured to transmit the priestly music to the representatives of the synagogue was R. Joshua ben Hananya who regularly taught the ‘stand-up men’ the institutions and the customs of the Temple. He was a famous singer and used to go from the orchestra of the Temple to the ‘Hall of Stones’ in order to conduct the daily service. As a disciple of Johannan ben Zakkai, he assisted him in saving as much as possible of the Temple ritual that it might be rendered in the academy of Jamnia. He and his contemporaries formed a strong link in the chain of tradition at a most critical time. Apart from these historical facts there are sufficient data to warrant the integrity of the musical tradition of Judaism. Comparisons with the music of the early Church will presently confirm our conclusions.

Rabbinic sources explain the strict prohibition of any instrumental music in the Synagogue as an expression of mourning for the loss of the Temple and land, but the present writer has been able to show that a certain animosity against all instrumental music existed well before the fall of the Temple. It seems that this enmity towards instrumental music was a defence against the musical and orgiastic mystery cults in which Syrian and Mesopotamian Jews not infrequently participated. Similar utterances came from Philo and one of the Judaean-Christian Sybilles, to name only two chief witnesses. The primitive Christian community held the same view, as we know from apostolic and post-apostolic literature: instrumental music was thought unfit for religious services; the Christian sources are quite outspoken in their condemnation of instrumental performances. Originally, only song was considered worthy of direct approach to the Divinity.

In the two centres of Jewry, Palestine and Babylonia, the liturgy of the Synagogue was gradually developed, and—with it—its music.

1 Talmud, 'Arakhin 11b.
2 Talmud, Succa 53a.
4 Clement of Alexandria, Paedagogus ii. 4; Arnobius, Adversus Nationes in Corp. Script. Eccl. Lat. 4, 270; also Gregory Nazianzen, Oratio 5, 25, in Patrologia Graeca xxxv, col. 708/9.
If we compare the constituents of early Synagogue and early Church music, we arrive at the following parallelisms:

<table>
<thead>
<tr>
<th>Synagogue</th>
<th>Church</th>
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<tbody>
<tr>
<td>Cantillation of Scriptures</td>
<td>Cantillation of Scriptures</td>
</tr>
<tr>
<td>Psalmody</td>
<td>Psalmody</td>
</tr>
<tr>
<td>Post-Biblical Prayers</td>
<td>Christian Prayers (chanted)</td>
</tr>
<tr>
<td>Melismatic Songs</td>
<td>Hymns</td>
</tr>
<tr>
<td></td>
<td>Melismatic Songs</td>
</tr>
</tbody>
</table>

These elements, however, which at first seem to be identical, diverged considerably as regards musical performance as early as the late second or early third century. Not only did the hymn attain a predominant position in the Church, especially in Eastern Christianity, contrary to the rite of the Synagogue where the hymn-forms were not introduced until the sixth century, but even the Christian performance of psalmody differed to a certain degree from the Jewish.

Whereas in the Synagogue the precentor was the sole musical functionary until the sixth or seventh century the churches early developed choral singing, especially with the development of monasticism. On the other hand, a good deal of the musical tradition of the Synagogue was taken over and preserved by the Church.

CANTILLATION OF SCRIPTURE

The attitude of the early Synagogue is clearly expressed in the Talmudic statement: ‘Whosoever reads Scripture without chant . . . to him the Scriptural word is applicable “I gave them laws and they heeded them not”.’ The term ‘cantillation of Scripture’ is very complex, however, inasmuch as there is more than one system of Scriptural chant in existence. Not only do the various parts of the Bible employ different cantillation, according to their liturgical function, but considerable divergences of regional traditions play a certain part. Thus, the Yemenite Jews, whose tradition is by far the oldest, use a cantillation much at variance with the central and west European Jews (Ashkenazim), and these again differ from the former Spanish Israelites (Sephardim).

Notwithstanding these variants, a common source is clearly discernible, the more so since the cantillation was to a certain extent regulated by three successive systems of Jewish ecphonic notation.

1 Megilla 32a.
The first system (Proto-Palestinian) arose in the fifth century A.D. in Palestine; it was closely akin to the ancient Syrian system of notation consisting only of dots and a few strokes. The second system emerged in Babylon during the late seventh and eighth centuries and used an intricate method of indicating the respective accents by the first letters of their names. The third, which finally proved best, was the system of the Tiberian Masorites which came into being during the ninth and tenth centuries; it shows a remarkable similarity to that of the early Byzantine ephphonic signs. A few illustrations may be cited:

<table>
<thead>
<tr>
<th>Byzantine signs</th>
<th>Hebrew signs</th>
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<tbody>
<tr>
<td>📌 Bareia</td>
<td>📌 Legarmeh</td>
</tr>
<tr>
<td>🝌 Kathiste</td>
<td>🝌 Zarqa</td>
</tr>
<tr>
<td>🕳 Kremaste</td>
<td>🕳 Shofar munach</td>
</tr>
<tr>
<td>🕗 Hypokrisis</td>
<td>🕗 Shalshelet</td>
</tr>
</tbody>
</table>

Since the rabbinic sources of the early fifth century already show familiarity with the existence of primitive accents, we may assume that the ephphonic systems arose in a country equally accessible to Byzantines, Palestinians, and Syrians: possibly north-west Syria. It should be noted in passing that the primary purpose of these accents was not the fixation of Scriptural cantillation but the minutely perfect punctuation and syntactic division of the Biblical text. Then the newly created accents were adjusted to the older cantillation. That such a cantillation existed in the early Christian liturgies of Jerusalem and Antioch, we know from various sources, chiefly from the Western Church Fathers. Thus we can explain why certain phrases of the Roman *tonus lectionis*, which is based upon Western neums, bear a remarkable resemblance to Jewish motives of cantillation such as:

Ex. 297

**The Half Close**

Jewish versions

Levante Italy Yemenites

Roman versions

Climacus resupinus Benedi - cti - o - ne per - petua.

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1 See Vol. II, pp. 10, 11.
2 See my ‘Preliminary Notes on Catholic and Jewish Musical Punctuation’ in Hebrew Union College Annual, xv (1940), also Idelsohn, Jewish Music in its Historical Development (New York, 1929), pp. 35-71.
PSALM TONES

The same resemblance exists between the psalm tones; yet here a distinction must be made. Formerly, some scholars thought the Jewish and Gregorian psalm tones to be remnants of the Temple liturgy. This cannot be so, since, hardly 150 years after the fall of the Temple, the Rabbis disagreed concerning the Temple’s singing of the Hallel (Ps. 113–18), the most solemn and revered collection of psalms.¹ All possible forms of responsorial and antiphonal performance are mentioned in those passages of the Talmud where the Hallel is discussed. The close kinship between Oriental Jewish psalmody, on the one hand, and Gregorian, Armenian, and Syrian psalm tones, on the other, impels us to assume that it was not the Temple, but the early Synagogue which served as a common source. The strict parallelism, the fundamental principle of Hebrew poetry, was carefully preserved in all the translations of the Bible. This dichotomic structure led to the establishment of such typically psalmodic practices as responses, antiphons, refrain-psalms, &c., all of which were taken over by the Churches. The claims of the Church Fathers that Basilius, or Flavian and Diodorus invented antiphonal singing, must be understood to mean that these men introduced such forms in the Gentile Church,² for in Judaism they were well known for centuries before the rise of Christianity.³ It is instructive to compare a few psalm tones of the Roman Church with Jewish psalmody⁴ (Ex. 298).

AUTONOMOUS MELODY

While in Scriptural cantillation and psalmody the melismata are restricted to the function of musical punctuation, marking the caesura

¹ Talmud, Sota 30b.
⁴ For the ancient version of Tonus IV see P. Wagner, Gregorianische Formenlehre (1921), p. 90; for the example from the Lamentations, see ibid., p. 239. See also The History of Music in Sound (H.M.V.), i, side 14.
in the middle, and the punctus at the end of the verse, in another form the melisma assumes full domination. As distinct from cantillation and psalmody, where syntactic and tonic accents determine the flow, the melody is autonomous in the ecstatic ‘Alleluias’ and independent of the word. Even Isidore of Seville knew of the synagogal origin of the Alleluia songs when he said ‘Laudes, hoc est Alleluia canere canticum est Hebraeorum’.1 (‘The praises, that is to say the singing of Alleluia, is a song of the Hebrews.’) It is in the Alleluias that the principle of the formula plays the most important part. These formulas were ancient melodic patterns which were linked together and, through constant repetition, often assumed the function and character of leading-motives. They represent the first instances of absolute or ‘autonomous’ music. A few examples will illustrate this point (Ex. 299).

Neither the Synagogue nor the early Church had professional choirs. In the first three centuries the shelitach tsibbur (messenger of the congregation), an honorary precentor, performed all parts of the liturgy, supported by the worshippers’ responses. The early Church used the terms psalmista, lector, anagnostes, or cantor for the same office. Only when monasticism attained its influence in the Church did trained monastic choruses become the rule in larger Christian communities. In Judaism this development took place about two centuries later—650–700—when the students of the talmudic academies of Babylon formed standing choruses.2 It was perhaps an imitation of the successful Christian practice, although the Babylonian Jews were not in direct contact with any Christian Church.

THE MODES OF SYNAGOGUE MUSIC

No use of chordal or harmonic construction is made by the peoples of the Near East. Unison melody is prevalent, occasionally embellished by instrumental accompaniment parallel to the chief melodic line with improvised ornaments (heterophony). The melodic lines of all Near Eastern music are based upon modes. Judaism, too, uses certain stereotyped melodic patterns which, by repetition and association, crystallized in the course of centuries into a system of modes.


Why eight modes seem to have constituted the generally accepted number is not quite clear; indeed, this question is so obscure that it will be useful to explore the origin of modality as much or as little as the scope of this chapter will permit.

The eight modes, which we know from Christian theorists (*Oktoechos*), in spite of their octave-like arrangement, have nothing to do with the system of a scale reaching through the interval of an octave. The earliest accessible sources demonstrate that the conception of eight modes originated with the calendar. Hittite and Babylonian documents allude to this, but the connexion becomes quite clear when we bear in mind that the Syro-Byzantine *Oktoechos* was originally a group of hymns to be sung on the eight Sundays following Pentecost. This reminds one strongly of the ancient Pentaccontadte calendar of the Near East in which eight holidays were inserted into a period of fifty days (seven weeks plus one day). This calendar system is still, to a certain extent, linked to the *Oktoechos* of the Nestorian and Armenian Churches.

In Judaism the musical modes have undergone numerous developments. First, as we see from the superscriptions and structures of some psalms, they were an esoteric secret of the priestly cast. Thus Psalm vi bears the inscription ‘*al ha-sheminit*’; the usual interpretation of *sheminit*, meaning ‘the eighth’, has led to translations such as ‘tunes in the octave’ or ‘upon an instrument with eight strings’. Neither of these explanations is satisfactory when compared with an old rabbinic interpretation quoted by Saadya Gaon, the great Jewish philosopher of the ninth and tenth centuries. He writes:

This is a hymn . . . in which the regular singers of the Temple were ordered to praise God in the eighth *laban* [Arabic for ‘mode’ or ‘melodic pattern’]. The expression ‘*al ha-sheminit*’ demonstrates that the Levites used eight modes, so that each time one of their regular groups executed one mode.2

In the Middle Ages, the Jewish modes were understood as hermeneutic devices to attune the human soul to the various emotions

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expressed in the Scriptural and post-Biblical poetry of Judaism. Then they deteriorated to musical habits, especially when they became imitations of Arab modes or melodies (lahanim). In the eighteenth century they were all but forgotten, but in the middle of the nineteenth century they were rediscovered and reconsidered. In these circumstances their tradition is by no means free from corruption, and authenticity can be claimed for only a few. Owing to constant repetition and association with certain liturgical types, the Jewish modes have today a strong hermeneutic function, linking special prayer-types with special modes. This practice is, of course, one of the numerous instances of the ‘ethos doctrine’ of music, common to all ancient nations.

Ex. 300

Structure of Jewish Prayer-Modes

(a) Skeleton ‘Magen Aboth’-mode (MA)

(b) ‘Ahaba Rabba’ (AR) supratonal.

(c) AR subtonal.

(d) Phrygian Plagal. Λ

(e) Modified Lydian mode (Daniel-mode of Spanish-Arab Jews)

Idelsohn, Thes. IV. 323

(f) ‘Adonai Molok’h-mode (A M), mixolydian, supratonal

(g) A M subtonal (Ha-El Psalm-tone)

These modes are not of the scale character that was imposed upon the modes of the Church by medieval theorists; they are rather models of melodic types. In addition to these chief modes, we find, especially
among the Oriental Jews, a number of other patterns that do not easily submit to systematization.¹

One of these modes, the main strain of Hellenistic psalmody, was especially singled out by the Church Father Clement of Alexandria in the beginning of the third century. Clement praises the majestic psalmody of the Alexandrian Jews, which was chanted in the Tropos Spondeiakos.² We have exact descriptions of this ancient mode by Plutarch and other writers; and it can still be traced in the oldest strata of Jewish, Byzantine, and Roman Catholic chant.³

THE INFLUENCE OF POETRY ON THE DEVELOPMENT OF SYNAGOGUE MUSIC

So long as Biblical diction, and its more or less conscious imitation, dominated the language of the Jewish liturgy, the musical forms and expressions remained unchanged—even in the first bitter centuries of exile and of conflict with conquering Christianity. But gradually a momentous change took place in both the substance and the execution of the liturgy. A new poetic style came into being in which metre and rhyme played important roles. The beginnings of this development reach back to the fifth century. It was caused by external as well as by internal circumstances. Since Justinian’s novella 146 prohibited the Deuterosis (Bible exegesis, Midrashic homily) in the Jewish service, Jewry tried to circumvent this law by introducing didactic homiletic poetry as substitutes for exegesis within the liturgy. That this was no more than an apparent cause is demonstrated by the fact that after the Arab conquest of Palestine and Babylonia (636–50) the Jews, liberated from Byzantine oppression, retained and even greatly expanded the new poetic insertions of the liturgy. We are bound to assume that Jewry simply followed the trend of the times, for the contemporary Syrian and Byzantine poems, too, are chiefly based upon homilies and are often nothing more than versified sermons or exegeses. Metrically, the early piyyutim (liturgical poems) show a variety of systems; sometimes accents are counted (homotomy), sometimes syllables, as in Syriac poetry, sometimes even words. After the tenth century the Arab system of metre was generally adopted. More difficult is the problem of rhyme, for neither the Byzantines nor the

¹ Cf. especially the motives cited in Lachmann, op. cit., pp. 98 ff.; also R. Lach’s remarks in ‘Die vergleichende Musikwissenschaft’, Sitzungsberichte der Akademie der Wissenschaften (Vienna, c. 1924), pp. 35 ff., 89.
Syrians ever cultivated it very much except for some forms of rhymed prose; perhaps Jewry adopted pre-Islamic or even Mandaic patterns of rhyme, although they were rather primitive.

The introduction of metre and rhyme brought with it a new type of music, not necessarily a periodic symmetrical one like the occidental music of the eighteenth century, but a kind of chant which could no longer disregard the principles of metre and strophic structure. The first pioneer to take cognizance of these changes seems to have been Rabbi Jehudai Gaon (c. 720), of whom it is said that ‘the early Hazanim (cantors) learned musical tradition from him as he had learned it from his teachers for many generations’. He championed the cause of new poetry and even ruled that a blind cantor might be appointed if his other qualifications recommended him. He also advocated the ternary form a–b–a in liturgical rubrics where the prayer opens and closes with a eulogy. They should be chanted to the same tune, ‘but the middle should be sung differently, yet not too differently’. Jehudai Gaon, therefore, must be considered as the father of Jewish musical tradition. Shortly before his time, the great Palestinian poets Jannai and Jose ben Jose show, both in form and content, remarkable resemblance to contemporary Byzantine hymnody, especially to the form of the kontakion.

After the Arab conquest of Babylonia, Palestine, and Spain (711), the Jews of the Iberian Peninsula established themselves in a close symbiosis with the ruling Arab class. The centuries between 800 and 1400 witnessed the rise of a magnificent Jewish culture in Spain which furthered religion, philosophy, literature, and music. The famous poet and philosopher of the Spanish epoch, Jehudah Halevi (1085–1141), discusses unfavourably the aspects of metrical music in his philosophical work The Kuzari, still preferring the old psalmodic improvising chant. Others, however, felt differently. A number of Spanish-Jewish writers, mostly writing in Arabic, showed considerably more understanding of the musical demands of metrical poetry; they even stressed the value of musical theory and championed its study. Their attitude represented a mixture of Arabic, Biblical, and Greek ideas. Few musical documents, however, have been preserved.

1 Cf. my study on Doxology in Hebrew Union College Annual, xix (1946), pp. 303 ff.
2 The greatest Byzantine melodos, Romanus, was of Jewish parentage, and his famous hymn upon the reappearance of Christ and the Day of Judgement is based upon various rabbinic homilies. Cf. Vol. II, p. 21, and E. Wellesz, ‘Melito’s Homily’ in Journal of Theological Studies, Oxford (1943), pp. 46 ff.
In contrast with the conservative Arab-inspired philosophy of the writers are the sources which have come down to us either by oral tradition or through documents. From the fourteenth century on, Judaeo-Spanish folk-songs, as well as artistic accomplishments, show a distinct inclination to follow Western and not Arab leadership, all efforts of the music department of the Baghdad *Bait-hikma* (Academy) notwithstanding.

The oldest known manuscript of Hebrew music is a ‘‘Eulogy on the Death of Moses’’, written in Lombardic neums on a four-line stave. Its text, and probably also its music, was composed by an otherwise unknown Amr ibn Sahl who lived in the eleventh century; it is very much akin to the more elaborate types of Gregorian chant.

Ex. 301

It seems to have originated at Ravenna, or thereabouts, although it was found in Cairo; the neums are Italian in type, while the Hebrew script shows Byzantine influence. Shortly after the thirteenth century the Italian Jews became the recognized leaders in poetry and music; their position was strengthened by the catastrophe that befell Spanish Jewry at the end of the fifteenth century.

**THE MUSIC OF ITALIAN JEWRY**

Generally speaking, the chant of the Synagogue had remained on

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1 The manuscript is in possession of the Jewish Theological Seminary in New York; (E. Adler Collection No. 4096). Cf. my paper, 'The Oldest Sources of Synagogal Chant', *Proceedings of the American Academy for Jewish Research*, xvi (1947), pp. 225–32.
the level of stylized folk-song for many centuries. The transition from this position to the sphere of genuine art music began with the early Renaissance and was nowhere so well developed as in Italy. There we find composers of Jewish extraction as early as the end of the fifteenth century. The papal court of Leo X (1513–21) employed two Jewish musicians, Jacobo Sansecondo, probably the model of Raphael’s ‘Apollo on Mount Parnassus’, and Giovanni Maria, who, in honour of the Pope, surnamed himself ‘De Medicis’.

The sixteenth century produced a score of outstanding Jewish musicians in Italy, of whom we need mention only those who were employed at the court of the Dukes of Mantua, the very liberal Gonzagas: Abramo dall’ Arpa Ebreo, Isacchino Massarano, David da Civita and Allegro Porto.

Something must be said here about the institution of the ghetto and its influence upon the music of the Jews within its boundaries. The Fourth Lateran Council, under Pope Innocent III (1215), decided to segregate the Jews as radically as possible from their Christian fellow-citizens, placing them in ghettis that were closed at nightfall; social or professional intercourse with the Christian community was virtually made impossible. It took about two generations before these decrees were fully implemented, but from about 1270 until the end of the fifteenth century these stern rules were faithfully carried out, and the Franciscan and Dominican monks did everything in their power to excite the Christians against Jewry.

Under these circumstances, while every tradition was loyally preserved in the ghettis, there was no opportunity for development. The ghetto did not kill Judaism and its institutions, but it condemned them to stagnation and gradual deterioration. No wonder, then, that we hear practically nothing of music from Jewish sources. Italian archives, however, especially those of Venice, Leghorn, and Ferrara contain a number of decrees against Jewish music-teachers.

At the end of the sixteenth century two remarkable persons appeared who at one stroke raised synagogal music to the high standard of contemporary music in general. They were Rabbi Leon da Modena and his protégé Solomone de’ Rossi il Ebreo. The initiative came from the Rabbi, one of the most colourful personalities of Jewish history. Brilliant and profound scholar, anonymous pamphleteer against himself, composer and conductor, prolific writer, gambler, alchemist: in short, a jack of twenty-six trades (which he carefully enumerated), he

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founded a musical society in the ghetto of Venice. One of his (converted) disciples Giulio Morosini has given us a good description of Modena’s Accademia musicale. The practice of having double choirs, then popular in Venice, was introduced to the ghetto by Rabbi da Modena, and he himself composed a series of such choral pieces in the style of the Gabrieli. But his chief merit is that he induced Solomone de’ Rossi to compose a book of synagogal music. This work, The Songs of Solomon, published by Bragadin (Venice, 1620), contains thirty-odd choral pieces ranging from three to eight parts. The style of his music resembles that of Monteverdi, with whom Rossi collaborated in the composition of the sacred drama Maddalena (Sacra rappresentazione di Giov. Batt. Andreini Fiorentino) in 1617. Rossi’s synagogue compositions contain few, if any, traces of Jewish tradition. While they are of enchanting beauty and religious spirit, they remained alien to the customary vein of synagogue song, which was the main reason why they fell rapidly into oblivion after Modena’s death. The merit of having preserved portions of old Jewish music belongs not to a Jew but to the Christian Benedetto Marcello (1686–1739), a Venetian noble. He collected twelve traditional chants of Venetian Jewry and used them as canti fermi in his composition of the first fifty Psalms, the famous Estro poetico-armonico, published in 1724–7. This attempt to revive ancient psalm tunes must be considered a late aftermath of former humanistic efforts to explore scientifically the fields of Scripture, Hebrew history, and literature. It has been shown independently by Idelsohn and myself that a number of Marcello’s Jewish tunes originate in the twelfth to the fourteenth centuries both in Spain and in central Europe. Here only three of the most interesting examples will be quoted, showing Arabic as well as Gregorian influences.

Ex. 302

A translation is given in my study ‘Manuscripts of the Birnbaum Collection’, Hebrew Union College Annual, xvii (1944), pp. 414–16.

8 Ibid. The manuscripts are in the Library of the Hebrew Union College.

9 A selected edition of Salomone Rossi’s vocal compositions has been edited by Samuel Naumbourg and Vincent d’Indy, 2 vols. (Paris, 1876).

4 Marcello’s Hebrew tunes are published and analysed in my study ‘Die hebräischen Intonationen B. Marcellos’, Monatschrift für Geschichte und Wissenschaft des
THE MUSIC OF CENTRAL EUROPEAN JEWRY

The music of Central European Jewry is of particular interest to the musicologist because of its amazing capacity for development and for active assimilation of foreign elements without loss of identity.

The finest musical monument erected by Central European Jewry is a group of solemn chants for the festivals and High Holidays which in the fifteenth century were already known as ‘Missinai tunes’ (melodies from Mt. Sinai). They represent the highest musical accomplishment of German Jewry up to the nineteenth century and reflect, in every phrase of music and text, the eschatological and mystical longings of a persecuted people. While quite a few motives of the ‘Missinai tunes’ originated in the Burgundian art music of the out-going thirteenth and early fourteenth centuries and show certain resemblances to pieces by Guillaume de Machaut, these borrowed elements are by no means clearly discernible; they are completely integrated into the traditional style of European Synagogue music. This style was replete with ‘wandering motives’ which soon became associated with certain Hebrew phrases or ideas, and thus in course of time became veritable leitmotives. Two examples will illustrate this point (Ex. 303).

The region in which this assimilation with Burgundian music took place was that which surrounded the old Jewish communities of the Rhineland, especially the cities of Worms, Mainz, Speyer, Treves, and Strasbourg. There we encounter a surprisingly strong familiarity with western German and eastern French folk-songs, many of which were integrated and adjusted to the older style of Jewish chants. Songs like ‘Wenn ich des Morgen’s früh aufsteh’, ‘Der Lindenschmied’, ‘Der Bruder-Veit’s Ton’, &c., became—with altered rhythm and tonality (changed from the original second and eighth to modified first and fifth mode)—part and parcel of Central European Synagogue music. This kind of adaptation of German folk-music came to an end about 1600 when the constant persecutions, peasant and other wars had all but annihilated the Jewish communities so that many were forced to emigrate either to Poland and Russia or to Italy. With the end of the sixteenth century began the rapid deterioration of West and Central European Synagogue music.

As distinct from Jewry in the Arab orbit, European Jewry showed very little interest in musical theory. One interesting exception should be noted, however; in the year 1342 Leo Hebraeus (Rabbi Levi ben Gerson, also known as Gersonides) was requested by Philippe de Vitry to ‘demonstrate a certain presupposition in musical science’. In
fulfilling this request, Leo Hebraeus wrote his treatise *De Numeris Harmonicis* in which he placed Philip's principle of *prolationes* upon a secure mathematical basis which proved to be most appropriate for the further development of the notation of the *ars nova* and subsequent systems.¹

**THE MUSIC OF EAST-EUROPEAN JEWRY**

The Jews who emigrated to Poland and Russia from the fourteenth century onward to 1600 found already established Jewish communities in their new homeland, chiefly in the south-eastern portions. Most of these earlier settlers had at one time or another escaped the turmoil in Persia, the Caucasus, or the persecution of the Byzantine government. They spoke Old-Slavonic or Tatar. It was only when the German immigrants came, with their superior Jewish culture and education, that these languages yielded to the Judaeo-German of the newcomers which in later centuries developed into a new language, the Yiddish idiom of all Eastern European Jewry. Together with their Middle-German language, the native Jews also learned their traditional songs. After a period of uncritical acceptance, a certain aversion to the German-Jewish songs set in and this led to a reshaping of the Synagogue chant of the eastern European Jews about the year 1620. During this revision the cantor (*Hzazan*) attained a position of paramount importance. Keen to hear new music as the Eastern European Jews always were, but restricted to the synagogue as their main institution of learning and art, they naturally urged the cantor to satisfy this longing. He was forever called upon to provide new tunes for the weekly service on Friday evening and the Sabbath and to interpret and arrange them in a manner that would satisfy the artistic longings of the congregations. Says Idelsohn: 'The Jew demanded that the *Hzazan*, through his music, make him forget his actual life and elevate him upon the wings of his tunes into a fantastic paradisiacal world, affording him a foretaste of Messianic times in the heavenly Jerusalem.'² The requirements of a good *Hzazan* were: he had to possess a sweet voice, in the Oriental sense, meaning a lyric tenor of nasal quality (called by the Byzantians ἑξόφωνος); he had to be well trained in brilliant coloratura-singing, since the Eastern European

style is replete with virtuoso passages of dazzling fantasy and finesse; he had to be a versatile and original improviser upon certain traditional modes, exactly as the Arabic or Turkish recital singers improvise upon certain maqāmāt. East European Jewry called these modes Gust (from the Italian gusto) or Steiger. The improvisations were strictly modal and polyrhythmic, rarely influenced by the Western European systems of beat or metre. The favourite modes were:

1. The Ahaba Rabba mode (Great Love): E-F-G♯-A-B-C-D-E, with a tendency to build the tune around the tenor D or A. The Greek Orthodox Church knows this mode, too, as its Echos ii and iv. As in Jewish practice, it is used there mainly for supplicatory texts. It seems probable that the eastern Jews borrowed this mode from the Byzantine Church since it was unknown to Central European Jewry. Other elements of Greco-Slavonic church music have penetrated into eastern Jewish chant, as a comparison between the Russian Synodal hymn books and the Jewish folk-songs clearly shows. Cf. Ex. 300 (b), (c).

2. The Tefilla mode (Prayer): the melodic pattern strongly resembles the fifth Gregorian psalm-tone; its scale is mixolydian. Cf. Ex. 300 (f).

3. The Magen Abot mode (Shield of the Fathers): this corresponds to a Dorian scale with a minor sixth and is characterized by its melodic pattern. It moves towards the fifth, leaps to the octave, and then rapidly descends to the finalis. Cf. Ex. 300 (a).

The emphasis on the vocal soloist, who at the same time had to perform a priestly function, led inevitably to the idolization of certain outstanding singers, improvisation led to anarchy, brilliance to empty showmanship; profound religiosity became, in the course of this development, a matter of routine or habit for the cantor. Still, by virtue of his experience, he was able to stir his audience to the depth of religious emotion. But by the end of the eighteenth century this style had lost its genuineness.

DISINTEGRATION OF SYNAGOGUE MUSIC BEFORE THE ERA OF EMANCIPATION

The beginning of the disintegration of Central and East European Synagogue music was arrested for almost a full century by a new movement whose roots lay deep in the realm of mysticism. Hasidism, which—in some respects—may be compared to the pietism of the seventeenth and early eighteenth centuries, came into being in eastern Europe. It was originally a reaction against rigid rabbinism, but in

1 See pp. 449–50.
2 J. B. Rebours, Traité de Psaltique (Paris, 1906), pp. 47, 90, 111. It seems that the mode is of Turko-Tatar origin, since neither classic Jewish nor Arab musicians up to the fourteenth century make any mention of it.
the course of time it developed an independent philosophy of its own. One of its main goals was the attainment of supreme bliss through a mystic approach to God. Music became a chief device of this esoteric philosophy. It was agreed by all adherents of Hasidism that song (without words) was capable of transforming the soul of the singing worshipper to such an extent that definite stages of a mystic approach to God could be reached, stages which otherwise were most difficult to attain.\(^1\) The ideas that song is the soul of the universe, that the realm of heaven sings, and similar notions are amazingly like those of the early Christian mystics; even Augustine's description of the wordless Jubili is born out of the same feeling that mystical music reaches a realm near to God. (It would be a worthy task to compare the ideas of early Christianity concerning music with those of Hasidism; striking parallels would certainly emerge.) Since the Rabbi of the Hasidic community was always the guiding spirit in mystic lore, it became a common practice for the Rabbi to compose his own 'God-hymns'. Many of them have come down to us in full notation. They invariably start slowly and majestically, but increase in intensity and speed until they reach a fast dance-like rhythm that leads into either an ecstatic jubilation or a lament. These pieces were called niggunim (plural of niggun, tune). In the development of Hasidism they became something like musical symbols of the various schools and ideologies which the respective Rabbi-composers had conceived.

When the economic and political situation of eastern European Jewry became less and less tolerable, large waves of emigrants flooded central and then western Europe. A large number of the emigrants were singers and cantors; their route was usually via Silesia or Moravia to Bavaria. These eastern singers carried the traditions of Hasidic music with them; thus we frequently encounter Hasidic tunes in central Europe from about 1750 on. The central European cantors, fascinated by the beauty of Austrian and German art music as well as of Hasidic tunes, frequently tried to reconcile these two strange worlds of music. This was occasionally attempted by simple juxtaposition, often producing deplorable results, sometimes by a more refined technique, whereby occasionally fine pieces emerged. One of this latter category, a duet for soprano and alto, by Abraham di Caceres of Amsterdam (1740) is given here. The general style resembles that of Handel's or Jommelli's chamber duets, but the melodic

\(^1\) Rabbi Shneor Zalman said: 'For the song of the souls—at the time they are swaying in the high regions to drink from the well of the Almighty King—consists of tones only, free and dismantled of burdensome words.'
line is strongly influenced by eastern Jewish chant (Γ † marks such passages).^1

Ex. 304

Traditional motive:

Through the influx of heterogeneous elements such as Slav and
German folk-songs, Russian church music, Hasidic tunes, and, above
all, art music of central Europe, the Jews who had lost much of their
positive assimilating power since 1600 were faced with a task far
beyond their ability. They were no longer capable of integrating the
various elements into the body of their traditional music; they could
no longer even preserve that treasure. Ignorant cantors, being ex-
plotted singers, urged by the cravings of the congregations for ever-new
music, made a theatre or music-hall out of the Synagogue. Its songs
were secularized: contaminated with poor imitations of Italian bravura
arias, miserable vocal arrangements of Gluck's or Haydn's instru-
mental pieces. This development was all but inevitable since the ghetti
could no longer completely segregate the Jews from their cultural
environments. They hungered for new music but were, under the

^1 MS. in the Library of the Hebrew Union College, Cincinnati.
rabbinical and secular laws, permitted to hear music solely in the Synagogue where it was performed vocally, and usually by untrained singers. Small wonder, then, that the emancipation caught the Jews in a condition where they cared very little for traditional music; it was their primary desire to absorb the fascinating trends of contemporary European music. Typical of this is the enthusiasm with which certain Jewish laymen—and women—followed the course of two famous sons of Johann Sebastian Bach. Sara Levy, daughter of the Berlin 'Hofjude' Daniel Itzig, the financier of Frederick the Great, and her circle, were among the favourite disciples of Wilhelm Friedemann Bach and she was highly praised as a fine harpsichordist by C. P. E. Bach. She performed many of their works at the early performances of the Berlin Singakademie. Only when a certain point of saturation was reached did they remind themselves of their abandoned treasure. By then, about 1840, a good deal of that tradition had been lost or irrevocably forgotten. Under the auspices of modern Liberal Judaism and the science of Judaism a rejuvenation of Synagogue music has taken place. But this ars nova had originally only a loose connexion with the ancient tradition; it took almost a century for the new style to become so firmly linked with tradition that it could be considered an integral part of Jewish musical history. This development will be discussed elsewhere (Vol. X). Let it suffice to say here that despite all changes, both internal and external, Judaism has succeeded in establishing, expanding, and preserving its own musical style and tradition. Notwithstanding many foreign elements absorbed in Jewish chant, and certain distinct similarities with the music of the Near East, Byzantium, and Eastern Europe, it can be said that the Jews have created a musical style sui generis, which satisfies all the criteria of an autonomous cultural entity.

1 Cf. G. Schünemann, 'Die Bachpflege der Berliner Singakademie,' Bach-Jahrbuch, 1928, p. 144; also Ernst F. Schmid, Carl Philipp Emanuel Bach und seine Kammermusik (Kassel, 1931), pp. 14 ff, and Jahrbuch der Sammlung Kippenberg viii, pp. 167–9. Madame Levy was the great-aunt of Felix Mendelssohn, and conveyed the Bach tradition to his family.
IX

ANCIENT GREEK MUSIC

By ISOBEL HENDERSON

THE MUSICAL TRADITION IN ANTIQUITY¹

In the nineteenth century it seemed not incredible that the music of the medieval churches might derive from some trickle of Hellenic tradition. Medieval studies have now dispelled such conjectures: even in antiquity we cannot assume the continuous evolution of one species of ‘Greek music’. The main instrumental types and the main theoretical terms persist. But instruments are inadequate clues to a music predominantly vocal; and the terms of theory seldom referred to musical facts. With the notable exception of Aristoxenus, the purpose of Greek theorists was not to author the art of music but to expound the independent science of harmonics; and ultimately the transmission of this harmonic science had no more to do with the history of musical art than the transmission of Greek astronomy or medicine.²

History must start from the great and obvious divergence between the fates of language and of music among Greeks who could quote their Homer for two millennia, but who ceased, after a certain point, to know their musical past except as they knew names of dead athletes. Since the point of divergence vitally affects our interpretation of the ancient sources, it will be convenient to begin with a rough provisional summary of the stages in this history.

(1) Archaic and classical music was transmitted orally with its words. We shall find, flourishing in Athens of the fifth century B.C., a genuine classical tradition—that is, the perpetual competition of new music with recollected models and standards. The supreme document of this tradition is The Frogs of Aristophanes, produced in 405 B.C. Next year Athens fell in defeat and revolution. During the fourth century the reservoirs of musical knowledge in school and theatre were breached. Plato—who had been educated in the classic style brought to its early maturity by Pindar, and had conversed with

¹ In all citations of Greek authors, the figures refer to the numbered sections given in the margin of standard editions.

Aristophanes—was the profound and sensitive critic of new developments in the music of his times. By about 320 B.C., as the great teacher Aristoxenuses noted, memory of the classic styles was almost obliterated. (2) Meanwhile a modernistic movement, starting from the later fifth century, had produced ‘popular classics’, which were upheld above a flood of transient stuff by the Hellenistic creation of repertory until, after the Roman conquest, they petered out in the backwoods of Arcadia. The music of the innovators, Philoxenus and Timotheus, was virtually dead by the later second century B.C., when two paeans from the derelict metropolis of Delphi sustain the literary façade, at least, of an obsolescent style. (3) Later antiquity retails a music of entertainment and artifice. Except under a brief spell of Grecian intoxication at Hadrian’s court, which bestowed high patronage on Mesomedes, the composer never again aspires to classic rank. The musician is now an executant, staging his own impersonations of set literary themes or, more humbly, purveying background noises for social and ceremonial occasions. A favourite ballet or mime has its vogue and passes. Writers no longer discussed present music, for there was no renaissance; nor, as in other arts, could they study the past, for there was no conservatory. The situation can be seen in the state of our musical documents, and explained by the history of education.

(a) The documents. Out of the vast manufacture of music in antiquity we have less than twenty written pieces, mostly stray finds of papyrus and stone. Music was not transmitted in the great ancient editions from which the main body of Greek literature descends, and the insatiable scholarship of Alexandria shows no awareness of musical palaeography. Greek writers constantly quote literary texts, but in all their extant works there is only one specific reference to a musical text. This reference has some intrinsic interest. Dionysius of Halicarnassus, in Augustan times, observes that in the Orestes of Euripides the music did not rise and fall with the speech-accents, and further adds that in two paired verses, strophe and antistrophe, the melody must be identical.1 Now we have a papyrus written about 250–150 B.C., containing some lines with music from an antistrophe of this very play. It has a variant of a textual error also present in the Alexandrian edition—but in different order—by which a line of verse is displaced. Such a displacement, if it had occurred after the extant music was composed, must almost certainly have broken the melodic correspondence with the strophe, noted by Dionysius

1 De compositione verborum, 11 and 19. See also below, p. 374.
himself. Therefore this music was presumably composed after the
textual corruption began to set in. Dionysius was in no position to
know whether a later text had the music of the original production
of 408 B.C., if he had seen a copy at all.

From other considerations, too, it seems unlikely that a written
record of classical music would be preserved unless by a freak. Some
archaic letter-forms in Greek notation may indeed indicate that pro-
fessional musicians used their ciphers from an early date. But since,
down to the fourth century B.C., no considerable work was composed
for more than one public performance, there was no reason to pre-
sure these memoranda. We have no evidence that written music was
circulated before the times of the Hellenistic repertory.¹ Nor is it
likely that many citizens could read music. In the later fourth
century notation was taught for harmonic theory, but this habit
seems to have been short-lived.² Practical training in music, which
was an independent discipline, was oral both in school and in the
citizen chorus. Musical settings were certainly not incorporated in
texts made for reading—which meant recitation, as opposed to acting
with gesture and song. Except, possibly, from the fourth to the second
century B.C., musical literacy was rare among educated men. The
spread of books may even be thought to have pushed music out of
education, for the mutual aide-mémoire of verse and melody was no
longer indispensable when the words were easily available in written
copies.

(b) Musical education. Plato, attempting in the fourth century B.C.
to save something of the classical education, gives the following
advice to teachers:³

... The lyre should be used together with the voices, for the clearness of
its strings, the player and the pupil producing note for note in unison.
Heterophony and embroidery by the lyre—the strings throwing out melodic
lines different to the melodia which the poet composed; crowded notes
where his are sparse, quick time to his slow, high pitch to his low, whether
in concert or antiphony, and similarly all sorts of rhythmic complications
of the lyre against the voices—none of this should be imposed upon pupils
who have to snatch out a working knowledge of music rapidly in three
years.

¹ The first extant piece is a papyrus of c. 250 B.C. The early papyrus of Timotheus'
musically famous Persae gives the words only. Players are never portrayed reading music.
On a vase of c. 425 B.C. (Fitzwilliam G73) a singer reads from a scroll, but there is no
evidence that it contained notation besides words. Nor can it be seriously argued that
Alexandrian performances of kitharisms from Euripides reproduced the original
settings.
² Aristoxenus, Harmonics, 39-40; but see Marrou, 'ΜΕΛΟΓΡΑΦΙΑ' in L'antiquité
classique, xv (1946), pp. 289 ff.
³ Laws, 812d. See pl. 10 (a) and (b).
Such accompaniments were heterophonic, not polyphonic or contrapuntal. Plato, speaking of elementary education, is not denying that classical accompaniments could be heterophonic, though they were almost certainly simpler or less obtrusive. What he does make clear is that the composer’s legacy was simply the sung poem: the instrumental part is conceived as a free accompaniment at the executant’s pleasure (too complex, Plato thinks, for elementary lessons). An archaic crusis (accompaniment) might occasionally be transmitted in set form; but the orchestration of a classical work—from the single aulos supporting a tragic chorus to the strings, wind, and dancers producing a Pindaric ode—was part of a unique spectacle which perished. Some fifth-century Athenians did learn to play not only the domestic lyre but the kithara (a big concert-lyre) and the aulos (a sort of oboe), but in public performance these instruments were normally left to professionals. The citizen’s part on the stage was the choric voice; and the classics, repeated by the citizen’s voice and his lyre in school and on domestic or social occasions, consisted in a body of song. Early in the fifth century the classical music had reasserted the leadership of the vocal part over the instrumental; from its close, the classicists complain that this priority is being reversed. The nature of the musical change will be more fully discussed below. But from Plato’s advice we can already see how, in a music made to show off the professional instrumentalist, the decorative and ephemeral part might overbear the durable melodic structure, which alone passed into the store of remembered classics. When the classical language and its literature began to grow unintelligible, they were saved by the labour of ancient scholars. No such labour was undertaken for music; and the classical melopoeia in fact perished from ear and understanding. Its ethos or character was distorted, as Aristoxenus says—explaining more precisely that when modern musicians attempted the best classical styles at all, they hit wrong notes.¹

For the history of music the decisive event was the fall of Athens in 404 B.C., and the revolt against the ideals of her former intellectual élite. In most other matters the post-war education was strongly conservative. But musical incompetence, once the mark of the cad, became a plume of the new snobbery. It was asked whether the citizen should practise music at all, or merely listen—as in Sparta and Macedon, the victorious powers of the fourth century. As Aristotle put it:² Could music, like cookery, be judged by the consumer, or was

¹ Harmonics 23 (cited below, pp. 387 ff.).
² Politics 1339a–1342b.
practical knowledge needed? He argued that practice was desirable, and need not be pernicious or vulgarizing unless the citizen, indulging in the pre-war excesses of Athenian spiritual pride, learned the ‘professional instruments’. Here began a divorce between the citizen and the professional, between theory and practice, from which Europe still suffers. The three years to which Plato, reluctantly, had reduced musical education were soon cut down to two; and in Hellenistic times we hear of schools founded with only one music-master or with none. Choral singing was still taught to boys, but the adult citizen’s musicianship so declined that professionals were already being imported into the fourth-century chorus; and the professional, on his side, was no longer a cultivated man. Genuine musical criticism ceases. The classic Athenian comedy had been made for a society which talked music as it talked politics or war. But in Aristophanes’ post-war plays, a shrunkken chorus gives us only a last flash or two of his musical parody; and his successors substituted ent'actes by variety artists. The Alexandria era still has excellent stage gossip on performers, but a first-hand judgement on the style or quality of music is hardly to be found after the fourth century. Aristotle already prefers received opinions. His master Plato and his pupil Aristoxenus are the last who speak to us with the authority of musical understanding. Yet their overwhelming influence on later writers was due less to their understanding than to the authority which they carried into two subjects still respected in higher education: philosophy and harmonics. While practical music lost the intellectual prestige which it had enjoyed since Homer, these two independent sciences reigned on, using the language of music for their own ends, and finally usurping its name. Mousikê, or musica, which had once included both music and words, is not always to be translated as ‘music’ in post-classical authors. Consequently, the evidence of any Greek theorist must be interpreted with due regard to his date and place in the history of Greek ideas: musical, mathematical, or metaphysical.

TRADITIONS OF HARMONIC SCIENCE

Harmonics meant tuning, or acoustic theory. Greek postulates were melodic and heterophonic, and ignored ‘harmony’ in our sense. The central problem of harmonic theory was the proper

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2 περὶ μουσικῆς is cited as the title of a work by Heraclides Ponticus (fourth century B.C.) on harmonic theory and psychology, which are regularly called μουσική in late antiquity.
3 The term ‘consonant’ (σύμφωνος) refers to melodic progressions. Music had nothing
division of musical space. Music, though practically ruled by the voice, was theoretically analysed in terms of the stretched string, which yields the words syntonos (taut) for high pitch and aneimenos (slack) for low, the nomenclature of notes from the plucking fingers, and some basic features of the notations. The static tuning of the strings was irreconcilably pitted against the free-wheel of the voice plotting its own consonances along its undivided continuum; and this musical antinomy audibly illustrated the Greek theory of numbers as delimiting points on an infinitely divisible ground (apeiron). The earliest harmonic theory used an academic monochord for mathematical or physical demonstration by the concept of measurable sound. Academic controversy later divided theorists under various labels; but the true distinctions are between the high mathematical method, the empirical, and the inductive.

(a) The term 'Pythagorean' is loosely used to cover a long tradition of mixed doctrine. Pythagoras of Samos, in the sixth century B.C., is said to have bequeathed to his disciples the principle of expressing divisions of the monochord by ratios, which founded the original and typical tradition of harmonics. It must be taken at its own valuation, as a self-propelled science, inspired not by a special interest in the musical art but by a general interest in the nature of the universe, seen under the strongly mathematical bias of Greek thought. Its aim was to reach a theoretically satisfying scale, which was conceived as a structural element of the cosmos. The astronomical firmament was pictured in the Music of the Spheres, from whose revolutions was emitted a scale of tetrachords, each divided by two 9:8 tones with the leimma, or 'remnant', of the perfect fourth.\(^1\) The Pythagorean ditone was really used in classical music,\(^2\) but long after it was obsolete the austere scale of the Spheres played on—not to the sensual ear, but in manuals which recorded it by sheer force of theoretical tradition. Astronomy remained a regular branch of harmonics. The attempt to express the universe in numbers admitting of an irrational element was not absurd in itself, though it lacked experimental method and finally descended into morasses of Neopythagorean mysticism. It served as a hypothesis to stimulate much first-class nearer to 'harmony' than choirs doubling at the octave (\(\mu o\gamma a\beta i\gamma o\tau r e\)), which are attested from the fourth century B.C.


mathematical work, which was carried on not only by so-called ‘Pythagoreans’, but also by such scientists as Ptolemy.

(b) ‘Harmonists’ means simply ‘harmonic theorists’, but the term was applied by Aristoxenus to his immediate predecessors. The 9:8 tone is not equally divisible by ratios, and other mathematical difficulties were soon noticed. Lasos of Hermione, in the sixth century, had smothered such dilemmas with the crude if sensible suggestion that notes had breadth, but the less robust fourth-century minds were shocked by the discovery that musical space was irrational. They attempted an empirical solution by splitting up the musical continuum into the smallest intervals audible, represented in diagrams of what they called pycnomata (the meaning is of microtones crowding along a melodic register). There was no question of realizing equal temperament on physical instruments. The intention was to reduce all intervals to common numerical terms on a theoretical gamut of atomic microtones. Plato glanced ironically at the contemporary professors, with their ears to the kithara, each fancying he heard a still smaller tonal unit. Aristoxenus had to explain to his raw students that the pycnomata (besides being logically absurd) were practically inept, since nobody could sing more than two consecutive microtones.

The ‘Harmonist’ theory persisted in the form of a linear measurement of units, which have been compared with modern cents. The comparison is superficial. When ancient theorists measured intervals—whether by ratios or by units—they did so for no practical purpose, but because numerical formulation was expected of an exact science. Textbooks were infested with tables of all possible scales, which never coexisted in musical history; and while some of the measured intervals might coincide with some current tunings, they were not direct descriptions of music. The unitary measurement of intervals, by a historical irony, was later attributed to Aristoxenus himself, who had exploded it. Harmonic doctrines known to Ptolemy in the second century A.D. as ‘Aristoxenian’ were largely derived from a school of empiricists and hack teachers of theory. There was no authorized canon of Aristoxenus’ works, and of the 453 books ascribed to him, not all were from his pen. On technical subjects ancient manuals were often issued—

1 Republic 531a–c. 2 Harmonics 28.
3 The opinion that the equations represent intervals really heard in music, and that Aristoxenus heard less exactly, lacks concrete evidence: the nature of these works is not aesthetic but theoretical.
4 See Düring, Porphyrios und Ptolemaios (Göteborg, 1934), p. 183. F. Wehrli’s edition
whether for piety or fraud—under the pseudonym of an appropriate authority (e.g. 'Galen' for a medical treatise); and the Aristotelian school, to which Aristoxenus belongs, was much overlaid with such fakes. The so-called 'Aristoxenians' used the authentic and the spurious without discrimination. Their reversion to 'Harmonist' principles of measurement is incompatible with all that we know of Aristoxenus' authentic theory.

(c) Whereas Plato had embodied the musical civilization of a past Athenian nobility, Aristoxenus was the son of a professional musician from the western colony of Tarentum, where old fashions lingered. At Athens he learned the new inductive logic from Aristotle; and under the impulse of this scientific method—later to collapse into a mere terminology—he attempted a true descriptive anatomy of music from his unique knowledge of fourth-century practice and of the earlier classics. Besides excerpts of varying authenticity, we possess an important but incomplete text arranged in three books, but actually compiled from at least four sources, overlapping in subject-matter, and presumably put together from pupils' notes of his lectures in Athens soon after 322 B.C.¹ In substance it has no parallel among extant Greek theorists. Whereas mathematical harmonics (including the empiricist school) necessarily postulated a series of notes as fixed points on a hypothetical gamut—or, in effect, a diagram—an inductive theory of music had to start from the voice in action. As Aristoxenus recognized, real melody presupposed not a fixed scale or tuning, but a line on which the voice's potentially infinite stations could be determined only by ear and understanding (ἀκοή καὶ διάνοια). Given a good ear to hear intervals, the mind must define them by their melodic functions. The only sane division of musical space was by 'consonances' (i.e. the melodic progressions to the fourth, fifth, and octave): these the ear could judge exactly, or within a hair's breadth, whereas it found other intervals 'dissonant' and variable in size. For melodic purposes, any basic note-series must be so conceived that each note lay a perfect fourth from the fourth in succession or a perfect fifth from the fifth. That this principle excluded numerical expressions of intervals was obvious to any educated Greek. It was substituted for the numerical method as a practical assumption of the ear in a music which did not pose the

(Basle, 1945) undertakes no historical criticism of the excerpts, and brackets the anachronism of frag. 124 without comment.

¹ Harmonics 30; Düring, op. cit., p. 183.
acoustic problems of modern instrumental harmony over large registers. The less precisely heard variations of intervals were then defined, so far as the ear demanded, not by equations but by recognized shades (χρόας).

To the real meaning of ordinary musical terms in his day, Aristoxenus will be our clearest guide.

GRAMMAR AND SYNTAX

(a) The Notes. The basic figure of analysis was the tetrachord. It was coupled with another tetrachord, either disjunct or conjunct (diezeugmenon or synemmenon: genitive plurals with long δ). The skeleton is here represented in our natural key:

Ex. 305

(i) Disjunct

\[ \text{(a) Diezeugmenon} \]

(ii) Conjunct

\[ \text{(b) Synemmenon} \]

This is the elementary grammar of fourths and fifths pivoting on the 'fixed notes' from which the melody takes its bearings. The fixed notes are called, in descending order: (i) nete, paramese, mese, hypate or (ii) nete, mese, hypate.

Each tetrachordal skeleton is filled in by two 'movable notes'. The possible ranges of their motion were classified in three genera, roughly represented as follows:

Ex. 306

(a) Enharmonic

(b) Chromatic

(c) Diatonic

In each case, the higher of the two movable points is called lichanos, the lower parypate—or, in the upper of two tetrachords, the higher point is paranete, the lower trite. In the enharmonic and chromatic genera, the segment lichanos-hypate is collectively called the pyknon, and must be less than the interval mese-lichanos.

The names of the notes do not refer to pitch, for they may be differently placed in different genera, and nete varies with the conjunct

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1 e.g. Aristoxenus recognizes two 'shades' of each of the three 'generic' positions of lichanos (see Ex. 306 above).
and disjunct systems. They are mostly adjectives of the implied noun *chorde*—a string or, simply, a note. They are probably not names of actual strings, for some notes may have been played by stopping one string. They refer primarily to the action of the hand playing: e.g. *lichanos* means ‘forefinger’; *hypate* means ‘highest’ to the hand on the tilted kithara; *nete* ‘lowest’ to the hand—although in pitch *hypate* is the lowest note and *nete* the top.¹

The double tetrachord, thus filled with movable notes, is still only a melodic skeleton. It give the typical minimum of notes: our written pieces show that others could be inserted besides. Greek music must never be conceived in terms of any continuous scale—least of all the harmonic series of our ‘just intonation’. Its essential character lies in the logical priority of the fixed notes, which hold the melody between the iron girders of consonant progressions, over the contrasting flexible effects of the mobile notes, which bound various and irregular intervals, some hair-split, some widely gapped (and are no less mutable in the more evenly spread diatonic genus). Only the fixed notes can be exactly translated on our schematic staff. The concept of uniform octave-scales is especially inept, since a pair of tetra-chords could be of different genera. The unit of the later solmization, as of the earliest analysis, is still not the octave but the tetrachord.²

(b) *The Systems.* It was for purposes of nomenclature only that theorists, during the fourth century B.C., worked out an extended note-system. The ‘Perfect System’ was compiled of two pairs of conjunct tetrachords separated by a tone of disjunction (*diazeuxis*)—the double octave being completed by a bottom note, whose name *proslambanomenos* (implying the masculine noun *tonos*) indicates an ‘addition’ from theory, not from music. The ‘Lesser Perfect System’, by omitting *paramese*, drops the disjunctive tone, substituting a conjoined tetrachord (*synemmenon*) for the purpose of illustrating the transitory effect of a modulation to the fourth. The two Systems (which Ptolemy combined in one diagram) are given overleaf separately. Positions of movable notes will of course vary with the *genus*.

Each note was called by its name with that of its tetrachord: e.g. in (i) the note marked *e* is ‘*nete* of the tetrachord *diezeugmenon*’, *E* is ‘*hypate meson*’, &c.

² Greek solmization (known only from late theory) rendered a tetrachord of the form *la sol fa mi* by *ta te* to *te*. 
The pitch of these Systems is relative or, rather, abstract. They are themselves abstractions. Certainly a salient feature of the fourth-century musical revolution was the use of *metabolae* or modulations of various types. It raised—as does all modulation on instruments with fixed tuning—the problem of establishing a basic note-series sufficiently regular to minimize false melodic relations when two tunings are exchanged. But the working out of this problem in real music must be clearly separated from its elaboration in theory. The player modulating did not hitch on a spare tetrachord *synemmenon*. Though the hypothesis of a fixed pentatonic tuning is not proven, it remains most probable that he tuned his kithara not to a continuous scale, but by a gapped *accordatura* suitimg the requirements of his music, and supplemented or adapted it by stopping his strings. (The *aulos* could be similarly adapted by devices of fingering and blowing.)¹

¹ Düring, 'Studies in Musical Terminology in Fifth-century Literature', in *Eratos*, xliii (1945), pp. 176 ff. Only so can the attested complexity of much Greek instrumentalism be explained. Against the pentatonic hypothesis first proposed by Sachs in *Zeitschrift für Musikwissenschaft*, vi (1924), pp. 289 ff., and further developed by himself and Otto
The continuous scale was a purely academic apparatus. Its name—systema—is a term not of music but of harmonic theory; and the dual System was intended only to exemplify on the blackboard (as it were) the mechanism of a simple modulation.

Greek musical history is still bedevilled by confusions, ancient and modern, of the terms systema, harmonia, tonos, eidos (= species), genos (= genus), tropos (= modus). They can be clarified only by chronological and critical distinction between the Greek sources. To anticipate conclusions, we shall find that harmonia, in the classical composers and in musically intelligent prose-writers, means a musical idiom together with the tuning which it postulates—whereas in musically ignorant theorists it is confused with an eidos or species of the octave, which, like systema, is a term of theory, not of music. Again, to Aristoxenus the terms genos and tropos connote both a tuning and a musical style—whereas to inferior theorists both are mere scales. Above all, it is necessary to reach a true definition of tonos. It means, literally, 'a stretching'. It first occurs in harmonic theory in the fourth century B.C. From Homeric times the verb 'to stretch' was used of the preliminary stringing and tuning of the instrument; but the noun tonos is never used by a composer, never connotes a melodic style or operation. In Greek theorists tonoi are continuous double-octave scales, in all three genera, set up on successive degrees of a basic note-series or System, with a superficial likeness to the scales of pitch-keys on a pianoforte. These tonoi were originally suggested by the musical fact of modulation in the fourth century; and the prevalent opinion of modern writers is that they represent real pitch-keys used in music. The view here set forth will be found to differ. It is, briefly, that the tonoi were theoretical concepts employed to define and name the relative loci of the topography of harmonic space. For nineteenth-century scholars, preoccupied with the search for continuity between ancient and modern, it was particularly hard to get away from the underlying notion of the octave with one supreme tonic; and efforts were made to ascribe such a tonic function to the Greek mese. But, on the contrary, the

Gombosi, convincing arguments are marshalled by R. P. Winnington-Ingram in an article in Classical Quarterly, new series, vi (1956).

1 Except by mere confusion with harmonia. ἐνέφρων (-oan) does not, as a scholiast on Aristophanes Clouds 968 says, mean to pitch high: see Rogers's editorial note. In compounds -ρως means a tone or tension of the voice, with no pitch-connotation (e.g. ἐνέφρωνς = loud). In late theory tonoi are miscalled tropoi.

2 The one reference to musical usage is in ps.-Aristotle, Problems; xix. 20 (undated), saying that good tunes recur often to mese, like good prose to the word 'and'—a remark notable only for its stupidity.
Aristoxenian analysis shows us a music of tetrachords oscillating on plural pivot-notes between the disjunct scheme, which covers an octave, and the conjunct, in which nete comes down to the seventh from hypate (or the fourth from mese). These scholars persistently, if unconsciously, tended to treat the Greek Perfect System as though it corresponded to the tuning of a musical instrument, upon which key-scales could have some real meaning. It seemed to them incredible that Greek theorists played with harmonic concepts for their own sake and for no musical purpose. Here Aristoxenus was the exception. But he has left us no direct treatment of the tonoi, and we depend on other theorists, for whom harmonic science was superior to musical art precisely because it had no practical use. A historical account of the tonoi, while recognizing their initial derivation from musical experience, must remember the unbounded capacity of fourth-century thought (outside the Aristotelian school) for generating abstract entities from words without facts.

THE TONOI

Pitch

The assumption that absolute pitch-values were recognized in Greek music is not warranted by any decisive ancient evidence. It rests on modern equations of harmoniae or tonoi with pitch-keys. (i) In its original form, Monro’s theory that the classical harmoniae were pitch-keys no longer needs refuting; and recent modifications of this theory—to the effect that the harmoniae had specific pitches as well as individual tunings—are no better founded. Plato, indeed, tells us that some harmoniae, used for men’s drinking-songs, were ‘low’, and others, used for women’s keening-songs, ‘high’. But since he adds that the latter are morally unfit for either sex, it is clear that they might be sung in a male register too. Their pitch-connotations are purely relative and general, meaning no more than what Greek authors call them—viz. ‘high’, ‘low’, or ‘middle’.

In the fourth century B.C. the new tonoi were at first described vaguely as harmoniae, and the Academician known as Heraclides Ponticus rightly protested that a harmonia was not defined by its

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1 In late antiquity it was compared for speculative purity to the science of generation of birds, which (unlike the best harmonic science) was pure nonsense (Berthelot-Ruelle, Collection des anciens alchimistes grecs, v. 15, 52, 436, lines 7–11).

2 Gombosi’s ingenious Tonarten und Stimmungen der antiken Musik (Copenhagen, 1939) does not refute major arguments brought against D. B. Monro, Modes of Ancient Greek Music (Oxford, 1894), nor adequately criticize sources of uneven value.

pitch. ¹ His own definition, however, only serves to show the confusion of these terms in a period of change, when the old harmoniae were forgotten and the old education disrupted. A harmonia, he declares, must have 'a peculiar eidos of ethos and pathos'. Eidos technically meant a species or segment of the octave; ethos and pathos (musical character and feeling) he can only connote with irrelevant nonsense about the racial psychology of Dorians, Aeolians, and Ionians, whose names had been attached to some of the old harmoniae. These names suggest to his witless fancy that there are three harmoniae, because there are three Greek races. Other speculators of the time were busy reducing all harmoniae to two—and all winds to north and south. ² Late antiquity believed that Lamprocles and Damon, in the fifth century B.C., had already analysed harmoniae as octave-species—whereas the species had barely been enumerated before Aristoxenus. ³ The late Neoplatonist Aristides Quintilianus actually produced six irregular species of the enharmonic scale purporting to be the harmoniae named in Plato's Republic, but he cites no authority. ⁴

Against such confusions of idioms with scales we must appeal to Aristoxenus. He briefly dismisses the preoccupation of his predecessors with 'the seven octachords which they called harmoniae'. ⁵ To avoid this misnomer he refers to the old Phrygian harmonia as 'the Phrygian melos' (canto)—with the significant remark that one would not understand it merely by transcribing it. Few musicians of his day, he tells us, still knew the classical idioms (tropoi). ⁶ Few theorists of his day had been educated in music at all. The confusion was merely verbal. When the old harmoniae were obsolescent, some of their names had been applied or adapted to the new tonoi with their attendant species. But species and tonoi together, as we shall see, formed a coherent theoretical structure postulating a basic scale which was drawn up in the fourth century. They can have borne no relation, except in name, to the harmoniae of the earlier music.

(ii) The tonoi certainly had 'pitch' in the sense of relative position. But Aristoxenus, c. 320 B.C., finds them still in the chaos of novelty,

¹ Cited by Athenaeus, 324e–325c. ‘The man from Heraclea Pontica’, writing c. 365–310 B.C., was given to miscellaneous speculation without experience (cf. Cicero, Ad Quintum fratrem, iii. 5. 1).
² Criticized by Aristotle, Politics 1290a.
⁴ Mountford, 'The musical scales of Plato's Republic', in Classical Quarterly, xlvii (1923), accepts Aristides' authority, but see Monro, op. cit., pp. 94–100. Aristides' source was presumably some commentary on Plato.
⁵ Harmonics 36 (Westphal's reading).
⁶ Ibid. 39 and 23.
without agreement as to their relative position or the order of their names. He gives two lists from contemporary theory, in ascending relative order, as follows:¹

<table>
<thead>
<tr>
<th>I</th>
<th>Hypophrygian</th>
<th>II</th>
<th>Hypophrygian</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Hypodorian</td>
<td></td>
<td>Hypodorian</td>
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<tr>
<td></td>
<td>Mixolydian</td>
<td>½ tone</td>
<td>Mixolydian</td>
</tr>
<tr>
<td>Dorian</td>
<td>1 tone</td>
<td>Phrygian</td>
<td>½ tone</td>
</tr>
<tr>
<td>Phrygian</td>
<td>1 tone</td>
<td>Lydian</td>
<td>½ tone</td>
</tr>
<tr>
<td>Lydian</td>
<td>1 tone</td>
<td></td>
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</tr>
</tbody>
</table>

The second school took their three-quarter-tone intervals from the borings of auloi. In rebuking their illogicality, Aristoxenus emphasizes the inaccuracy of manufacture and intonation for which the aulos was notorious, but says nothing of any absolute pitch. Manufacturers of auloi did preserve some pitch-standard by general reference to other auloi; but this very fact shows that the Greek idea of pitch was relative. Absolute pitch, on the contrary, would have determined the manufacture of instruments. Some passages from late theory, assigning different tonoi to different instruments or ranges of the voice, have been taken to imply real pitch-keys: yet the same theorists postulate a pure relativity of pitch, in which the limits of musical sound are definable only by the limits of instruments or hearing.² These vague and contradictory assumptions are outweighed by clearer inferences. The anomalies of the two lists of tonoi cited above are incompatible with any idea of absolute pitch. Absolute pitch is nothing if not a practical convention, and it cannot exist in convention or in practice without some consistent terms of reference to the notes or keys indicated by such a pitch-standard. But Greek writers never had consistent terms of reference to pitch. Both the nomenclature and the number of tonoi were in endless fluctuation and dispute. Seven tonoi represented the diatonic degrees of the octave—or the Seven Spheres (a book On the Seven Tonoi was written by Thrasyllus, astrologer to the emperor Tiberius). In imperial Roman times a baker's dozen—one on each semitone and a superfluous thirteenth at the octave—was imputed (incredibly) to Aristox-

¹ Ibid. 37. In List I no interval is given for the Hypophrygian, which was sometimes omitted.
² Bellermann's Anonymus 28 (but cf. 13); Aristides 16 1 (but cf. 15 1). Note Gaudentius 20–21 and Aristoxenus, Harmonics 13–15.
enus. A set of fifteen was begotten by a passion for verbal triads (e.g. Hypodorian—Dorian—Hyperdorian). The various sets coexisted, with alternative and often anomalous names: no need for practical agreement was felt.

(iii) None of these nomenclatures agrees with the names given to kitharists’ tunings in Ptolemy’s day. Theorists used an academic fifteen-stringed apparatus, of no fixed register, to represent the Perfect System; and Ptolemy, after tabulating his own scientific results, shows which sections of his gamut will also yield tunings in current use. But these tunings, whatever they may signify, are variously tempered sequences of intervals, not pitch-keys; and their names show no relation between the practical and the theoretical uses of terminology. Once, in Aristoxenus, the name of a tonos is associated with a low aulos; but the same passage proves that the attempt to define tonal relations by auloi was an ignorant mistake.

(iv) In late antiquity tonos-scales are sometimes transcribed with musical notation. Since the notation may be merely an alternative means of expressing their relative positions, these tonoi are not thereby proved to be pitch-keys for practical reference. But if Greek notation were applicable at any pitch required, we should, a priori, expect to find all musical pieces transcribed in the same central nucleus of notational signs, with the least possible use of ‘sharps’. Now this expectation is not falsified by the Delphic paeans of the second century B.C.—our earliest fragments of sufficient length to provide a valid test. But of the later pieces, one (the ‘Ajax’ fragment) is written with the dashes which, in the tonoi, raise a note by an octave; and, while the rest fall within a central nucleus spanning a twelfth, they do not all use the same basic notational sequence of ‘naturals’ and ‘sharps’. The use of variant sequences is generally taken to denote differences of real pitch; and it must be clearly stated that this hypothesis has not been disproved. Yet other explanations, though unconfirmed, are conceivable. In late antiquity at least, variant notational sequences might have indicated different temperaments of intervals (as on the several sections of Ptolemy’s abstract gamut), or different loci

1 ‘Cleonides’, Isagoge 12. Both the number and the names are too illogical for Aristotle’s pupil. The work on tonoi ascribed to him, if genuine, may have been about ‘tones’ (so Düring).
3 See further below, p. 357.
4 Aristoxenus, Harmonica 37–43, if the text is sound. In Athenaeus 634 f., citing Aristoxenus, names of aulos-registers are not related to tonoi.
upon a standard tuning of instruments or theoretical apparatus, or
different conventions of musical transcription. Those who prefer
the hypothesis of fixed pitch-keys have to explain the absence, in
Greek writers, of reference to absolute standards of pitch, and,
in Greek music, of the conditions which would plausibly account
for the development of such standards. They freely admit that, on
this hypothesis, a radical distinction must be drawn between the
tonoi on consecutive semitones, as indicating pitch, and the
Ptolemaic system of seven tonoi, which is pitchless: yet Ptolemy's
polemics against the former would be inept if the distinction
existed. In sum, difficulties arise on either view. In the present
writer's provisional judgement, the arguments for attributing fixed
pitch-values to some tonoi (but not to all) are outweighed by the
improbabilities.¹

It is agreed that Ptolemy's tonoi have no real pitch. Here at least,
tonoi and species were together devised for a purpose independent
of musical practice: to name points, both fixed and movable, upon
an ideal diagrammatic structure of no real pitch-value, but of un-
questioned importance for ancient scientific thought.

**Nomenclature by Tonoï and Species**

The tonoi transpose the scale-form of the Perfect System to other
degrees of the System's own tonal series.²

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Here the Perfect System (cf. p. 340 above), filled out in the dia-
tonic genus and in a handy key, is set up on the staff vertically,
while a tonos-scale in transverse descent transposes the same tonal

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¹ See, however, Winnington-Ingram's careful discussion, op. cit., pp. 49–53.
² No real pitch is here implied. Logically, sol-fa should be used (as by Düring,
op.cit.), but the modern notation gives a clearer picture.
GREEK INSTRUMENTS

(a) A kithara player singing (c. 480 B.C.)

(b) A Greek music school showing lyres and double auloi (early 5th century B.C.)
sequence one degree higher.¹ The double tetrachord which is the scale-form’s central core (₃₃−₃₃) is marked in black notes, and its ‘natural’ locus on the System’s register is set between bars. The System is here treated as a static register around which the typical scale-form is borne by the revolving tonoi. As this scale-form moves one degree higher, one top note of the tonos is cut off and one bottom note is added within the System’s register.

The System’s nomenclature was used in a double sense: (1) as a term of reference to notes by their serial order of position (thesis) on the basic System; and (2) like a sol-fa, to describe notes by their function (dynamis) in the melodic scale-form (₃₃−₃₃) without regard to its position. In Ex. 307, M remains mese by thesis on the System; m becomes mese by dynamis in the scale-form (here transposed by the tonos).

Our staff, with its assumptions of equal temperament and real pitch, might tempt us to identify the dynamic m with the thetic paramese as the same pitch-note (here written as middle B). But Greek theory could neither refer to external pitch-standards, nor ignore the fact that the scale-form’s fixed and movable notes must shift their positions in different tonoi. Nete diezeugmenon, dynamically defined as a fixed fifth from mese, cannot be precisely described by thesis; and this is doubly evident in the present example, where dynamic nd takes a sharpened position with no place nor name on the diatonic System. It can only be described as ‘nete diezeugmenon in this tonos’. Therefore the tonoi themselves had to be named and fixed in a relative order of intervals one from the other. Our keys are serially numbered A, B, C, &c., by the sequence of their tonics in a note-series established by musical usage. But, although C always stands at the same interval above or below A, it is not true that the key of C is higher or lower than the key of A, since two melodies in A and C may use the same register. Greek theory logically defined tonoi by reference not to any single note like our tonic in an arbitrarily chosen series, but to the whole central register of the System where the tonoi meet and are comparable—viz. the octave set between bars. Within this octave each of the seven tonos-scales casts a different segment or species of the octave. In Ex. 307 the segment of the tonos between the bars has the sequence of tones and semitones T S T T T S T. This sequence was named the Phrygian octave-species, and the tonos was accordingly called the Phrygian. The names

¹ Tonos-scales were read downwards at first, later upwards. The change confused the notation, but is otherwise irrelevant. A uniform method is here adopted.

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A a
were given artificially, and the sole purpose of the *species* was to locate each *tonos* by its position relatively to the other six *tonoi*, without using arbitrary or practical criteria. The whole set may for provisional purposes be presented as follows:\(^1\)

Ex. 308

![Musical notation showing the relationship between different tonoi](image)

**Mesae:**
\[
\begin{array}{ccccccc}
D & C\# & B & A & G\# & F\# & E \\
S & T & T & S & T & A & T \\
\end{array}
\]

= **Natural Series:**
\[
\begin{array}{ccccccc}
F & E & D & C & B & A & G \\
\end{array}
\]

The typical scale-form *mi*-mi—always in black notes—is carried down the System’s register by each tonos successively; the white notes at either end represent the space through which this scale-form moves. The System’s central octave-register (here = e–E, marked not between bars but in square brackets on each *tonos*) is successively filled by seven different *species* of the revolving scale. These *species* have no melodic meaning: they exist only as thetic terms of reference to the relative positions of the *tonoi*. It will be noted that the System’s central octave-register is the only octave whose terminals all the *tonoi* have in common. If, like the feeblter Greek theorists, we insert extra *tonoi* at the inter-diatonic semitones, these *tonoi* will fail by a semitone to touch the two terminals of the central octave where the *species* meet. Since there are only seven *species* of the octave, the logical number of *tonoi* is seven. These must be projected on the System at a relative pitch-position one-and-a-half degrees below their ‘natural’ sequence (i.e. the *mesae* D C\# B A G\# F\# E correspond to a sequence F E D C B A G).

It is, however, only for the limited purpose of showing the relative locations of the *tonoi* that they are projected on the System. For this purpose the unequal temperament of the dynamic scale is ignored, and all the thetic degrees of the System are treated as equal tones or

\(^1\) This figure, serving only to correlate *tonoi* by *thesis*, appears to hypostatize the System as a keyboard; but see below, pp. 355 ff.
semitones. But both *tonoi* and *species* are purely thetic concepts—the *thesis* of a *tonos* being expressed by its *species*. Greek harmonic thought could also compass the abstract idea of modulation as a purely dynamic act. Ptolemy, after discussing the modulation expressed by the Conjunct System (cf. p. 340), proceeds to explain the general idea of modulatory dynamics, as follows:\(^1\)

The construction of *tonos*-modulation does not occur for the purpose of adapting a melody to higher or lower voices: for a change of that kind it is enough to tune the whole instrument up or down, since no variation is produced within a melody when it is sung right through as a whole, the same by higher voices as by lower. Modulation occurs in order that the identical melody, in the same voice, starting now from the higher registers, now from the lower, should produce a certain alteration of *ethos* (mood), through the fact that the two extremes of the melody, as it modulates, no longer coincide with the two extremes of the voice, but at the one end the voice's limit always terminates before the melody's, and at the other end the melody's before the voice's. Thus a melody originally fitted to the compass of the voice, by falling short at the one end and gaining ground at the other as it modulates, gives to the ear the impression of an altered *ethos*.

Ptolemy's point will be easily seen in diagrammatic form.

Central octave-register

\[
\begin{array}{c|cccc|cccc}
N & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\
\hline
mi & re & do & si & || & la & sol & fa & mi \\
\hline
T & T & S & T & T & T & S & (== Dorian)
\end{array}
\]

\[
\begin{array}{c|cccc|cccc}
\hline
(b) \\
\hline
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\
\hline
mi & re & do & si & || & la & sol & fa & mi \\
\hline
T & T & T & S & T & T & S & (== Mixolydian)
\end{array}
\]

\[
\begin{array}{c|cccc|cccc}
(c) \\
\hline
N & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\
\hline
re & do & si & || & la & sol & fa & mi \\
\hline
T & T & T & S & T & T & S & (== Mixolydian)
\end{array}
\]

The melodic scale-form is unchanged by modulation: i.e. there is no change of 'mode'. Ptolemy conceives the central octave-register as the vocal space, always and completely filled by the melody, which is symbolized by the constant scale-form *mi*–*mi*. This melodic

---

\(^1\) *Harmonics* ii. 7.
scale may lie within the vocal register in its continuous form T S T S T T S (numbered 1 2 3 4 5 6 7 8 in (a), above). If a modulation to the fourth occurs (b) we may imagine the continuous scale bodily shifted up a fourth; but then its upper notes would fall outside the register’s top limit. They can, however, be picked up again an octave below, in the empty space left at the bottom of the register. As Ptolemy puts it, the melody falls off the register at one end and gains ground at the other. The register is still completely filled with the same melodic scale-form mi–mi, but in a differently distributed sequence (numbered 4 5 6 7 8 [= 1] 2 3 4). So, in our music, modulation may shift the tonic without changing the tessitura.

Viewed as a continuous scale, the note-series within the register has changed from T T S T T S (the Dorian species) to T T T S T T S (the Mixolydian). But this has nothing to do with the melodic movement, in which the scale-form does not change. The species merely indicates the tonos or thetic degree of the modulation, which does not here concern Ptolemy. He is conceiving the register not as a basic scale (as in Ex. 308) but as an empty space which the voice can fill as it chooses: there is no question of specifying the sharps or flats required to illustrate any particular modulation in practice.

Elsewhere Ptolemy insists that a melodic modulation is not a change of tonos (i.e., as he here says, of repetition at another pitch-degree), but a change of systema. The systema does not, like a species, consist in a particular sequence of individual notes, but in the relations of disjunction or conjunction between tetrachords.1 Modulation to the fourth (he explains) is effected by eliminating the disjunctive tone: thus in (c) above the functional paramese of (a) drops out, and nete comes down to the fourth above mese, making a total heptachord of two conjunct tetrachords instead of the disjunct tetrachords of (a). Here our own sol-fa becomes inept: the octave was not a rigid unit, and it does not matter whether we express the tetrachord T T S as la sol fa mi, mi re do si, or re do si♭ la. It is this change of system that Ptolemy supposes to have the aesthetic effect of an altered ethos: the ear is left in doubt whether mese has moved up a fourth, as expressed in (b), or whether paramese has dropped out, as expressed in (c).2

The change between disjunction and conjunction is the only type of modulation that Ptolemy will call melodic, although any permutation of tonoi or genera could be admitted theoretically and on paper.

1 Harmonics ii. 6. This is the only significant distinction between systemata, though some theorists enumerate them by size, genus, &c., as any ordered note-series.
2 Ptolemy is, however, hazy and abstract on the aesthetic effect: it may be merely his own intellectual inference.
In theory, also, the idea of other tetrachordal forms besides T T S was entertained; but only T T S was used in regular harmonic structures—with its corresponding enharmonic and chromatic genera, which are attested in real musical use from the fourth to second centuries B.C. Whether, or when, other forms were realized in musical practice we have not sufficient evidence to say. Ptolemy, after his theoretical demonstrations of his own temperament of intervals, turns to the empirical data of kitharistic tunings in current use, to find them at various segments of his academic gamut. These tunings consist of tetrachords and octachords, both diatonic and chromatic, in several forms or shades of tonal sequence, which are named sterea and malaka on the lyre, tritae, hypertropae, parypatae, tropoi, iasti-aelolia, and lydia on the kithara. This nomenclature is a pot-pourri of technical jargon, and cannot be connoted with Ptolemy’s tonos-names. If, as some maintain, the tunings are melodic scales of variant modal idioms, they are remoter than ever from Ptolemy’s concept of a uniform melodic scale. But Ptolemy’s words do not imply so much, and since the terms differ from the lyre to the kithara, they would seem to refer to some more mechanical aspect—e.g. to professional operations of preliminary tuning of the instruments, like the conventional tuner’s chords in testing a pianoforte. This would fit the context. Ptolemy aduces these tunings as phenomena independent of his own harmonic system, to show that his academic calculations of tuning are not incompatible with common acoustic experience. With this confirmation, he can proceed to his purpose—the harmonics of astronomy.

Whatever these tunings may represent, their names show how far musical practice had diverged from harmonic theory. To imagine that Ptolemy of Alexandria did, or could, reflect contemporary forms of music in his main doctrine is to mistake his position and aims. He lived nearly five centuries away from the inductive method by which Aristoxenus had analysed music as he knew it ‘by ear and understanding’. In all his many works, his great achievement was to re-capture the high Alexandrian tradition of mathematical sciences after an age of collapse and decline. He did not change the terms of the problems: it was hard enough to recover them—and, on occasion, to improve their expression. In the harmonic field (a small part of his activity) the decline can be seen from his own criticisms of recent pretenders to the names of ‘Pythagorean’ or ‘Aristoxenian’. He was

1 Düring, op. cit., pp. 201–15: the first serious analysis of Ptolemy, Harmonics i. 16, ii. 15 and 16, but the solutions are inevitably speculative.
2 τὰ μελοδοθήματα (ii. 16, chapter-heading) does not in theoretical contexts refer only to melopoetic use.
3 Cf. Düring, op. cit., p. 83.
perhaps the one man alive who had the logical insight and the experience of astronomical diagrams to assimilate the harmonic system of early Alexandrian thought; and in harmonics, as elsewhere, it is early Alexandrian thought that he interprets to us.

Some account of Greek harmonic theory has been necessary for a negative purpose: to prevent unprofitable searching for musical significance in mathematical concepts. There is also a positive reason. Greek notation, though also used for transcribing musical compositions, was developed largely by theorists for their own purposes, and cannot be properly understood without reference to the theoretical tonoi. Not that the better minds—Aristoxenus or Ptolemy—had recourse to notation. It could neither define the functions of notes, like the verbal nomenclature, nor measure the exact size of intervals, like the arithmetical cipher. It was used among a lower class of harmonic professors, known only from late antiquity. Since they too claimed to be 'theoretical', prestige obliged them to include the Perfect System in their doctrine; but their heads were too weak to relate it correctly to the tonoi—not, indeed, could it be correctly related to their irrational sets of thirteen or fifteen tonoi on consecutive semitones. Some merely gave lists of tonos-names with relative intervals. Others set out their tonoi with notational signs; and the anomalies of Greek notation, as we know it, may owe something to their hands.

THE NOTATIONS

The Greek notations are explained to us only by a few minor theorists of the third or fourth centuries A.D.—in particular, one Alypius, who gives a set of tonos-scales with reproductions and verbal descriptions of the corresponding signs in two notations. A central nucleus of the signs of both occurs in extant musical fragments going back to c. 250 B.C. The final series of the Alypian signs is here given in continuous sequence with the relative diatonic note-series in our staff (no absolute pitch):

Ex. 309

\[ \begin{align*}
I. & | A'D'N'K'N' | A \bar{A} \Delta \bar{H} \bar{K} \bar{N} | A D H K | P T X | V V H X H U | \\
2. & | B' E' \Theta' A' Z' | A A \bar{B} E \bar{B} \bar{A} | \Xi \bar{P} Y Y | R F M V | b | \\
1. & | G' Z' I'M' O' | \Theta \bar{U} \Gamma Z I M | \bar{O} \bar{C} \bar{P} \bar{O} | T 7 - W | 3 \bar{a} \\

II. & | Z' N' S ' < T K' | N Z N < \eta | K C F | \bar{G} \bar{E} H H | \bar{E} a | \\
2. & | \bar{U} \bar{U} \bar{V} \bar{V} | \bar{L} \bar{L} \bar{U} \bar{U} | \bar{U} \bar{U} \bar{U} | T \bar{L} \bar{W} | \bar{E} \bar{W} | \\
3. & | \bar{U} \bar{C} \bar{B} \bar{O} \bar{B} \bar{Y} | \bar{X} \bar{X} \bar{O} \bar{O} \bar{O} | \bar{X} \bar{X} \bar{C} \bar{P} \bar{P} | \bar{L} \bar{E} \bar{P} \bar{P} | \bar{B} \bar{T}
\end{align*} \]
The second notation, which is the earlier, shows a nucleus of fifteen signs—some alphabetic, but in no regular alphabetic order—evidently put together to fit the Perfect System a\(^1\)–A in the fourth century B.C. This is extended upwards, by signs repeated with a dash, to the top g\(^1\). Below A two extra bottom notes G\(_1\) and F\(_1\) have been added, with signs later borrowed from the first notation. Each sign of row no. 1 (which is the diatonic note-series) is triplicated with its own sharp and double-sharp: for example, in the triad $\begin{array}{c} \text{E} \\ \text{F} \\ \text{G} \end{array}$ horizontal $\uparrow \downarrow$ is the sharp and reversed $\exists$ the double-sharp of E erect. The triads doubtless originated in the enharmonic and chromatic dieses; but only theorists distinguish the chromatic (by a cross-stroke) from the enharmonic; and the same signs are also used for other sharps. It is possible that a triad could be played on one string, but the hypothesis that the notations were tablatures will not bear examination.\(^1\)

The first notation, avoiding archaic signs, makes a central octave of the Ionic alphabet A B Γ, &c., in continuous descent, A being the double-sharp and B the sharp of Γ (so that row no. 3 is the diatonic note-series). Alypius calls the first notation ‘vocal’, the second ‘instrumental’; but, although these names are too well established in modern usage to be abandoned now, the distinction is pointless and was adopted only in late antiquity.\(^2\) The ‘vocal notation’ is obviously a translation of the ‘instrumental’, with its obsolete cipher, into the familiar and consecutive series of the Ionic alphabet, which was gradually spreading into common use from the end of the fifth century B.C.

The nucleus of the ‘instrumental’ signs stands logically enough on the System’s series a\(^1\)–A, which is just as we should have expected, and we may hope that the alphabetic disorder of the other signs dates back without change to the fourth century. The ‘vocal’ notation, however, has been much reshuffled.\(^3\) Its most important segment is the erect Ionic alphabet, with the two or three triads adjacent, which together supply all signs found in our ‘vocal’ texts. Its serial order is certainly correct, but the question is whether the group has been bodily shifted from its original segment on the diatonic note-series. The erect nuclear alphabet is irrationally set on the meaningless

\(^1\) See above, pp. 346 f., n. 1.

\(^2\) e.g., in the Berlin papyrus (after A.D. 156): not in the Delphic Hymns (second century B.C.).

\(^3\) In ex. 309 above, the nucleus of the System’s note-series is marked by continuous bars, additions or displacements by dotted bars. Bits of five alphabetic sequences have been patched together where three would have sufficed.
octave $f' - f$; and where we should expect a translation of the ‘instrumental’ nucleus $a^1 - A$, we find displaced signs at either end of this note-series. On $a^1$ and $g^1$ are two signs torn from their proper sequence (in the lower register), like a rubble filling between $a^1$ and $f'$. At $G$ and $F$, below $A$, that sequence is prolonged by two additional letter-forms (which also appear as additions to the ‘instrumental’ notation). On its top $g^{11}$ the notation abruptly descants a solitary $omega$. From these and other anomalies we are bound to suspect that the erect central alphabet, with its neighbours, may have suffered a shift of tonal sequence—that it was not originally set on the $f' - f$ octave. On the assumption that past music was commonly written and read, such a shift might seem impossible. But notation was known to few, as the laborious verbal descriptions of Alypius show; and it was used by theorists as a mere numerical cipher for $tonoi$ of no real pitch-value. Certain theoretical aberrations of late authors do, in fact, strengthen the suspicion of a shift of the erect alphabet to $f' - f$:

(1) Alypius and his kind do not present $tonoi$ as scales revolving about the System (as in Ex. 308), but simply as continuous double-octave scales at semitonal intervals. We may imagine them on the pianoforte, if we exclude all idea of real pitch. The Alypian note-series extends over fifteen of such $tonoi$. As Ptolemy argues, $tonoi$ set at or beyond the octave are logically superfluous. Of the three extra $tonoi$ of Alypius, one was added to round off the octave, and the other two merely to complete a set of $tonos$-names in triplicate (with the prefixes $hypo$- and $hyper$-). The logical note-series would run from top $g^1$ to bottom $A$. The extra bottom notes $G$ and $F$ can only be the additions to that note-series which were made to accommodate the three superfluous $tonoi$. Since the $tonoi$ were mere names and the signs mere ciphers, it did not matter at which end either were added. In fact, the new $tonos$-names were put at the top of the list and the new signs at the bottom. Consequently the old $tonos$-names, in their conventional order, were shunted two diatonic degrees down the notational series: i.e. the bottom $tonos$ called Hypodorian, to make room for the new $tonoi$ at the top, was pushed from the old terminal $A$ down to the new terminal $F$.

(2) Since the $tonoi$ are $A$-scales, the $tonos$ that begins from $A$ of the notational series, whatever its name, will be the ‘natural’ $tonos$ (i.e.

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1 Alypius’ Hyperlydian, Hyperaeolian, Hyperphrygian. The fourth so accommodated (Hyperionian, $mese = g^#$) was placed top of twelve semitonal $tonoi$ (from $A$), but the notation has no corresponding top $g^#$: it was extended at the bottom instead.

2 See Ex. 310 below.
that in which the signs keep their unsharpened forms). In the shifted Alypian tonos-list, the tonos that falls on the A is called 'Hypolydian'. Now in both the Alypian notations, the Hypolydian tonos has the 'natural' signs. It has been supposed that there was a real and musical change from a 'Dorian' to a 'Hypolydian' tuning. But this view is based on the modern assumption of absolute pitch. If it is not accepted the change can be simply interpreted as a diagrammatic shift of tonos-names; and this is perhaps confirmed by a reference in late antiquity to 'the tonos now called Hypolydian'.

(3) But this was not all. Ptolemy, in arguing against the habit of interposing tonoi on the semitones between the diatonic series, pointed out that there was a risk of transposing the whole System—since the central octave of the System does not coincide with the terminals of any octave of these interposed tonoi. In the correct projection of Ex. 308 the 'natural' tonos was the Dorian, which shared the System's own central register at the thetric mi'-mi. But if we take the seven primary tonoi, to which the names of the species belong, and reproduce them with the sharps and flats assigned to them by Alypius, they appear as follows:

Ex. 310

\[\text{Mesae: Eb} \quad \text{S} \\ \text{D} \quad \text{T} \quad \text{C} \quad \text{B}\flat \quad \text{S} \quad \text{A} \quad \text{T} \quad \text{G} \quad \text{F} \]

\[=\text{Natural Series: F} \quad \text{E} \quad \text{D} \quad \text{T} \quad \text{C} \quad \text{B} \quad \text{A} \quad \text{T} \quad \text{G} \quad \text{F} \]

These tonoi, while preserving the same natural sequence (= FEDCBAG) are projected at EbDCB♯AGF instead of the correct DC♯BAG♯F♯E of Ex. 308 above. In other words, these theorists

\[1\text{ ps.-Plutarch, De musica 39, 1.}\]
have not contained their *tonoi* within the System's basic scale $a^1-A$. They have simply started their bottom Hypodorian *tonos* on an extra-Systematic bottom F, and proceeded accordingly. If they were to extend the basic scale at all, they should have started their Hypodorian on a low D. As it was, the Lydian was pushed up from its old C$\sharp$ to the old Mixolydian position of higher d. In the confusion the Mixolydian name drops out of the later list, and the Lydian is often treated as 'the first of the *tonoi*'. From the false projection it follows inevitably that the Hypolydian *tonos*, from its place in the list, falls on the System's thretic $a^1-A$ previously occupied by the Dorian.

So far, it might be more accurate to say that they were not relating their *tonoi* to the System at all, but merely ignoring it. But when they had to find the *species* known as synonymous with these primary *tonoi*, they got into trouble with their central octave. On their projection the one octave common to these *tonoi*—the octave in which the *species* lie—is not, as before, the central $mi^1-mi$, but $fa^1-fa$. This is a real error of construction. The scale-form of the Alypian *tonoi* is still the $la^1-mi^1-mi-la$ of the System's proper scale, which corresponds to the Dorian *species* $mi^1-mi$, and should fall on the central octave $mi^1-mi$. But Alypius' primary seven *tonoi* are placed to fall on the central octave $fa^1-fa$, which corresponds to the Hypolydian *species* and conflicts with the scale-form of the *tonoi* themselves. It is not to be regarded as a reflection of musical practice, but only as a gross theoretical misunderstanding from the period of the Greek mathematical decadence.

Now it is hard to escape the conclusion that these theorists, having landed themselves with a 'natural' Hypolydian *tonos* and a 'natural' central octave $fa^1-fa$, thought it necessary to place the 'natural' erect alphabet of the 'vocal' notation upon the corresponding octave of the Hypolydian *species*—$f^1-f$ of the note-series. The 'instrumental' notation, being alphabetically unintelligible, may have escaped interference; but the Ionic letters, which were also used as numerical notation, were peculiarly subject to such treatment. Their position in Alypius reflects the theoretical error.

Once the Alypian notation was established in theory, it will also have been used for transcribing real music. But it is not so certain

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1 They actually read scales upwards, and counted them from the bottom terminals. In Ex. 308 above, one *tonos* (Hypolydian) is inevitably extra-systematic at its terminals, but there *tonoi* are properly counted from the *Mesa* and the common central octave is the logically important feature.

2 Among others, Alypius 3: ἐν ἐκείνῳ τῷ ἐπάνω ὁ λόγος. Some echo of controversy as to whether the Mixolydian should be on high or low D may be preserved in the scholiion on Aristophanes, *Clouds* 967-8.
to apply to our earliest documents in ‘vocal’ notation. The mistake postulates the addition of the bottom G and F for new tonoi, and the set of fifteen was believed to be comparatively late. The notation known to Aristoxenius cannot have been consistently related to the embryonic and divergent tonos-lists that he describes; and we have no means of knowing when it was adapted, as we find it in late antiquity, to the purpose of writing out tonos-scales. What is evident is that, apart from the modern hypothesis of absolute pitch-keys, the extended Alypian series in its two notations absurdly exceeds any conceivable requirements of musical practice. All that was needed to transcribe a melody was a convenient nucleus of signs (with their triadic sharps) in a sequence which could be used at any desired register. There is a strong a priori probability that, as in the ‘instrumental’ notation, so in the ‘vocal’ version of it, the fourth-century nucleus was the fifteen-note System a₁–A. This would require a reversed alphabet above the erect alphabet. But otherwise we can only try to pick out fixed notes, in Greek musical documents, by reference not to theoretical tonoi but to indications (if any) of melodic structure and function. A suggestion, here to be put forward with all reservations, must be taken only as a lead towards further study.

THE EXTANT MUSICAL DOCUMENTS

(1) The ‘First Delphic Hymn’ or paean to Apollo (our most extensive piece) was composed almost certainly in the later second century B.C., and written in the ‘vocal’ notation on stone at Delphi, where it must have won a prize in the Pythian festival. From the ceremony of its occasion and from the clichés of its literary style, it seems to be highly academic and archaistic stuff; and where academic rules were observed at all, they were unlikely to have changed much since Aristoxenus. On this assumption, Aristoxenian principles may be applied, first, to the schematic note-series of the Hymn (below, I is the transcription according to the Alypian signs, II a hypothetical new version):¹

Ex. 311

¹ The notational sharps are here set above the ‘natural’ signs, and are transcribed by black notes.
There are two *pykna* on Ψ and Μ, which, therefore, are fixed notes, and, being a fifth apart, should be *paramese* and *hypate* (i.e. in the mere abstract *schema*, for in melody modulation could vary their functions). *Mese* would then be Γ, which must lie a whole tone below *paramese* Ψ. In Aristoxenus’ extant treatment the tonal location for such a *schema* would equate *hypate* with our *mi*; and this brings the first alphabetic triad Α Β Γ to our *la*, where the nucleus of signs a¹–Α also starts in the ‘instrumental’ notation. Against the usual transcription (I) it may be pointed out that (i) the key-signature of Ε♭, not here reproduced, but commonly inserted from modernized *tonos*-scales, is spurious, for in this version of the score itself the B is always natural; and (ii) by this transcription the composer is twice made to break an Aristoxenian rule of melodic grammar which forbids a progression from a *pyknon* to an interval less than a tone (Ex. 312 below, §§ 45–48, 60–61). The new transcription (II) avoids this error. As to the *pykna*, the sharp-sign × here implies no choice between enharmonic *dieses* and chromatic; but at this date the chromatic *genus* is to be presumed. If so, the *lichanos* will be nearer *fa#* than *fa*, but in any case a movable note cannot be transcribed exactly.¹ The continuous parts of the paean are here transcribed both in the Alypian reading (I) and in the version here suggested (II):²

Ex. 312

¹ Aristoxenus, *Harmonics* 23: the ‘shades’ of *lichanos* could not have been indicated by notation.
² Restorations are omitted. The repeated notes and time-values of the usual transcriptions may be plausible, but are inferential. Reinauc’s transcription of the Alypian notation is recorded in *The History of Music in Sound* (H.M.V.), i, side 15.
ANCIENT GREEK MUSIC

47 I
ΓΜΥΘΙΘΟΓΘΟΤΟΜΑΜΟ
dένυνἈρηςἀτμόςἐσ"Ολυμπονἀκιδναται,
II

53 I
ΤΟΜΑΜΑΚΑΜΜΤΟΜ
λυγὸδελωτοῦςβρέμωναείλοιοςμελεωνώδεδαν
II

57 I
ΑΜΓΑΚΑΜΚΑΜΟΤ
κρεκεί,χρυσόαδισθροςκιθαριςδμουσον
II

61 I
ΟΜΑΜΟΦΥΑΓΥΕΓ
ἀναμεται.οδετχυντωνπροπαςεσμὸς
II

65 I
ΑΥΘΕΓΑΥΛΙ
θιδαλαχωσεικλωτονπαιδαμεγαλου
II

72 I
ΙΘΓΑΥΡΑΓΑΥΑΓ
ἀκρονθήτονδεπαγονπασιθναιτοις
II

77 I
ΥΓΜΥΜΙΘΕΓ
προφαιντηποδαμαντειευονωσεισ
II

82 I
ΑΓΥΑΦΥΙΟΓΑ
θρονωσειδρακωνδετεισειστηησαιαελον
Whatever be the true reading of the signs, our schematic staff is singularly ill adapted to this music. Greek notation was also schematic; but contemporary Greeks had the advantage of understanding the music. For us it would be better rendered on a differently constructed staff, reserving black lines for the fixed notes, giving dotted (hypothetical) lines to the chief movable notes, and leaving the rest indeterminate in the spaces—as in the following sample from the Hymn (notation II), admittedly a conjectural version.\footnote{Here, and in examples below, speech-accents are omitted, as their application to different dialects and periods is very uncertain. See, however, the new and careful discussion by R. P. Winnington-Ingram in Symbolae Osloenses, xxxi (1955), pp. 64–73.}
Do we learn anything of Greek music from this piece, admittedly a last breath from the dissolution of a silver age? Modulations—of which much has been written—we must not pretend to understand. The use of progressions is visible rather than intelligible to us. Yet we can see the rapid decorative effects of the *pykna* at ΚΑΜ or ΧΙΤΩ, and the *tremolo* or variation of notes on one syllable—once parodied by Aristophanes as a new trick of Euripides and the modern dithyrambists,
but now become a cliche. In the fourth century, ‘programme music’ had been popularized by Timotheus, whose lyric name The Persae featured sound-effects of the battle of Salamis. In this Hymn, at §§ 45 and 55, the words aieidei and aieldoi are set to imitate the flickering of flames and the tremolo of an aulos. We may reasonably believe that the style preserved some echo of the tradition of Timotheus, which was just dying.

(2) The ‘Second Delphic Hymn’—a long but battered inscription in the ‘instrumental’ notation—was composed by an unknown Limenius of Athens in 128–127 B.C. Although the setting seems even sparser, this paean is to us, at least, stylistically indistinguishable from the other; and their likeness encourages the belief that the notations are not hopelessly corrupt. The second Hymn shows no signs of any such shift of tonal sequence as must be suspected in the ‘vocal’ notation of the first. It will be sufficiently illustrated by two extracts: Apollo’s advent at Delphi, and a final prayer for the Roman empire:

Ex. 314

(i) πο-τε λυπων Κυνι-θι-αν νασσου ... πρωτοκαρ-νου κλουν Αρτιδ’ε-πι

(ii) ιν ... Δια-χειρ πετρο-κα-τοι-κη-τοι αυξ...

(3) Our only other engraved musical document is the ‘Epitaph of Seikilos’—an inscription beginning with an elegiac couplet, on a tombstone found at Aidin in Turkey, near Tralles. The Greek script might date from the second century B.C., but is probably much later. The convention of musicography differs sharply from that of the Delphic pieces, and approximates to that of papyri of the first, second, or later centuries A.D., in which every syllable is

1 At the moment of going to press it is reported that the stone, which had been lost since 1923, has reappeared. This transcription may, therefore, be subject to revision in detail.
set and rhythmic signs are introduced. It is possible, therefore, that
the song was transcribed according to the Alypian values of the
notation, although its diatonic banality in this transcription is dis-
concerting. It has commonly been assigned to the 'Ionian tonos',
whose note-series in Alypian theory overlaps its own:

Ex. 315

![Musical notation]

But in the song (Ex. 316 below),[1] the opening fifth Cć, if it is intelli-
gible at all, must surely be a main progression between fixed notes—
whereas in the tonos C and Z are movable notes. There is no musical
relation between the two. The usual solution is to postulate a 'Phry-
gian mode' for the song, and thus to combine the hypothesis of
absolute pitch-value with the hypothesis that the octave-species of
harmonic theory represented a multimodality of music. But even if
the transcription is correct, enough has been said to suggest that the
interpretation of Greek music in terms of theoretical octave-struc-
tures may be unhistorical. A particular range of signs may have been
chosen to indicate, not an absolute pitch, but a special temperament
of intervals, or by force of musicographical habit.

Ex. 316

![Musical notation]

THE EXTANT MUSICAL DOCUMENTS

In our uncertainty about the notation, the chief interest of the piece must lie in its rhythmography. Of the rhythmic signs the dot or stigme (marking the strong beat of the metric foot) and the bracket (linking groups of notes) have no time-value. The unit of time (protos chronos) is left unmarked; the diseme — is equivalent to two time-units, and the triseme — to three. Now, whereas the four lines of the verse have respectively 9, 11, 11, and 11 metric units (in 5, 7, 8, and 9 syllables), each line of the music has twelve rhythmic units.¹ In ordinary Greek melopoeia, although a long metric syllable sometimes counted for more than two short ones, the length of musical lines was determined simply by the words of the verse, and a piece was commonly written out like prose, not in lines. In the Seikilos song, on the contrary, a uniform time-scheme is imposed on irregular verses by the music. It is a warning that breeds of music alien to the orthodox tradition might exist among the mixed populations of a superficially Hellenized world—and nobody can guess what sort of music a well-to-do Asiatic Greek might have chosen for the grave-stone of a female relative.

Although we have no other examples of verses prolonged and determined by the musical line, we know from a scholium (probably of late antiquity) that ‘the verse is not completed by the metric line alone: it puts a full stop to its movement only when the lyre stops sounding’.² We also have what sounds like a description of Seikilos’ metric scheme—but strangely misapplied to an incompatible verse-form—in the Byzantine annotation to some musical setting of a Greek poem on a sundial, known from the thirteenth-century Ottoboni Codex 59:³ ‘The tropos is the Lydian; the rhythm is of twelve beats (δωδεκάδημος) . . . . Taking the line as a whole, the rhythm is of twelve beats, for the verse has eleven syllables, but (since the line is for twelve syllables, and there is one beat missing) the last syllable of each verse counts for three time-beats.’ A rhythmic time-scheme of twelve-beat lines with three beats on the final syllables corresponds to Seikilos’ song, and might possibly be taken from some ancient treatise on rhythm; but the Byzantine annotator, who scanned verse by syllables not quantities, has attempted to relate it to a regular hendecasyllabic poem which will not fit it, and has counted wrong.

¹ For a recent transcription and analysis see E. Martin, Trois documents de musique grecque (Paris, 1953). He divides each line into four sections of three beats.
² Scholium to Dionysius Thrax (Bekker, Anecdota Graeca, ii, p. 751).
³ See Wilamowitz-Moellendorff, Griechische Verskunst (Leipzig, 1921), pp. 595 ff.; 599–600 (no. 4).
connected with the problem of the famous musical documents first published by Vincenzo Galilei in 1581: the Hymns to the Muse (two poems run together), to the Sun, and to Nemesis. They were transmitted among ancient and Byzantine treatises of musical theory: so, too, were the metrically similar poems which are copied in the Ottoboni Codex without the music itself, but with Byzantine annotations on musical settings of the poems to Nature, to Isis, and on a Sundial. The two groups therefore had a common source. As to the words, modern scholars accept the Byzantine attribution of the poems on Nemesis and on the Sun, at least, to Hadrian's celebrated court musician Mesomedes (second century A.D.). But the music is another question. It certainly existed by the thirteenth century: the question whether it was ancient in origin or a Byzantine reconstruction, undertaken as an exercise in ancient notation, may be stated as follows:

(i) Mesomedes—as Byzantine scholars knew—published a collection of his 'kitharoedic nomes'. But since these poems are choral hymns, not nomes, the hypothesis that they were transmitted from that collection is unfounded.

(ii) The Galilei pieces are preceded in both our two archetypal codices by a tenth-century theoretical treatise addressed to Constantine Porphyrogenitus by one Dionysius, who was editing or emulating the ancient treatise of Bacchius—a work containing Greek notation.

(iii) The extreme rarity of rhythmic signs in these pieces is in striking contrast with all known pieces so late as Mesomedes.

(iv) The Byzantine annotation cited above from the Ottoboni Codex certainly cannot refer to an ancient setting of the poem to which it is attached. Firstly, it is metrically impossible. Secondly, whereas the other poems might well have been written for singing, this is an epigrammatic conceit upon a sundial, of a literary genre quite alien to music. The idea that it could have been intended as a song is absurd. Therefore (unless the annotation has been somehow displaced) in this case at least the music was a subsequent and artificial addition. In the other cases, taken singly, an ancient origin cannot be disproved; but since the six pieces were evidently transmitted together, it is doubtful.

(v) Mesomedes was a famous figure in Byzantine minds, and Byzantine theorists understood the Alypian notation. In four cases

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1 G. Martellotti, Mesomed (Rome, 1929).
2 Dio Cassius LXXVII 12 (transmitted by the Byzantine excensor Xiphilinus).
3 For the date of Dionysius' iambics see P. Maas in Byzantinische Zeitschrift, xii (1903). p. 273.
the annotator has interpreted the *tropos* of the settings as Lydian or Hypolydian by reference to the notational signs of late Greek theoretical *tonoi* (called by Alypius *tropoi*). Therefore Dionysius or his successors had the knowledge to attempt such settings in ancient notation for poems attributed to Mesomedes. A subsidiary point is that red ink is used, as it was for Byzantine notation.

(vi) The correspondence of speech-acents with melodic rise and fall is hardly consistent enough to prove an ancient origin.

The probability, then, perhaps seems to favour an erudite Byzantine reconstruction. On the most cautious estimate, we must refrain from basing any idea of the composer Mesomedes of Crete upon these curious emissions. We can be sure only that he was a kitharoede of extraordinary virtuosity. In that period of sentimental Hellenic revivals he got a public salary; he was docked of it by Hadrian’s successor, on the ground that a musician was a useless member of society; but the amateur strummer Caracalla afterwards built him a mausoleum. His immortality may have been fraudulently perpetuated by the Galilei pieces: yet, since these pieces (whatever their origin) have excited the interest of European scholars for centuries, a sample from the Hymn to Nemesis is here given in the usual transcription.

Ex. 317

(5) Of papyrus fragments in Greek notation, the most considerable so far published is a Christian hymn from Oxyrhynchus, transcribed
ANCIENT GREEK MUSIC

in the third century A.D.; but since its melody is now recognized to belong to the oriental tradition of the Early Church, it lies beyond the scope of this chapter.¹

From other papyri we have the following fragments:² (i) a Zenon papyrus (Cairo), c. 250 B.C.: a few words (? from a tragedy); (ii) a Rainer papyrus (Vienna), 250–150 B.C.: lines 339–45 from Euripides’ Orestes; (iii) a papyrus (Berlin) inscribed after A.D. 156 with parts of (a) twelve lines of a paean, (b) a brief example without words, (c) four lines of verse (? tragic) addressing Ajax, (d) a brief example without words, (e) half a lyric line. These are cited only as fragments, and are best explained as examples composed to illustrate musical declamation, rhythm, &c., from some theoretical treatise,³ (f) P. Osloensis 1413. It contains two separate pieces in nineteen lines of text (all incomplete, some very fragmentary) with ‘vocal’ notation and profuse rhythmical signs. The script may be of the late first or early second century A.D. Published by Amundsen and Winnington-Ingram in Symbolae Osloenses, 1955.

(6) Two considerable fragments await publication:

(i) P. Michiganensis Inv. 2958. The papyrus, of the second century A.D., contains twenty-five fragmentary lines, of which 1–8 and 10–25 consist of Greek text with notation above, while line 9 is of notation without words.⁴

(ii) An Oxyrhynchus papyrus from Oxford.⁵

The papyri hitherto published are problems of palaeography rather than objects of musical history. All are too brief or too broken for assured analysis; and not all their rhythmic signs are fully understood. What is more certain is that music in Roman imperial times was distinguished from Alexandrian music by explicit rhythmical marking, which in all but our earliest pieces (the Zenon papyrus and the Delphic stones) replaces unaided interpretation of rhythm by the verse-metre.⁶ In the first century B.C., as Dionysius of Halicarnassus

² Jan, Musici Scriptores Graeci, supplement (Leipzig, 1899); Reinach, La Musique grecque (Paris, 1926), appendix; Mountford, ‘Greek Music in the Papyri and Inscriptions’, in Powell and Barber, New Chapters in Greek Literature, ii (Oxford, 1933), and ‘A New Fragment of Greek Music in Cairo’ in Journal of Hellenic Studies, li (1931), pp. 91 ff. E. G. Turner has re-dated the Orestes papyrus; see Bibliography, pp. 496–7.
³ Mountford, however, regards the papyrus as part of an anthology.
⁴ Information courteously supplied by Prof. Youtie and Dr. Pearl of Michigan.
⁵ Information courteously supplied by Mr. Winnington-Ingram.
⁶ On Greek metric (too complex a subject for discussion here) see works cited in Bibliography, II. 6.
implies, music normally followed the rise and fall of speech. This was impossible in the classical music, where a strophe was melodically repeated by an antistrope. How far it occurred in late antiquity we can seldom be sure, since the accent of words is too imperfectly represented by the Alexandrian signs which we use, and the pitch-accent was in any case being replaced by stress. But we know that in the second century A.D., when crowds would flock to hear a sophist speak Greek correctly and beautifully, these rhetorical performances were accompanied by academic study of rhythm. So passionate an interest in declamation must have influenced music generally, and may account for the attention paid to rhythm in late antiquity. A school of rhythmic theorists grew up beside the classical metricists, working on other principles. In a philosophical treatise—strangely compounded of neoplatonic speculation, notational lore, and garbled musical antiquarianism—the otherwise unknown writer Aristides Quintilianus speaks of rhythmical matters with some realism, which may reflect the art of his own age, and at some length, which certainly reflects the contemporary interest.

Such writers, however, cannot help us towards an understanding of contemporary music, as Aristoxenus does for an earlier epoch. In their textbooks nothing is more depressing than the fossilization of the doctrine of melopoeia—musical composition—as a mere branch of theoretical terminology. The writer dubiously named ‘Cleonides’, professing the doctrine then claimed as ‘Aristoxenian’, first defines metabole as change from one tonos or systema or genus to another; then he adds that ‘in melopoeia’, metabole is something different—a change from an expansive mood (ethos) to a mood of contraction or of calm, &c. But his second definition has no more to do with real music than his first. It is only ‘ethical’ speculation overlaid with the academic terms of the professional rhetoricians. He illustrates it with a list of examples of the ‘calm ethos’: hymns, paean, encomia, and symbulae. Now the symbule or deliberation was not a musical form at all, but a regular exercise of the rhetorical schools. It has crept into a purely conventional list of musical forms under influence of the habit of applying musical terms to oratory, which may, indeed, have been the most serious use of music for an educated mind in this age. These later sources preserve little more from the musical past than a few

1 Plutarch (Ti. Gracchus 2) reflects academic rhetorical practice of his own day in the absurd legend that C. Gracchus’ speeches were accompanied by a wind-instrument.
2 For a fresh estimate of Aristides we await the edition of R. P. Winnington-Ingram, now in preparation.
3 Isagoge 13–14.
technical terms which have lost such meaning as they may ever have had. ‘Cleonides’ produces *agoge* for conjunct motion, *ploke* for disjunct, *tone* for a sustained note, *peteia* for a note struck repeatedly. *Peteia* was apparently a metaphor from the repeated click-click of pieces on a draughts-board. But Aristides Quintilianus, who also knows the word, misinterprets the metaphor as a reference to the draughts-player’s strategy, and defines *peteia* as the choice of notes in composition.\(^1\) It has no musical context for either writer: the one repeats what he has read, the other makes a wrong etymological guess. None of these theorists think of describing current principles by which we might analyse our later musical documents.

For the most part, however, written documents of music had never existed. It is not from fragments nor from harmonic theorists that we can hope to gain an idea of its historical character. The best sources are the earliest—poets who were also composers and critics who were also musicians. They cannot reveal what Greek music might have meant to us, but on the question what it meant to the Greeks their evidence is the clearest that we have.

**THE HISTORY OF GREEK MUSIC**

(i) *Music in Homer’s Greece.* By the end of the eighth century B.C. Greece was a land where ‘beggar bears spite to beggar, and bard to bard’.\(^2\) Such jealous professionals sang epics like the Iliad to their own lyre—*phorminx* or *kitharis*—freely adapting a conventional recitative style, with an initial appeal to the divine muse who possessed them to sing.\(^3\) They came, as Homer shows, of a society whose twinborn music and poetry were already mature, consciously removed from the primitive, barbaric, or rustic. Not all Greek music was skilled art, but we know nothing of a period before a skilled art existed.

Music was early practised as an ingredient of magical medicine; its festival occasions and its formal conventions were often religious; but the line between the religious and the secular was differently drawn in antiquity. In the Iliad music already has the status of an art over and above a mere ritual; and the Greek tradition remained humanistic, anti-liturgical, swiftly sensitive to social or mental change. Gods as well as men daily demanded new music. The old was remembered in the classical period as a model and as a possession for ever, but not as a rite to be reiterated. There is no adequate foundation for

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\(^1\) P. 17 J. Some scholars, however, prefer Aristides’ definition.


\(^3\) Cf. the pose of Phemius (*Od*. xxii. 345 f.): ‘I am self-taught and God has planted in me all kinds of song.’
recent interpretations of Greek musical 'modes' as groups of melodic *formulae*, on Indian, Jewish, or Byzantine analogies: Byzantine composers could never have been personally parodied as Athenian composers were. In competitive individualism, at least, classical Greek music was nearer to modern Europe. It was an accomplishment open to all talents. The gods of Agamemnon's army not only receive music from mortals but make it at their own banquets, to Apollo's *phorminx*; and on earth, not only the paid professional but the lord Achilles sings epics of the renown of warriors to his own *phorminx* for his pleasure.¹ This ideal of a music respected among an aristocracy by practice, as well as by patronage, reached its fullest expression in fifth-century Athens. There were, however, higher and lower classes of music. On a sleepless night Agamemnon, looking across from his tent to Troy, heard the skirling of oboes and pipes in the besieged Phrygian city.² The *aulos* and the *syrinx*, though common to Greece, were later thought to be Asiatic imports beside the pure Hellenic *lyra*, *kithara* or *phorminx*; and two rival musics were symbolized in the legend of the Greek Apollo flaying the Phrygian satyr-aulete Marysas. But in the Iliad the wind-instruments are rustic and popular rather than alien. Paris, being a prince of Troy, plays the aristocratic *kitharis*.³ Common folk may also use the *aulos*, and shepherds the *syrinx*—the pipes of the satyr Pan. Dionysus, to whom the *aulos* later became what the lyre was to Apollo, is not yet among the Olympian *élite* of Homer's gods; and Homer's heroes sing the Apolline paeans, not the Dionysian dithyrambs.

It is in the Odyssey that we find the apotheosis of the professional kitharoedic bard. Semi-divine beings like the Sirens, the nightingale, or Circe are allowed to sing; but music is otherwise monopolized by the resident minstrel. He has become a self-conscious ornament of noble households, and claims, although a servant, that recognition of genius which Pindar could still demand of a later aristocracy. The bard in the story—Phemius in Odysseus' manor or Demodocus in Alcinous' palace—is deliberately dramatized as a secondary hero, and incidentally used to introduce compliments to the musical profession as an indispensable asset of good dining.⁴ He sings epics of warriors or love-stories of gods; he advertises his forthcoming works; he also performs for dancers in athletic contests. In Homeric and classical times *music* included not only poetry but often dancing as

¹ II. i. 472 and 601 ff.; xxii. 391; ix. 186 ff.
² II. x. 13.
³ II. iii. 54. The precise difference between *kitharis* and *phorminx* at this date is unknown. The terms *kithara* and *lyra* are later.
⁴ Cf. Od. viii. 73 and 261 ff.; i. 337 ff.; xxiv. 197; &c.
well. As the sung word expressed the intonation, so the beat of the
dancing foot (sometimes marked by castanets) expressed the rhythm.¹
The bard advances into a dancing-ground (chorus or orchestra) and
the youths dance time to his song. If a dance is performed without
song—as was the famous Phaeacian ball-throwing dance—there is
no music either: the rhythm is conducted by the hand-claps of the
spectators, or by the arms of Nausicaa dancing among her maids.²

For the music of the archaic community as a whole we must return
to the earlier, less self-assertive Homer of the Iliad. He describes, for
instance, the form of the dirge sung over Hector's body. Professional
bards begin the lamentation, after which a chorus of women keens;
then Hector's widow Andromache, his mother Hecuba, and his
sister-in-law Helen take up their laments in turn, with a keening of
women after each.³ Improvisations set within a formal sequence may
still have been the structure of the dirges known to Plato. Almost
every social occasion also had its song—often a more or less tradi-
tional elaboration of some simple cry like the Ailinon ('alas for
Linus!') in an ancient and celebrated harvesting-shanty, or the Hymen
O Hymenae of the wedding-hymns.⁴ Some of this music is set into
scenes on the Shield of Achilles. Here girls with garlands and boys
with knives, holding hands, dance in rings or in rows to the song of a
bard with a lyre, while two acrobats turn somersaults at the beginning
of each verse or strain.⁵ In other scenes, a boy with a lyre sings the
'Linus' at the vintage; two shepherds play the pastoral syrinx to
their flocks; and a wedding-feast is celebrated with the chant Hymen-
aeus and the dancing of boys to auloi and lyres.⁶

These scenes, though drawn from real experience, are as artfully
idealized as Gongora's poetic pictures of country life. They give us
the context of the archaic lyrical music which went on beside the
grand style of the epic with its tales of the gods and heroes.

(ii) The Music of the Early Lyrics. Down to the mid-fifth century
B.C., sophisticated poets composed songs of skilled art but of popular
inspiration—songs for such daily doings as dances of young girls or
fighting men, weddings, funerals, processions, wars, drinking-bouts;
love-songs and songs of political or private hate. This lyric move-

¹ A metric foot is a term borrowed from dancing. For castanets see Hom. Hymn. iii.
162.
² Od. viii. 261 ff.; ibid. 370 ff.; vi. 100 ff.
³ II. xxiv. 720 ff.
⁴ On the Linus-song (which did not explain who Linus was nor why he was mourned)
see Frazer, Golden Bough, vii. 216. See also above, p. 251.
⁵ II. xviii. 590 ff. Acrobats also in Od. iv. 17 ff.
⁶ II. xviii. 491 ff., 525 ff., 561 ff.
ment sprang from Ionian Greece, and found its first great metropolis
in Sparta, whose aristocracy was still Homeric enough to love good
music next to good fighting. Its early stages are extremely hard to
trace. The attribution of extant poems is often in doubt, the dates of
composers in confusion. Musical history was first reconstructed in
the fourth century B.C. by Glaucus of Rhegium, whose work is known
chiefly through an unintelligent source of late antiquity, the pseudo-
Plutarchian De musica.1 No subject is more confused by legend and
invention. The main sources were local histories compiled from the
later fifth century onwards; and these records, to judge from the many
ancient doubts and divergences on the dates of archaic poets, must
have been either unreliable or sketchy. The musical victories of early
poets in local or Panhellenic festivals may have been interpolated
into the annals by the competing vanities of Greek cities. It was
claimed that a Pythian festival of music was held at Delphi long
before the official Pythian era (582 B.C.), and a high though hazy
antiquity was also ascribed to musical contests at the Spartan Carnea.
None were included in the indubitably ancient Olympian Games, and
Homer knows no more than musical accompaniments to athletics or
dances. Even if musicians began so early to compete for their own
prizes, no firm chronology was transmitted from these events.

Festival music consisted of epic declamation and poetic forms
dedicated to particular deities. The ‘Pythian Nome’ for Apollo was
a composition or genre on the set theme of Apollo and the Dragon
(or Python), which still recurs in the extant Delphic paens of the
second century B.C., and which was revived by sixteenth-century
pioneers of Italian opera.2 The Delphic contest of auletes originated,
according to Pindar, in an archaic ‘Many-headed Nome’ on the
theme of Perseus slaying the Gorgon. The dithyramb probably began
in the sixth century B.C. as a recital of the Birth of Dionysus, not
acted, but danced and sung to the aulos by a circular chorus of fifty
men or boys. It was brought to maturity, in a strophic form, by the
early classic composers, and broke away from the limits of the set
subject. No special themes were prescribed for tragedy and comedy
as we know them in the fifth century, but they may originally, like
dithyramb, have had some particular reference to their patron
Dionysus.3 Of all these festival genres, however, no clear example

1 Ascribed to Plutarch by Weil and Reinach (ed. 1900), but no longer accepted as
2 The opinion of later authors that the original Pythian Nome was an aulos-piece
without words is hardly credible.
3 See further A. W. Pickard-Cambridge, Dithyramb, Tragedy, and Comedy (Oxford,
has come down to us from the archaic period. Early lyric poets, while they may also produce hymns to gods, are more concerned with the musical occasions of ordinary private and social life than with the set ritual narrative or drama. Even the more formal choric works of Stesichorus, which do narrate mythological stories, were probably designed (like Pindar's) for the personal occasions of a patron's court. Most of the lyric genres are less grandiose. From Alcman, for instance, we have a piece, possibly composed for two choirs, in which the poet bandies compliments to pretty girls as they sing and dance, calling them by their names.\(^1\) To Tyrtaeus were attributed the patriotic marching-songs (\textit{embateria}) of the Spartans, who had the unusual habit of keeping step, and took auletes with them into battle.\(^2\) Archilochus of Paros, the most famous figure of all, composed colloquial songs—gnomic, satirical, autobiographical, and above all, convivial. Songs called \textit{scolia}, often on political subjects, were sung to an \textit{aulos} by gentlemen after dinner over their wine, each delivering one line in turn.\(^3\) But of Archilochus' music the fifth century seems to remember only the triple \textit{tenella kallinike}—three cheers for an Olympic victor. Pindar thought it crude stuff beside his own regal victory odes.\(^4\)

What was recorded of these poets' lives was mainly inference or romance. They were dated to the seventh century (or, in the case of Stesichorus, variously to c. 600 and c. 485 B.C.). This patch of history was much confused by the later Greek passion for deriving every musical form or instrument from a First Inventor, to whom extant works would then be apportioned.

The founder of auletic music was said to be Olympus, who was a myth, but was credited with real archaic compositions still known in the fourth century B.C.: e.g. a ritual libation-song (\textit{spondeion}) which used some ascending three-quarter-tone intervals—presumably related to the irrational borings of the \textit{aulos} which Aristoxenus noted.\(^5\) The early \textit{aulos}, of which the Argive Sacadas was the first known virtuoso, was improved in the later fifth century by Pronomus of Thebes or his school.\(^6\) Besides common devices for modifying notes, \(^1\) Diehl, \textit{Anthologia Lyrica Graeca} (Leipzig, 1942), ii., p. 7, n. 1. The interpretation is difficult and uncertain.
\(^2\) Cf. Thuc. v. 20. Later stories that Tyrtaeus was (a) a general, (b) a music-teacher, need not be credited.
\(^3\) Examples in Diehl, op. cit. ii, pp. 181 ff. Singers either repeated known \textit{scolia} or composed as they went.
\(^6\) No full account of Greek instruments can here be attempted. See Reinach, articles
metal rings were used to close or half-close holes, and the number of holes (sometimes as few as six) was raised to fifteen. *Auloi* were made in five registers covering three octaves between them. They were of wood, bone, or ivory, with a double (or less probably, a single) reed in the bulb of the mouthpiece. The player wore a leather halter to hold in his puffing lips. Often he used a pair of *auloi*, modifying the note by drawing them apart or together. The *aulos* might accompany any choral singing, down to drinking-parties after dinner; but a soloist accompanied himself on strings, and strings were naturally used by the composers themselves.

Bigger and better stringed instruments may have come in about Pindar's times. The classical *kithara* had a body of wood, and a sound-box made of, or shaped like, a tortoise's shell, with oxhide stretched over the face and two curved horns rising from it, joined by a cross-bar carrying the pegs, to which strings of gut were stretched over a bridge. For plucking, an ivory plectrum was generally used in one hand, and in the other the fingers alone. From the seventh century onwards, archaeological evidence shows varying numbers of strings (from four to eleven or twelve) in concurrent use. This simultaneously attested variety is enough to suggest that the exact number had less practical significance than was attached to it in apocryphal anecdotes of the fourth century B.C. Terpander—a shadowy figure assigned to variant seventh-century dates and suspiciously coupled with the mythical Olympus—was inflated into a Founder of kitharistic music, and was supposed to have increased the strings of the *phorminx* from four to the symbolic number of seven, also imputed to Orpheus. He was made responsible for poems of uncertain origin and traditional kitharistic nomes (e.g. the *nomos orthios* or 'shriln nome', still familiar in the fifth century). According to Pindar, however, his instrument was not the *phorminx* but the *barbitos*, which he invented in antiphonal answer to the Lydian *pectis*. Exactly how these instruments differed from others was disputed. The *barbitos*, which was a lyre with long strings, was certainly used by the two great Aeolian


1 Aristox. *Harm.* 42. The left *aulos* might also answer the right: Varro *R R* i. 2, 15–16, may also mean that the *tibia succentiva* (left) was held lower than the *incentiva* (right), but certainly implies that its part was a subsequent response (cf. *succino* in Hor. *Ep.* i. 7, 48).

2 The poem on the subject ascribed to Terpander is spurious.

3 *Frag.* 125 (ap. Athen. 635d, discussing the instruments).
composers of the early sixth century, Alcaeus and Sappho. Both were of Lesbos, which was also the reputed home of Terpander. It is not necessary to decide whether 'Terpander'—a title meaning Rejoicer of Man—was a historical personage or merely a πρῶτος εὐφρετής: the equivalent of a patron saint. In either case his quasi-legendary fame is best interpreted as a symbol of the musical influence of the Aeolian school which followed in the sixth century.

(iii) Aeolian Music. Of Sappho's life little but legend is preserved. Alcaeus, on the other hand, is the first tangible figure in the history of European music. He was a nobleman of Lesbos with a colourful record of war, exile, and political opposition to the local Tyrants. He is said to have sung in exquisite dress, and his own songs were especially popular in classical Athens at those fashionable drinking-parties where the aristocracy made music. Both Alcaeus and Sappho were brilliant metrical innovators; both wrote in their native Aeolian dialect. Their art was personal, and their lyric forms usually monodic. In literary genre there is little to relate them to the first classical composers at the end of the sixth century. But these composers have a special predilection for a style which they call 'Aeolian', although they themselves came from Boeotia or the Peloponnesse; and while no influence can be traced from Alcaeus and Sappho in particular, it is possible that a general influence was exercised by the school of Lesbos.

At Athens the pioneer of the classical movement was Lasos of Hermione, the powerful dithyrambist who caught a creature of the Pisistratid Tyrants forging oracles. Lasos refers to his own music 'in the deep-sounding Aeolian harmonia'; and Pratinas, another Peloponnesian, not much later exhorts musicians to 'follow neither the high nor the low Ionian muse, but plough the middle course and Aeolize in your song'. The verb means 'to speak the Aeolian (musical) language'. Harmonia in its melodic sense denotes not only a tuning but a tropos or idiom. That the Aeolian idiom was 'deep' to Lasos but 'middle' to Pratinas only shows that its pitch was a relative matter: at any rate, it was something opposed to the shrill archaic styles. Evidently they were proud to practise and advertise this music.

Pindar, though he also has a Lydian manner, more often describes his tropos as Aeolian. For his Lydian he can employ a phorminx as

1 Aristoph. Thesm. 160; Lys. 1236 f., &c.
2 Both cited by 'Heraclides Ponticus' (ap. Athen. 624e–625f), who ignorantly equates the Aeolian harmonia with the Hypodorian octave-species.
well as wind, and for his Aeolian auloi as well as strings, or he can combine both with dancers in a full-dress epinikian ode: the difference is not in the instruments, but simply in the styles. A problem, however, arises when Pindar seems to call the same music both Aeolian and Dorian. For King Hieron’s Olympian victory on his horse Pherenicus, Pindar writes: ‘Take from its peg my Dorian phorminx. . . . Him I must crown with a horseman’s strain of Aeolian song.’ Elsewhere he speaks of ‘an Aeolian walking the Dorian road of hymns,’ and of some new tropos (unnamed) which he is tuning to his ‘Dorian sandal’. Later scholiasts, noticing the difficulty but knowing nothing of his music, conjectured that in the former case the rhythm was Aeolian, in the latter Dorian. But these are not metric terms, and the idea that a ‘Dorian’ rhythm could simply be clapped on to an ‘Aeolian’ tropos (or vice versa) seems purely academic. Pindar’s language suggests rather that he was somehow adapting an Aeolian melopoeia to principles of rhythm and string-tuning which were called Dorian. That the term Dorian in fact referred to tuning as well as rhythm is shown by the following passage of Pratinas:

What is this uproar, what these dancings? What outrage has attacked the trampled altar of Dionysus? . . . It is the voice that is queen, by order of the Muse: the aulos must dance behind, being indeed a servant. Only in the rout and fisticuffs of young mummers banging at the door let him act the General and be thankful. Beat that bad breath of a coloratura-mottled toad! Burn that varlet of a low-crooning babbling reed that wastes spittle and spoils time and tune as he steps along, with his body all gimlet-holes! Now look at me, O God of the ivied hair, Dionysus triumphant in dithyrambs: this is the right fling of hand and foot. Hear my own performance—the Dorian!

Here Pratinas, notwithstanding his other manifesto in favour of the Aeolian style, is calling his own music Dorian. Taken together with Pindar’s evidence, it tends to strengthen the suspicion that in this early classical period the terms Dorian and Aeolian might be applied to the same music; and it is notable that in the later fifth century, although Pindar was by no means obsolete, the Aeolian name dropped out of musical use, while the Dorian remained. But we cannot pretend to understand such terms too exactly in a period of rapid musical development, when the main styles were certainly losing any real association with the local schools and dialects from

1 Ol. i. 17 and 101 f.
2 Frag. 19; Ol. iii. 5. Aeolian tropos also in Pyth. ii. 69 ff., Nem. iii. 79.
3 Frag. 1 (ap. Athen. 617e, where the musical point is misunderstood). Text and meaning are often dubious, but the general sense is clear.
which they may originally have been named. What emerges clearly is
that to Pratinas the Dorian stands for true rhythm and tuning led by
the voice, as against the rhythmical and tonal errors of an uncon-
trollable aulos. By the end of the century our sources distinguish,
above all, two major types of tuning and idiom: the one clean and
sustained (entenos), typified by the high classical Dorian, the other
chromatic and quivering (aiolos), often assorted with the style then
known as Phrygian and with the aulos or its tonal effects. Other
distinct brands of music still existed, but they were falling away into
the popular background of the more mature fifth-century movement.
To illustrate this point, it will be necessary to clarify the terms in
which Plato surveys the range of harmoniae known during the later
classical period.

(iv) The Harmoniae of Plato’s Republic. We know from Aristo-
phanes that fifth-century schoolboys were taught to tune their lyres
to more than one harmonia or accordatura. But these tunings need
not be interpreted as mechanical scale-forms. The stylistic connota-
tions of the word emerge clearly in the classical Greek preference
for an adverbial form, Doristi, Lydisti, Phrygisti—used of speaking
‘in a certain idiom’—rather than an adjectival phrase, ‘Dorian,
Lydian, or Phrygian harmonia’. Plato’s own usage can best be studied
in a famous passage, here summarized as follows:¹

The harmonia and the rhythm must follow the sense of the words; and in
words (as we were saying) we have no use for dirges and lamentations.
Which, then, are the harmoniae of dirges? That in the Mixolydian, the
High Lydian, and suchlike harmoniae. Then these must surely be abolished,
for they are unprofitable even for decent women, let alone men. Now, in
the men who defend the City drunkenness, softness, and laxity are most
unbecoming. Which are the soft wine-bibber’s harmoniae? That in the
Ionian; and some in the Lydian are also called low and lax. These can be
of no good to fighting men. So you seem to be left with two harmoniae, in
the Dorian and in the Phrygian.

The term harmonia here has two connotations. (a) Since there can
be more than one harmonia in the low Lydian, Plato at this point
equates harmonia with a single melody, or at least a sub-type; and
this usage is confirmed by Euripides, who speaks of the nightingale
‘weaving her fine-spun harmonia in the trees’.² (b) Otherwise Plato

¹ Rep. 398d–399a (abbreviated). The word chalaros is punitively used for both ‘low-
pitched’ and ‘morally lax’. The reading as πυγες is here accepted.
² Frag. 773.
gives to *harmonia* the more general sense of a whole melodic idiom (e.g. what Aristoxenus calls ‘the Phrygian *melos*’).

Some, though not all, of the *harmoniae* named are associated with (relatively) high or low pitches. But their more fundamental associations are with special forms or occasions of music—for instance, the hysterical shrieking of dirges or the sensual crooning of wine-songs. Plato elsewhere tells us that at the end of the classical era these and other associations broke down, and the various forms and idioms were confused.¹ Later Greeks, no longer knowing the old forms of musical expression, imagined that Plato was attaching abstract ethical effects to the various *harmoniae*: a superstition which Aristoxenus briefly repudiates.² It is true that to classical Greek minds music was like a second language, capable of expressing almost all that could be said in words, and of bringing out the moods or passions latent in them. Such bilingualism of speech and music is perhaps unparalleled in Europe: certainly it is the antithesis of the idea of music as a closed world existing for its own sake in its own terms. Like all Greek art, music was *mimetic* or representative—a direct photography (as it were) of mental objects formed by the *ethos* and *pathos* of the soul. This psychological theory was carried to absurdity by later Greeks who (as an ancient writer says) fell into ecstasies and compared tunes with natural objects.³ But Plato’s own meaning is quite straightforward and sensible. Music in the classical tradition expressed the words and was indivisible from their substance, which was not always edifying. Aristophanes has given us a decisive example of the Ionian style which Plato regards as unfit for boys’ education. It is, in fact, an outrageously indecent duet between two prostitutes.⁴ The polite Hellenistic society of a later age had forgotten that music could be barbarous and orgiastic. The famous oriental dirge for Adonis was civilized into a conventional piece of Alexandrian recitative, which Theocritus could cast into charming verse; but this was not the real *Adoniasm*, with its dinning drums, known to fifth-century Athens. The excruciating ‘Ai-ai Adonin!’, screamed from the house-tops by a frenzied female, falling on the ear like an evil omen, had been almost enough to break off the Assembly’s debate on the invasion of Sicily.⁵

The ‘high and low *harmoniae*’ (like the archaic ‘shriill nome’)

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¹ *Laws* 700a ff. (cited below, p. 395).
² *Harm.* 31.
³ *Papyr.* Hibe 13.
⁴ *Eccl.* 893 ff. (in 918–19, ‘Ionic *tropos*’ is used playfully, alluding to the musical sense in L. 883).
⁵ *Theocrit.* *Buc.* xv; *Aristoph.* *Lys.* 393 ff.
may represent a lingering ancient stratum of popular music. We cannot
define them precisely. The Mixolydian aroused endless curiosity in
late antiquity owing to the problems of placing a seventh theoretical
tonos of that name, and speculations on its archaic nature were then
quite unhistorical. The archaic Lydian and Ionian date from the
period when Ionia was in the Lydian empire, and the two terms may
have meant much the same. The ‘high Lydian’ and ‘low Lydian and
Ionian’, which Plato banishes from education, can scarcely have
differed very much from the ‘high and low Ionian’ which Pratinas
banished from music. Both were of the primitive or popular stuff
against which the first classical composers were asserting the modern
refinement of their Aeolian or Dorian manner.¹ In the later fifth
century respectable composers ceased to write in the old popular
genres, which early poets had refined and adorned. These genres fell
back into a musical underworld, which could still inspire the genius
of Euripides, but was generally regarded as vulgar.² The Dorian and
Phrygian were the main styles now practised in serious music. They
represented two indispensable but sharply contrasted modes of ex-
pression. The Lydian name is still occasionally used, but is virtually
identified with the Phrygian. Telestes, at the end of the century,
speaks of ‘that Phrygian king of the holy aulos . . . who first tuned the
quivering (aiolos) Lydian strain, rival of the Dorian muse’.³

Telestes’ adjective aiolos exactly reflects that quivering, flexible
melodic line which Aristophanes parodies in the new dithyrambs. The
dithyrambic tropos of the day was the Phrygian, which was
closely associated with the aulos, though the new composers imitated
its effects on strings as well. The aulos (as Pratinas complained)
drowned both rhythm and tuning with its incontinent wobbles unless
it was subordinated to the voice, and a music dominated by its noise
can have had little regard for rational laws of consonance. Its attrac-
tion was emotional excitement. Phrygian music was not always exag-
ergated or intemperate: Plato admits it as a necessity for the softer
moods of persuasion or appeal. But its antithesis to the Dorian
tuning went far deeper than any alleged difference of ‘modal’ species.
Greek writers, in contrasting the Dorian music’s measured firmness
with the pliant ecstasy of the Phrygian, are not merely word-painting.
When Philoxenus tried to compose a dithyramb in the Dorian he
found it a stylistic impossibility.⁴ The Dorian was entonos, a music

¹ Pindar’s Lydian (whether related to archaic Lydian music or not) belongs to a
different musical level. Plato implies that there were several ‘Lydian’ harmoniae.
² Aristoph. Frogs 1301-4.
³ Diehl, op. cit. ii, p. 126; cf. ibid., p. 156.
⁴ Aristotle, Pol. 1342b.
of notes firmly tuned and sustained without quavering or *kampai*,
incredible of the *enthusiasmos* demanded by the Dionysiac dithyramb.\(^1\)

Plato and Aristoxenus are at one in their preference for the high
classical school of the earlier fifth century. But they refer to their ideal
in different terms. For Plato, it is represented by the Dorian *harmonia*;
for Aristoxenus, by the enharmonic *genus*. There is some reason to
believe that the Dorian *harmonia* and the enharmonic *genus* were
intimately related.

(v) *The ‘enharmonic’ music*. It is not till the fourth century that
we hear of the classification of the tetrachord into three *genera*.
Ex. 306 is here set out on a less rigid staff, with continuous lines for
the fixed *mese* and *hypate*, a dotted line for the movable *lichanos*,
and movable *parypate* in the space:

Ex. 318

<table>
<thead>
<tr>
<th>(a) Enharmonic</th>
<th>(b) Chromatic</th>
<th>(c) Diatonic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mese A</td>
<td>M L</td>
<td>M L</td>
</tr>
<tr>
<td>Lichanos</td>
<td>L H</td>
<td></td>
</tr>
<tr>
<td>Hypate E</td>
<td>H</td>
<td></td>
</tr>
</tbody>
</table>

These are still only schematic figures or skeletons of melodic styles.
According to Aristoxenus the diatonic (which dominates post-
Alexandrian music) was the oldest. The chromatic was a novelty in
411 B.C., when Aristophanes parodied its fashionable exponent
Agathon, with the comment: ‘Ant-crawls—or what’s this warbling?’\(^2\)
*Chroma* means the minor shades of the movable notes, and the chromatic
developed as a moist relentment of the sharp enharmonic outlines.
It connoted a very different style, attuned to the poetic prettiness of
the fourth century.

Analytically, the *genera* were defined by the tuning of *lichanos*.
Aristoxenus contrasts the classical enharmonic with the fourth-
century cult of chromaticism in an illuminating passage:\(^3\)

That there is a melodic style which demands a ditonal *lichanos* [i.e. two
whole tones below *mese*]—and no mean style, but about the finest of all—is
far from evident to most musicians nowadays, although it could be
shown to them by induction from examples. But what I say will be clear
even to those familiar with the first and second of the old *tropoi*. Those
used only to the present style of composition will of course reject the
ditonal *lichanos*, since the great majority nowadays use a higher tuning.

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\(^1\) See further below, pp. 389, 393 ff.  
\(^2\) *Thesm.* 100.  
\(^3\) *Harm.* 23.
The reason is a hankering for more and more sweetness: that this is their aim is shown by the fact that they practise chiefly and almost always the chromatic—or if they ever do touch the enharmonic, they approximate its tuning to the chromatic, wherewith its stylistic character (ethos) is distorted to ruin.

The numbering of ‘first and second tropoi’ can only be pedagogic. It refers, not to the archaic beginnings of music, but to the meloppoeic styles taught in the classical curriculum of schools, beginning from Simonides and Pindar, or the first period of what was recognized by the classicists as ‘the finest style of all’.¹

In this ‘finest style’, Aristoxenus treats the ditonal progression from mese to lichanos not as a mere option of the ear, but as a demonstrable necessity of musical syntax. The term induction is taken from the logic of his master Aristotle.² The exact effects are of course irrecoverable, but we can imagine how a music built upon the contrast between fixed and movable notes, consonant and dissonant progressions, might be deranged by the introduction of a new quasi-consonance such as a sweet and perfect 5:4 third from mese down to a higher tuning of lichanos. According to the pseudo-Plutarchian De musica, the enharmonic pyknon was originally undivided, and old-fashioned auletes could still be heard to keep the semitone whole ‘in the tetrachord meson as well’.³ The implication is that the dieses were used chiefly or solely in the tetrachord meson, and that, even there, they were regarded as a later decorative addition. These so-called ‘quarter-tones’ often strike modern minds as the salient feature of the enharmonic genus. In fact, they were incidental to it. The enharmonic style was basically defined by the progressions resulting from the ditonal lichanos of the classical period.

The pseudo-Plutarch somewhat unconvincingly derives enharmonic music from the archaic spondeion of Olympus, but adds that the irregular three-quarter-tone interval of the spondeion is alien to the real enharmonic (and to all the genera). This account at least serves to emphasize the purity of the enharmonic tuning by contrast with archaic aulos-music. Now it is a striking fact that the term ‘enharmonic’ is not found till the fourth century, when the three genera were first classified. The traditional name of the genus—still used by Plato, and often by Aristoxenus—was simply ‘The Harmonia’: i.e. ‘the tuning’, or music in tune. The opposite term, exharmonic, means

¹ When the ‘second tropos’ began is uncertain, but not here relevant.
² ἐνδύκοσα.
³ De mus. 11, 6. The source of this datum can hardly be later than the fourth century, when the enharmonic music was dying out.
'out of tune'. The false notes produced by violent modulation in the new anti-classical styles are called *exharmonic*: i.e. transgressions of 'The (enharmonic) Tuning'. Before Aristoxenus, no theorist had ever analysed any *genus* except the enharmonic; and Aristoxenus himself uses it as the typical figure for general demonstration. It is clear that, until the fourth century, 'The *Harmonia*’ was in some sense unique—the only note-series which was considered to be truly ‘in tune’ and worth logical analysis. Historically, it may be supposed to represent the principles of rational consonance worked out in music by the first classical composers, and in mathematics by their contemporaries, the first harmonic scientists. This is not to say that the archaic idioms necessarily lacked all acoustic logic; but the classical music represented some more conscious achievement of a well-tuned tonality, which first superseded the archaic styles, then broke down under the chromaticism of the modernists.

The double enharmonic tetrachord (with the ditonal *lichanos*) is to Aristoxenus the pure theoretical figure of the great classical styles which he remembered. In fourth-century terms, it corresponds to the octave-species called Dorian (in the enharmonic *genus*). Without the melopoiec progressions, the scale conveys little to us; but it may reasonably be regarded as an abstract *schema* of the old classic Dorian tuning. In other words, ‘The *Harmonia*’ may probably be identified as both ‘enharmonic’ and ‘Dorian’. The idea that a composer took a mode called Dorian and then chose between its three alternative *genera* is an unhistorical impression from later analytical textbooks. In classical melopoeia, *harmonia* and *genus* were not so dissociable.

The other fourth-century scale-forms were only artificial segments, with artificial names, cut out of this rationalized note-series for theoretical purposes. The old Phrygian *harmonia* or *melos*, which called for the tonal uncertainties of the *aulos* or emulated them on the *kithara*, may have been stylized to some degree, but it cannot be explained as a sub-type of the same note-series.

Thus far a tentative discussion of this fifth-century terminology may be justifiable; but it is hampered by our ignorance of contemporary teaching. Of the mysteriously influential Damon, the musical friend of Pericles and Socrates, we know little for certain, though much was conjectured by later Platonists. He is said to have standardized the nomenclature of some *harmoniae*. In any case, the

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1 'Pherecrates’ *ap. ps.*-Plutarch, *De mus.* 30, 3.
2 *Harm.* 2.
3 All references to extant writings by Damon are suspicious or late. Few will accept as authentic his alleged speech before the Areopagites.
poet-composers who were absorbing local dialects into a literary lan-
guage must also have universalized the chief musical idioms. A common 
and conscious Hellenism was the tendency, if not the achievement, of the age. The Greek belief that Dorian music was more 'Hellenic' 
than Phrygian was true only in the sense that the Dorian was a 
typical creation of the classical spirit. For oriental influences in 
music of this date there can be no concrete evidence. The names and 
natures of harmoniae have evoked both ancient and modern specula-
tion, but it is doubtful whether they could ever define more than the 
broader differences of musical character. Between the Lydian of 
Pindar and the Lydian or Phrygian of Telestes much had changed. 
The classical music did not develop through musically autonomous 
forms; it was more aptly classified (as Plato also knew) by the literary 
forms which it served. These forms, too, were in rapid growth and 
change. Within them, contemporaries were sharply aware of differ-
ences in the dates and styles of individual composers.

(vi) Aristophanes and Athens. Pindar, though he may have boasted 
of noble lineage, speaks and behaves as a professional musician. His patrons were the aristocracies of Greece and the kings or lords of 
Sicily, where Stesichorus had brought choral performances into 
fashion. The distinctive contribution of Athens to music was the 
tragic and comic theatre, still financed by wealthy persons but effec-
tively patronized by the whole City: a drama in which the simple 
movements and plain accompaniment of a citizen chorus required no 
professional training in choreography and instrumentation, as did 
the dithyramb or the Pindaric ode. Whereas gentlemen like Alcaeus 
had touched only the smaller forms of lyric song, free-born Athenians 
could now compose big works. A set of three tragedies with a comedy 
had to be presented for a prize at the Great Dionysia or other yearly 
festivals. The tragedians, being financially independent and bound to 
a dramatic theme, tell us far less of their own music than the pro-
fessional Pindar, who is continually aware of his art, his lyre, and his 
orchestration, his patrons and rivals, and his purse. But it was a 
prime function of the classic comedy to criticize music as well as 
politics and persons. The greatest of comedians was himself probably 
the greatest of Athenian composers, and certainly the greatest of

1 Cf. Plat. Lach. 188 d. 'Heraclides Ponticus' on racial origins of music is anachronistic 
fantasy.
2 Laws 700a.
3 Pyth. v. 72 ff; but professional status is proved by his references to fees.
4 So Plato's epigram: the Graces (goddesses especially of music) chose Aristophanes' 
soul as their home.
Greek musical critics. Aristophanes and his audience—or its upper layer—could catch musical allusions back to Archilochus or Alcman, and could enjoy parodies ranging from the first classics to the latest dithyrambic novelty. His plays are the epitome of the Athenian musical education of his time.

Boys of the upper classes went to a music-master, and in company they were expected to intone their piece of epic or to sing the classics at meals.¹ ‘Musical hoggishness’ was a social and political insult.² For advanced students there were professors of composition, caricatured in Aristophanes’ hack Poet with his stock in trade of model styles—Homer, Simonides, Pindar, the maiden-song, the dithyramb.³ Choruses were also trained by professionals, unless the composer (like Aristophanes) could do it for himself. But music was much more than an academic discipline and a fine art. At every drinking-party an aulos was there to accompany scolia and favourite numbers from musical comedy. The first man to drain his vase of wine during the breath of a trumpet- blast got a prize; the drinker who sang the night through ‘took the cake’ as a reward.⁴ At a smart party, as staged by Aristophanes, the guests first pour the libation of wine on the floor (the social rite at which libation-songs were sung); then the aulos- girl tunes up, and the scolia go on until the eldest guest makes off with the aulos-girl.⁵ Auletes were also employed by gymnasts for rhythmical exercises, and by magistrates for public proclamations in the City.

The forms of rural music were afterwards collected by Alexandrian scholars, more from literary references than from life. They catalogued over fifty generic or regional types of dance, with innumerable songs of shepherd loves or of rustic labours—the ‘practical songs’ sung at work by spinners, millers, reapers, and water-drawers.⁶ Fifth-century composers had drawn upon the melodic fund of popular music for their own work. Aristophanes often uses the popular metric forms, polishing them into sophisticated art and mixing them on occasion with the grand styles.⁷ It had been done before, as he tells us, by Phrynicus and other early classical composers. ‘I reveal’ (sing his Birds) ‘the nomes sacred to Pan, the dances to the Great Mother of the mountains, from which Phrynicus ever drew his sweet melody,

¹ Aristoph. Peace 1267 ff.; Clouds 1355 ff.
² Knights 985 ff.
³ Ach. 1000; Knights 277.
⁴ Birds 904–58.
⁵ Wasps 1212 ff.
⁶ Athen. 618e–620a, with some examples. (But the ‘Nile Chantey’ of Powell, Collectanea Alexandrina (Oxford, 1925), p. 185, no. 7, is scarcely an Egyptian bargee song.)
⁷ e.g. Aristoph. Clouds 563–74.
sucking like a bee that ambrosial fruit of song.” The ‘old honey-sweet songs from Phrynichus’ Phoenissae’ were inspired by hymns from country liturgies. Modernists dismissed the choruses of his contemporary Lamprocles as ‘prehistoric maypole-stuff full of grass-hoppers’—to which the classicists retorted that this was the music that bred the men who fought at Marathon. In the Frogs, Euripides is made to accuse Aeschylus of stealing from this antiquated folk-song: ‘Did you get those water-drawer’s ditties from Marathon, or where?’—‘From Beauty I drew them to Beauty’, replies Aeschylus impressively, adding, ‘that I might not be seen to have reaped the self-same holy meadow of music as Phrynichus.’ The point is that Aeschylus did, in fact, draw upon the same rustic hymnal. Its influence appears in the rhythmical refrains used at the end of strophic movements in some of his choruses. Echoes of a more primitive music are audible too. In a chorus of Persian elders bewailing the destruction of Xerxes’ army, his mind goes back to the dirge-cry for Bormus sung by serfs as they reaped the cornfields by the Black Sea; at the end of two choric strophae of the Agamemnon he recalls the Ailinon of the Linus-song sung by peasants since Homeric times. Aristophanes himself, at the end of a play, will often use the old wedding-cry Hymenaeus, or the tenella kallinike of Archilochus, or some country dance. Popular melody was still an ingredient in the subtle and modern music of Euripides, though he drew it (so Aristophanes alleges) not from pure and solemn rural chants, but from the dregs of vulgar song—dirges, drinking-catches, dances fit for castanets: in fact, the harmoniae of low life which Plato rejected.

The Frogs is Aristophanes’ last tribute to the composer whom he had parodied so often that he could not leave the subject when, in 406 B.C., Euripides died. In the play of 405 the god Dionysus, sick of the bad poets left swarming on earth, goes to Hades to hear Euripides once more. The souls of dead frogs in the Stygian marshes are initiates of the Orphic mysteries (which claimed communication with the after-life). Against the contrasting chorus of their simple chants, sung to the Elysian aulos, Aristophanes stages the competition between the two

2 Wasps 220; Clouds 984 ff. (The aboriginal country-folk of Attica were believed to have worn gold grasshoppers in their hair.)
3 Frogs 1298 ff. (cf. 910).
6 Frogs 1301–4.
great tragic composers. Aeschylus wins by superior weight. The clattering pomp of his oracular lines, between the monotonous thrumming of the kithara—tophlattothrat tophlattothrat—is calculated to make the modern lyrical sophistries of Euripides sound insubstantial and wispy. In his later plays Euripides had withdrawn the chorus somewhat from the action, using it often for interludes of evocative poetry in which musical sound (so critics thought) counted more than dramatic sense. His chief innovation, however, was the lyric monody sung by an actor on the stage. Instead of observing the strophic correspondence of classical tradition, these monodies were durchkomponiert. Aristophanes himself had adopted this form to his own style in his brilliantly new Hoopoe Song, where he strings together a series of brief passages (anabolae) in variant and contrasting metres. But it was originally and especially associated with the musical manner of the school of Phrynis and Cinesias, who were working out modern ideas in the dithyramb and the kitharoedic nome.

In the last quarter of the fifth century, the dithyrambist Melanippides and his successors began to exploit or emphasize the quivering intonation suggested by the aulos, and to copy it in their kitharoedic nomes. Although Aristophanes’ musical parodies are lost, his verbal metaphors are vivid and illuminating. He defines the style by contrast with the early classics. The new music was no longer virile, taut, entonos—well tuned and unwavering: it was marked by flamboyant kampai (‘bends’) and by a formless flexibility of melodic line. It is not clear whether kampai were in fact modulations or decorative shakes, but Aristophanes certainly insists upon the tonal instability of this music. The modernist tragedian Agathon appears on the Aristophanic stage spreading out his strophae to melt in the sun: if cold, they will not bend. When he sings, his song is like the zigzagging of ants. The new dithyrambists, ecstatic and effeminate creatures, are so easily bent that they have to wear stays. Their bodies are willowy; their souls after death go fluttering among the clouds in search of brand-new anabolae; their music is made of snowflakes and feathers eddying in the sky; they long to be birds. Aristophanes is obviously alluding to the same new, sky-borne, fluttering manner

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1 Frogs 1264–1363.
3 For this Melanippides the date usually accepted (c. 480–450 B.C.) makes nonsense of musical history, and is unproved: we know only that he died before 413 B.C.
4 Aristoph. Clouds 967 ff.
5 Thesm. 66–192.
when, in the *Frogs*, he burlesques Euripides’ coloratura on the first syllable of the word for ‘twirling’: *ei-ei-ei-ειλισσουσα.*  

In the light of subsequent evidence we can see that what Aristophanes was describing was the breakdown of the classical tonality, which came about chiefly through modulation and chromatic tuning. A little later, a comedian stages a personal protest by the Muse against the tortures she has suffered from Melanippides, Phrynis, Cinesias, and their successors Philoxenus and Timotheus, who twist her on the rack with their ‘exharmonic’ notes as they modulate, knocking a dozen different *harmoniae* out of five strings, regardless of the false melodic relations produced. We are further told that Agathon was the first tragedian to use the chromatic *genus*, which Aristoxenus noted as a prime factor in the breakdown of the classical *melopoeia*. *Metabola* and *chromata* are expressly cited as features of the style of Philoxenus, the next leader of the new movement. In its experimental stages, when Aristophanes wrote, these technical terms cannot yet have been invented to describe its innovations. But it must not be supposed that, because we now possess only Aristophanes’ word-pictures, his musical criticism was any the less precise or mature. The reason why classical Greeks invented few technical terms was that they did not depend on the imperfect medium of words alone; they criticized music by caricaturing it in music, so long as a musically educated public existed.

The *Frogs* was not only a foreboding of musical disruption. It was an appeal for the whole tradition of Athenian citizens ‘bred in athletics, the chorus, and the arts of music’, against uncultured or alien ideas. The chorus had already been cut down under the financial stress of the war. At the end of the play the demagogue Cleophon is requested to hang himself, and the spirit of Aeschylus is sent up to counsel Athens, ‘that the City may be saved and have her chorus still’. From Aristophanes’ later plays we know what happened. Such music as he could still provide, with a much reduced chorus, had to conform to a level of popular taste which can be judged by the vulgarity of the genres and the crudity of the metres. The dithyramb survived the war because its wide popular appeal induced the rich—and eventually the City—to go on paying its high costs of production. The comedy could not maintain its choric tradition, and the best

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1 *Frogs* 1348 (cf. 1314).
2 ‘Pherecrates’ *ap. ps.*-Plutarch, *De mus.* 30, 3; cf. Düring in *Eranos*, xliii (1945). The number of strings has been emended through editorial misunderstanding.
3 Aristoph. *Frogs* 729; ibid. 1419 (cf. 1504).
4 *Ecclesiazusae* and *Plutus*. 
school of public musical education in Athens virtually closed down with the Spartan *auloi* chortling over the destruction of the city walls.

(vii) *Plato and the revolution*. Plato’s brief history of the musical revolution in Athens, written in the mid-fourth century B.C., is worth summarizing at some length:¹

Our music was once divided into its proper forms. Prayers were one form of ode, surnamed ‘hymns’; opposed to this was another form, ‘dirges’; another called ‘paeans’, and another ‘dithyrambs’. . . . ‘Nomes’ were a distinct kind, surnamed ‘kitharoedic’. It was not permitted to exchange the melodic styles of these established forms and others. Knowledge and informed judgment penalized disobedience. There were no whistles, unmusical mob-noises, or clapping for applause. The rule was to listen silently and learn; boys, teachers, and the crowd were kept in order by threat of the stick. . . . But later, an unmusical anarchy was led by poets who had natural talent, but were ignorant of the laws of music. Over-intoxicated with love of pleasure, they mixed their drinks—dirges with hymns, paeans with dithyrambs—and imitated *aulos*-music in their kitharoedic song. Through foolishness they deceived themselves into thinking that there was no right or wrong way in music—that it was to be judged good or bad by the pleasure it gave. By their works and their theories they infected the masses with the presumption to think themselves adequate judges. So our theatres, once silent, grew vocal, and aristocracy of music gave way to a pernicious theatocracy—for had it been a free democracy, it would have been nothing to fear. As it was, the criterion was not music, but a reputation for promiscuous cleverness and a spirit of law-breaking.

If classical drama without applause sounds austere, it must be remembered that the theatre was the only school of the poorer citizens. Seats were free, and under the Periclean system of State education the poor were paid two obols’ maintenance whenever they attended. That they had to be kept quiet with sticks is only one instance of the well-known fact that Periclean ideals of enlightenment failed to penetrate the lower strata of society. Plato’s charge against the new dithyrambists is not lack of musical genius: it is that they used high musical talents, showmanship, and virtuosity in the pursuit of sensationalism, consciously rejecting educated standards of judgment, and proclaiming that their end was immediate pleasure. The proof of this charge is that the new middle classes of the fourth century, while they no longer knew the past classics, turned away from the music of their own time as from a vulgarizing influence, enjoyable indeed, but no matter for serious practice or thought. Hence the

¹ *Laws* 700a–701a (abbreviated).
reduction of musical schooling to an elementary level and the disappearance of critical judgments on compositions.\textsuperscript{1} The perpetual disparagement of new music in later philosophers has given the impression of a mere general prejudice against modernism, but these writers are not expressing opinions on any actual music: they are mechanically repeating Plato.\textsuperscript{2}

From another passage we know that Plato was thinking particularly of the school of Cinesias the dithyrambist, which had since produced the ultra-modernists Philoxenus and Timotheus. Aristophanes in his last play had parodied the solo of the Cyclops, sung to the ‘\textit{threttanelo}!’ of the strumming \textit{kithara}, which Philoxenus flung into one of his dithyrambs—a concrete case of the mixing of musical genres, for a dithyramb had never contained a kitharoedic piece.\textsuperscript{3} Philoxenus, it was told, was sent to the quarries for laughing at the old-fashioned compositions of Dionysius the tyrant of Syracuse, who treasured Euripides’ pen. Phrynis, as well as Euripides, was now thought out of date. Timotheus of Miletus repudiated the entire past tradition in a famous manifesto:\textsuperscript{4}

\begin{quote}
I do not sing the old things,  
Because the new are the winners.  
Zeus the young is king today:  
Once it was Cronos ruling.  
Get out, old dame Music.
\end{quote}

A deliberate blatancy and toughness distinguishes the post-war rebels from their precursors, who had affected to be aesthetes. The bombastic libretto of Timotheus’ \textit{Persae} was written for programme-music of the sort which attempted (Plato says) to make the noises of thunder, wind, hail, cats, dogs, cattle, bird-song, and all kinds of instruments, with frequent and startling modulations.\textsuperscript{5} The dithyrambist and the kitharoede were professional musicians, normally aliens; and music of this kind depended on the virtuosity of performers, especially of instrumentalists. The problem of modulation produced many instrumental experiments. Plato mentions a ‘pan-harmonium’, strung for all tunings at once. A certain Pythagoras of Zacynthus is said to have invented a pyramid of three \textit{kitharae}, tuned to the Dorian, Phrygian, and Lydian \textit{harmoniae}, on a revolving stool which he kicked round with his foot as he played—but, as the source

\begin{itemize}
\item \textsuperscript{1} See above, pp. 339–40.
\item \textsuperscript{2} On such repetition of Plato down to medieval times, see Egon Wellesz, \textit{A History of Byzantine Music} (Oxford, 1949), pp 38–55.
\item \textsuperscript{3} Plat. \textit{Gorg.} 501e; Aristoph. \textit{Plut.} 290 ff.
\item \textsuperscript{4} Diehl, op. cit. ii, p. 150, no. 7.
\item \textsuperscript{5} Plat. \textit{Rep.} 397a–b.
\end{itemize}
confesses, this contraption may be apocryphal. Certainly apocryphal are the stories that Timotheus himself added new strings to his kithara, was ordered by the conservative Spartans to cut them out, and appealed to the archaeological evidence of a many-stringed lyre in a statuette of Apollo. A contemporary fragment of comedy suggests that Timotheus and his school got their modulations upon a small number of strings, and that new devices were introduced for stopping. Though eleven-stringed instruments probably came into use in this period, the additions were exaggerated by theorists ignorant of real kitharistic technique, familiar only with the kitharoid apparatus of harmonic science, which had a string to each note. In practice we know only that rapid changes from one idiom to another dissolved the characteristic tunings and progressions of each. The ‘exharmonic’ effects were soon enjoyed for their own sake. ‘How well,’ said an admirer of Philoxenus, ‘his melodies are concocted with modulations and chromata.’ How inferior, he adds, is the insipid prettiness of more recent music—all ivy and flowers and water, a string of unrelated tunes.

(viii) Music after the revolution. The iconoclasts soon became the idols: Timotheus and Philoxenus eclipsed both their predecessors and their posterity. Aristoxenus is quoted for the story of a contemporary musician, Telesias of Thebes, who, after being educated on the classics, grew enamoured of modern music and learned the works of Philoxenus by heart, but could never, in his own composition, break himself of the classical idiom. It shows how decisive was the break between the old and the new. While the immediate precursors of Philoxenus and Timotheus seem to have been scarcely better remembered than the classics, their successors lacked their vitality, and could not rival their appeal to the wider public of an enlarged Hellenistic world. They had created a large pool of enthusiastic listeners who liked nothing better than to hear the old favourites again; and prizes were won by musicians repeating the works of Timotheus, instead of producing their own according to the classical rule. By Aristoxenus’ day the new style had become conventional: contemporary music, to him, is not shocking but sugary. This was partly, no doubt, because the new tonality no longer surprised the ear; but another reason may be that the Alexandrian age did not (so far as we know)
pursue the more bizarre instrumental experiments of the revolutionary period—the noises which (as Aristotle says) could excite babies or beasts. Among the instruments which Plato associates with these effects is the pectis: yet a century later, when Philoxenus and Timotheus were still widely performed, the pectis seems to be obsolete, for Alexandrian scholars begin disputing what it was.¹ Their original orchestration cannot have been reproduced: as in the classical period, only the vocal part in music was permanent. Although Alexandria, for its part, invented the hydraulic organ, we hear little of its use before the days of the Roman arena.² In Hellenistic times, more fashionable types of performance were the massed choirs, sometimes doubling at the octave, which filled the big new theatres; solo kitharisms without words; duets of auloi playing now in unison, now antiphonally (but only the philistinism of a Roman general could order a band of auletes to play all at once). Nor did the duets lead to any ventures in polyphony. The question whether harmony and counterpoint were practised by the Greeks, which intrigued eighteenth-century scholars, can be briefly disposed of. A heterophonic accompaniment was common, as we know from Plato;³ but the instrumental parts could not have been left to improvisation if they had been solid elements in a truly polyphonic structure. Choral unison and monody, in their post-classical forms, remained the staple genres of music; the atrophic dithyramb, now using wind or strings indifferently, persisted down to the second century B.C. andstraggled on afterwards; the kitharoedic nome flourished into late antiquity.

A century and a half after Timotheus was dead, when Philopoemen came into the theatre victorious from Mantinea, the kitharist could still bring the house down with the opening line of the Persae:⁴

He who fashioned for Hellas the glorious adornment of Freedom.

Two generations later, when Greek freedom was gone, it was known as a curiosity of folklore that Philoxenus and Timotheus were till lately performed as a part of boys’ education in Arcadia.⁵ The leaders of revolution had ended as school classics of a rustic and inaccessible countryside. Our knowledge of music now becomes so dim that we do not even know when or how the chromatic manner was superseded by the common diatonic; but it is probable that by the time of the Delphic Hymns the chromatic was used only by force of tradition

¹ Plat. Rep. 399 c-d; Athen. 635–636.
² On the hydraulis (-us) see pp. 270 and 408.
³ Laws 812d (cited above, p. 338).
⁴ Plut. Philopoemen 11.
⁵ Polyb. iv. 20–21.
for rare and ceremonial occasions. All our later pieces are based on a diatonic note-series. About 193 B.C., in a vote of thanks from Cnossos in Crete, a visiting musician had been praised for performing not only Timotheus and his disciple Polyidus, but also old Cretan songs, ‘as befits an educated man’.\(^1\) His programme was primarily a compliment to the Cretans, whose folk-songs were famous, but it may also indicate a growing taste for something simpler and more popular than the grand metropolitan style which Timotheus now represented.

The typical popular genre of Hellenistic times (though it dated back much earlier) was the pantomime. Mummers called by various generic or local names—*hilarodists, magodists, deikelists, autokabdali*—gave mixed shows of ballet and acrobatics, indecent jokes, comic scenes about drunkards or foreign doctors, escapes, romances, success stories, parodies of themes from mythology. On a more pretentious level, the story of Andromache or Antiope might be performed as a sort of sung ballet. Cicero remarks with surprise that there were people who could recognize a piece of this sort from the opening instrumental notes.\(^2\) We must infer that such music could attain at least the relative permanence of a popular vogue. But the example of the pantomime tended to break up set forms of drama. A chorus of Euripides might be rendered as a separate concert-piece or kitharism, though not with the original music. One actor would sometimes give his own selected part from a tragedy, or sometimes sing a personal interpretation of a tragic role or theme. Nero, who took lessons from the Greek kitharoede Terpnus, improvised an interminable piece about Niobe, and also executed tragic parts—Canace bearing her incestuous child, Orestes killing his mother, Oedipus blind, Hercules mad. He seems to have sung these parts as solos, in his ‘thin husky voice’, with other figures on the stage merely to supply the action.\(^3\) Roman drama was by then extinct, and such performances were more like recitals with music and costumes. Another of Nero’s enterprises was a choir called *Augustiani* to lead his own audience’s chants of applause. The rhythmical chanting of praises to the Emperor on public occasions was a direct precedent for the acclamations of the Byzantine Church.\(^4\) Together with Quintilian’s outburst against orators who liked to sing their speeches, it shows how closely, in this period, formal or ceremonial speech approximated to a musical recitative.

\(^1\) *Corpus Inscriptionum Graecarum*, 3053.
\(^2\) *Ac. ii. 20.*
\(^3\) *Suet. Nero* 21; see also p. 418.
From the fourth century B.C. onwards the musician thought of himself as actor rather than creator or 'discoverer' (as Greeks preferred to put it). His patrons no longer wanted new music for themselves and their children to sing, but exhibitions to applaud from the hands of a maestro, lavishly staged and subsidized. Technical standards were high: it was the age of the virtuoso. A star kitharist might get for one concert a fee that would maintain a Greek trireme for a year, or more than the cost of a first-class dithyrambic chorus. Extravagant verses were written on the tomb of the aulete Telephanes, whom Demosthenes employed for a chorus in 347 B.C.; and the inscriptions that commemorate a winning performance soon begin to name the aulete before the poet. The division of labour between words and music may have begun already in the fourth century, when new settings had to be provided for Euripides and other revived classical drama, but poet and musician are still one in the Delphic Hymns, and there was perhaps no sudden or universal change. Certainly, however, sophisticated poets were growing incapable of making music, and musicians of writing sophisticated verse. When the classical unity of Music was broken, the 'music' (in our narrow sense of the term) was supplied by a professional engaged in the performance. The modern figure of the pure composer, who is neither poet nor player, was unknown to antiquity.

It would not be true to say that post-classical music was altogether monopolized by the professional. Singing was still taught to children in most Greek schools, and encouraged in some cities by prizes both for song and for the lyre. Boys' choirs represented their cities in festival competitions. In one city thirty noble boys were trained to sing a hymn to Hecate once a month in the town hall. A city had to keep a choir for festivals and religious occasions, and those who found professional singers too expensive sometimes economized by training the ephebes, lads of eighteen to twenty conscribed for military and public service. But even these elementary duties were largely taken over by unions of hired musicians. One of the Delphic Hymns advertises the performers as technitae of the famous musicians' union of Athens, which served half of mainland Greece and included composers with other professional players. These bodies soon became

1 Athen. 623d; Demosth. In Med. 155; Lysias xxii. 1–2.
2 A new post-Hadrianic inscription (Hesperia, xxii, 1953, pp. 125 ff.), apparently discarded for the cutter's mistake, commemorates a musician with an unintelligible phrase, of which Dr. P. Maas kindly offers his still unpublished emendation: ... μέλος καὶ πρῶτος όπερνά Σοφοκλῆς καὶ Τιμόθεος ἰθαὶν μελοποιεῖσθαι..., interpreting: 'the first and only since Euripides, Sophocles, and Timotheus to compose the music to his own words.' I cannot construe K. Latte's rendering in Eratos, lii (1954), pp. 125 ff.
universal. In Augustan times a 'collegium symphoniaeorum', engaged for public religious services in Rome, was recognized by a special decree of the Senate as a legitimate association. The local unions finally amalgamated into one 'holy oecumenical synod of artists in the service of Dionysus'.¹ In spite of the majestic title—and high rates of pay—musicians stood much lower in the social scale than doctors or teachers of grammar and rhetoric. The public recognition of Mesomedes was an exception and a scandal. In archaic and classical times the professional composer as well as the citizen had been honoured for musical excellence. In Alexandrian sources music is reduced to a topic for anecdotes of low life or oddments of curious information, which were later collected by Athenaeus in the form of table-talk, suitably sandwiched between similar talk on famous courtesans and gastronomic delicacies.

'Unheard music is better than heard' was a Greek proverb in late antiquity. Against it Nero used to quote another: 'Unheard music is unregarded.'² Contemporary opinion was not on his side. No reputable woman would play an instrument too well, no gentleman would dance unless in his cups, and a musical emperor was a disgrace:³ these views were held no less by upper-class Greeks than by Romans. But both had inherited from Alexandria a profound reverence for the classical past; and classical authors had spoken respectfully of music. The music that Plato had admired was lost: what remained was Plato's admiration. He could never (so these later minds assumed) have set such a value upon mere audible music, which they knew as a stimulant laid on at theatrical shows or at banquets where girls from Cadiz did their celebrated hip-wobbling dances.⁴ It was impossible, by now, to realize that music had been or could be a higher form of artistic expression: Plato must have meant some mysterious ethical alchemy which music could work upon the motions of the soul, or else the harmonic science of 'number conceptual and immaterial' which enshrined truths of astronomy. This was the 'unheard music' of the proverb. Through its own traditional prestige it was persistently cultivated, without relation to any heard music, in the harmonic theory and philosophy of the later ancient world. The idea of music—so much holier than music itself—

⁴ Martial, xiv. 203.
embraced not only cosmological doctrine but moral and medical belief. Staunching-songs, to be sung over a bleeding wound, were already known to Homer and Pindar. Sciatica, according to Theophrastus, was treated by playing the aulos over the part affected; musical healing was important in psychiatry, and incantation in the magical rites of Gnostic sects. The more intelligent valued harmonic theory for its mathematical beauty. But no specific motive, after all, is necessary to explain the pious transmission of an inherited and venerated branch of learning. Musica was established as the seventh of Varro’s ‘liberal arts’, but it was not an art in the modern sense: it belonged to the quadrivium of mathematical subjects. The transference of the term musica to harmonic science in itself implies that for the liberal education music did not exist.

Our present difficulty in studying Greek music is, in the main, a consequence of this contempt of educated post-classical Greeks for the practical art, together with the obstinate survival of the mathematical subject miscalled musica in the ancient and medieval curriculum. Earlier Greeks had found in music an art which was seldom independent of verse, but was capable of co-operation in the highest poetic enterprises; then, at a critical moment, before music had adequate means of surviving memory, the standards of judgement were changed or shaken and the legacy of the past dissipated. From Alexandrian times, when the old oral schooling grew insufficient, education was based on books, and the unwritten had not the prestige of the unheard. If the classical music had still been extant and intelligible in writing, it could not have been neglected by so many curious and diligent generations. The post-classical music, if written, was seldom methodically stored, because it was not considered worth methodical study. Musical illiteracy in an age of book-learning is a sure index of the decline in the status and quality of the art. Isidore of Seville, whose erudition covered a great bulk of ancient writings, had never heard of the existence of notation. His words are an epitaph on the music of antiquity: ‘Unless the sounds are retained by the memory of man, they perish, for they cannot be written.’ Fifty years ago we hoped to recover indefinite quantities of music from papyri: now, on the contrary, papyrology has shown by cumulative evidence that the preservation of music in writing was casual and sporadic. Failing some lucky chance, our knowledge of Greek melo-

1 Hom. Od. xix. 457; Pind. Pyth. iii. 51; Theophr. fr. 87 and 88 (cf. Athen. 624a–b); Wellesz in Ambix iv (1951), pp. 145 ff.
2 The hypothesis that its loss is due to medieval scribes is no longer accepted.
3 Etym. iii. 15, ii (early seventh century A.D.).
poeia is likely to remain, for the most part, indirect. Nor can we now look for any considerable help in the post-Aristoxenian harmonic theorists, since we must reject the assumption that the musica of the schools was directly concerned with heard melodic structures.

This is not to say that historical study of Greek music is impossible, but only that certain kinds of evidence have yielded less than was once expected. The subject therefore needs some reorientation towards other problems. Work remains to be done on the deciphering of such written pieces as we have or may find, but the central task is still the better dating and interpretation of the large ancient literature from which we can reconstruct the history of poetic forms and rhythms, of musical criticism and ideas, of the social and intellectual environment. This, though difficult, is not beyond reach. To recover the music itself might have been preferable. But it was to Greek music that a good scholar applied the wise motto: *Quod vides perisse, perditum ducas*.¹

INTRODUCTION
There is no lack of material for the study of music in the Roman world, but the greater part of it is concerned with the instruments rather than the music itself. What little is known about the music proper is evidence of unequal value and often open to more than one interpretation. We should further bear in mind that in the Graeco-Roman world we cannot without danger apply evidence from one part or period to the whole, and the dividing line between what is to be called Greek and what Roman in any of the arts is never quite certain.

Three main influences affected the Romans; the first was from the Etruscans, the second from the Greeks, and the third from the East. But Rome did not only borrow instruments and music; she adapted, blended, and developed what other nations had to offer. Certain aspects of ancient music may fairly be regarded as Roman, though other influences may have been present. Music of some kind was specially composed for the Latin comedy. The songs and instrumental calls of the Roman army were presumably of native origin; popular ‘lays of ancient Rome’, according to the elder Cato, had once been sung to the tibia at banquets, though they were extinct by Cicero’s time; and the colourful popular music of the Empire, with its emphasis on rhythm and percussion, was probably, in the main, an Italian growth separable from Greek traditions.

Some believed that foreign ostentation in music was effeminate and was leading to a lowering of moral standards. The archaic Law of the Twelve Tables, published in the middle of the fifth century B.C., forbade more than ten pipers at a funeral.¹ A number of anti-luxury laws were passed to restrict ostentatious performances and banquets; one, for example, in 115 B.C. allowed only the Latin piper in Rome.² But Roman expansion opened the way for new music and foreign influences. We can only mention here the great number of

¹ Cicero, De leg. ii. 59.
² Cassiodorus, Chron. A. U. 639.
INTRODUCTION

Greeks who came to Rome in professional though humble capacities. In the capital there existed numbers of foreign groups who kept their entity and brought their own forms of worship.\(^1\) Trade expanded enormously and brought in new fashions and new demands for luxury. New religions were first banned, then tolerated, and then often actively encouraged at different times by various emperors. During the second Punic war the cult of the Great Mother, Cybele, which centred in Phrygia, was brought to Rome in 204 B.C. It never became completely Roman and citizens were not allowed to take part in the ceremonies or wear the peculiar dress. However, the priests brought with them their musical instruments and these—pipes, cymbals, and tambourines—soon gained great popularity. So we see portrayed, and read of, the Bercynthian pipe with bent horn (inflexo Bercyntia tibia cornu), the mad pipe (furiosa tibia), the hollow drums (inanis tympana) and the din made by the attendants of the goddess as they thump the brass and the rumbling leather (aeris deae comitas raucaque terga movent).\(^2\) Pl. 11 (a)\(^3\) shows one of the chief priests and some of the instruments. The twin Phrygian pipes and a tambourine hanging above are to be seen on the right, while a pair of cymbals are suspended on the left. (The other things do not concern us here.) These pipes were much more powerful than the twin straight ones; they could be rivalled only by the tuba. They tended to drive out the older kind, though they never completely succeeded in doing so. It is not possible here to discuss the spread of oriental cults in the west during the Empire, but they should not be forgotten in considering the spread of new ideas in music and the changes in musical instruments.\(^4\)

It must not be thought, however, that Rome absorbed so much without difficulty. Polybius relates a story of Greek musicians who came to Rome in 167 B.C. to give a performance during victory games; their style of playing not being understood, they were laughed off the stage and compelled to stop their concert and improvise a kind

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\(^3\) Strong, *La Scultura romana*, ii (Florence, 1926), fig. 248; Jones, *Catalogue of the Ancient Sculptures preserved in the Municipal Collections of Rome: Palazzo dei Conservatori* (Oxford, 1926), pl. 100. There is an excellent detailed representation of the Phrygian pipes in Jones, ibid.: *Museo Capitolino* (Oxford, 1912), pl. 34A.

of burlesque.\(^1\) Writers long continued to protest at the new styles. Juvenal was bitter at the Syrian Orontes pouring into the Tiber with its language, manners, and music.\(^2\)

Roman authors sometimes write about music with a patronizing air and with the notion that there existed nothing but a pale glimmer of the past greatness of Greek music.\(^3\) This was fundamentally wrong; music, though not to everyone’s taste, was very much alive. There was nothing amateurish about either instruments or performers. Not only in Hellenistic times, but also during the Roman empire, instruments became more complicated, capable of greater sonority; new and improved experimental types were introduced. The evidence of instruments has limitations. It is, for instance, quite unsafe to take a particular instrument and say that because it could be played in such and such a way and with such a technique, it must therefore have been so played by its original owner. Nevertheless, the various instruments used are in themselves typical of Roman musical occasions, in which their part was often more prominent than in classical Greece, although in most music the voice still retained its leading position.

**INSTRUMENTS\(^4\)**

* Aerophones

The *tuba* was long and straight and made usually of bronze, though it is known to have been made also of wood and leather, or iron; it was constructed in sections which fitted into each other and the usual length was about 1-3 metres. The instrument was cylindrical in shape almost to the very bell end where it rather abruptly swelled out. The mouthpiece—conical rather than cup-shaped—was detachable and determined the quality of the note produced just as its length determined its pitch. There was frequently a strap to hold the instrument tight against the mouth when playing; this was attached to a small loop near the bell end. Perhaps about eleven harmonics could be obtained from the instrument, which was not, one might imagine, a very easy one to handle. It was essentially an army instrument and, like so much Roman military equipment, borrowed from the Etruscans. The Greeks had a similar instrument, the *salpinx*, perhaps rather shorter in length and with a more prominent bell end

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\(^1\) Polybius, xxx. 22.

\(^2\) Juvenal, iii. 62. Nor did he think much of the raised status of the cornicines: iii. 34.

\(^3\) Cf. pp. 337 and 401.

\(^4\) For further information see the books and articles listed in the Bibliography.
(a) A priest of Cybele. Relief showing cymbals, tympanum, and twin Phrygian pipes (c. A.D. 150). See page 405

(b) Roman musicians at the circus. Mosaic showing the *tuba*, *hydraulus* with female player, and *cornu* (late 1st century A.D.)
which in addition to its use in the army was a popular solo instrument in the musical contests.

The cornu, also of bronze but originally of horn, was conical in section and curved into rather more than half a circle. A supporting cross-bar allowed it to be played carried over the shoulder with the bell end aloft over the player’s head and facing in the same direction as the player. Like the tuba, it had a detachable mouth-piece, apparently rather longer than the tuba’s. The cornu was Etruscan in origin and at first used mostly for military purposes.

The bucina is often confused with the cornu, and was so confused in Roman times, but there is no doubt that it was a separate instrument; right to the end the bucinator (as the player on this instrument was called) was sharply distinguished from the cornicen. There is no certain representation of it in the Roman world. Tombstones of cornicines sometimes show the cornu, but the bucinator’s never his bucina. Descriptions of the instrument are contradictory but probably it was originally the animal’s horn made into an instrument. Certainly it was intimately connected with the countryman and it became in the army the instrument for giving non-tactical signals. It was less powerful than the tuba or cornu and could not be used by itself in the heat of battle.

The lituus was of bronze and Etruscan in origin. It was J-shaped with a long extension to the straight part, generically a natural horn with a greatly enlarged mouth-piece. The lituus found at Caere and now in the Vatican is 140 cm. long. The instrument is in g and produces six notes; another lituus, found in the Rhine near Düsseldorf is in a. Its sound is that of a soft trumpet. This was also an army instrument though it was used on state occasions.

The aulos or tibia was a reed instrument known to the East Mediterranean world generally. It was nearly always played in pairs with the help of a ϕορβεία (Lat. capistrum; Eng. mouth band) to steady the twin instruments in the mouth and to help to maintain a constant pressure of wind (see pl. 12). The short pipes with perhaps three or four holes were known in very early Roman times. There were several Greek types used for different purposes. In the late Republic and early Empire, pipes grew longer, perhaps 2 feet or more in length. The

1 For instance, see the descriptions in the works of reference listed in the Bibliography.
4 See pp. 269, 280, and 380–1.
musical range was extended by increasing the number of holes to as many as fifteen. Mechanical devices were used, when required, to cover certain of the holes. The single cross-flute is known to have existed but it is rare. Phrygian pipes were probably brought to Rome when the worship of Magna Mater was introduced in the year 204 B.C.; these powerful instruments were used in the ritual but appear to have become popular everywhere; one pipe was straight, the other ended in a large curved bell.

The *utricularius* or *ascales*, in English ‘bagpipe’, came from the East. (It is necessary to be careful in identifying the instrument, for *utricularius* usually meant wine trader, and not the performer.) One or two genuine representations in art are known; many, including one from Richborough, are false.

The organ, said to have been invented in Alexandria in the third century B.C., became a most important instrument in imperial times. The evidence from literature is extensive but by itself insufficient to explain the instrument completely. Archaeology supplies more evidence: there are two portable organs from Pompeii, and two terracotta models, while the instrument is shown on a number of mosaics and *contorniates*. At Aquincum the remains of an organ were found among the debris of a cellar into which it had fallen from a clubhouse above during a fire. The date is fixed at A.D. 228 by an inscription attached to the instrument. There are four ranks of pipes, thirteen in each, the remains of levers, sliders, and a sounding board. Organs were worked usually by water pressure, hence the name *hydraulis*, though the pneumatic action was also in use, especially in later times.

The *syrinx* (panpipes) was more the instrument of the shepherd and the instrument of mythology than a serious musical instrument.

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3 This was the *tibia Berecynthia* mentioned by Horace, *Odes*, iii. 19, 18.
4 See the dictionaries listed in the Bibliography. The poem *Copa*, sometimes attributed to Vergil, contains a description of what can only be the bagpipes.
5 By Ctesibius, *Athenaeus*, iv. p. 174. See, however, the important article by Apel, ‘Early History of the Organ’, in *Speculum*, xxiii (1948), p. 191, where the literary evidence is considered in detail.
6 A photograph of the bronze portable organs is in Anderson 25880. There is a convenient illustration in the *Catalogue of the Mostra Augustea della Romanita* (Rome, 1938), plate cxlii, of some reconstructions made for the exhibition.
7 Nagy, *Die Orgel von Aquincum* (Budapest, 1934), was the original work, which I have not been able to see. See also Hyde, ‘An Inscribed Water Organ’, *Transactions of the American Philological Association* lxi (1938), p. 394. Most of the reproductions of the water organ have been collected and studied by Mercurelli in *Rivista di Archeologia cristiana* xv (1938), p. 73.
Reeds, in number up to a dozen or so, were joined together like a raft and stopped with wax at one end. The lengths were graded and the player blew across the open mouths, moving the instrument as he desired.

**Chordophones**

The Greek lyre (λύρα) and *kithara* were distinct instruments. In Roman times the lyre tended to die out and the *kithara* acquired more strings; the sounding-board became larger and more unwieldy. The instrument was now often played sitting down.¹ It remained to the end the king of instruments for the soloist.

Harps with large numbers of strings were, of course, well known to the Greeks. In the Roman world they become more popular.² They were played sitting down with the instrument resting on the knees. Other stringed instruments came into use, the most interesting of which was the pandura or pandore with long thin neck and fingerboard.³

**Idiophones**

There were several instruments of percussion which can only be mentioned here. The *scabellum* was a hinged flapping board of wood or metal worked by the foot and used for beating time.⁴ The *sistrum* was an Egyptian rattle used in the worship of Isis,⁵ and there were several kinds of cymbals and tambourines, bells and whistles.⁶

**Literary Description**

It is interesting to notice in both literature and in art how music and musical instruments are portrayed by writers or artists who do not possess the musical knowledge required for a precise description. For example, in the poem *Aetna* (lines 297 ff.) the author wishes to describe the organ being played; his observant eye has perceived the essential features, though he is unable or unwilling to use the technical terms.

¹ These statements are based on a survey of the surviving illustrations, especially in Pompeii.
² e.g. Juvenal, *Satires*, iii. 64 tells of the chordae obliquae brought to Rome from the East.
³ See p. 273.
⁴ For references see the works listed in the Bibliography. See also below, p. 414, for the terra-cotta from Alexandria.
⁵ See p. 267.
⁶ Cf. the well-known mosaic of street musicians, now in the Naples Museum, from Pompeii, made by Dioscorides of Samos.
carminique irriguo magnis cortina theatris
imparibus numerosa modis canit arte regentis,
quae tenuem impellens animam subremigat unda.

(Just as in some vast theatre, a water organ whose musical modes harmonise through their unequal pipes, sounds its water-worked music thanks to the organist’s skill, which starts a small draught of air while causing a rowing movement in the water below.)

Here we have in a few words what an intelligent onlooker sees: the caldron-shaped body, the row of different-sized pipes, the organist controlling the instrument, and the rowing-like action of the blowers. Sometimes, of course, the writer has the accurate knowledge and expresses it in the form of an enigma. Thus Julian describes the organ, with pneumatic action and not worked by water.

I see reeds, or pipes, of a different kind: I ween that from another, a metallic soil, they have perchance rather sprung up. They are agitated wildly, and not by our breath; but a blast, rushing from within the hollow of a bull’s hide, passes underneath, below the foundation of the well-pierced pipes, and a skilled artist, possessed of nimble fingers, regulates by his wandering touch the connecting rods of the pipes, and these rods, softly springing to his touch, express (squeeze out) the song.

Perhaps the neatest description is of the double pipes:

εἶς ἄνεμος· δύο νῆσε· ἐρέττουσαν δέκα ναῦται.
εἶς δὲ κυβερνήτης ἀμφοτέρας ἐλάει.

(One wind, two ships, ten sailors rowing, and one steersman directs both.)

SOCIAL STATUS OF MUSICIANS

In the Roman world musicians held a place of honour from the earliest times. In the list of trade guilds into which the people of Rome were traditionally divided by Numa, successor to Romulus the first king of Rome, pipers come first. If the sacred pipers went on strike, as they once did, the work of the State was held up; the pipers were recalled to duty by a trick and a bribe. A boy piper was usually present near the altar at a sacrifice, but he played not for the music’s own sake but to cover up any sound that might be accidentally heard

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4 Plutarch, Numa 17. For some of the duties of the State pipers see Ovid, Fasti vi. 657. A number of inscriptions attest to the guild organization. A piper is included among the list of magistrates’ officials at Urso (Spain) in 44 B.C. Riccobono, Fontes Iuris Romani Antejustiniiani, Leges (Florence, 1941), p. 177. On the guilds, see also p. 401.
5 Livy, ix. 30. Plutarch, Qu. Rom. 55.
in the vicinity and thereby spoil the ceremony. This scene is portrayed many times in Roman art, always with the short auloi. On festal occasions, or when the emperor was welcomed on his return home, there was always music to greet him. A tuba player is normally seen near the emperor at his triumph. There is no doubt that the way in which music could stimulate or calm a crowd was well known in the ancient world and that much use was made of this knowledge.

In the army from the days of the Servian reforms, usually regarded as military in character, when in the sixth century B.C. tuba and cornu players (but not bucina players) were named as an official class in the Roman list of citizens, musicians had a well-defined status. From inscriptions we learn that the order of seniority was tuba player, cornu player, and lastly bucina player. Like other professional groups, they would at times organize themselves into clubs with elaborate rules and conditions of entry. Thus, for example, when a member joined he paid into the common chest 750 denarii, and when he died or got his discharge, or if he were reduced in rank, or promoted inside the legion, or if he had to make an unwelcome voyage overseas, he or his heir received stated sums. This was in the early years of the third century A.D.

**MILITARY MUSIC**

In the army orders were given on different instruments. The tuba sounded the attack or retreat, and the time for the posting of sentries. The bucina, which could scarcely be heard outside the camp if there was much noise, sounded the watches; it was superseded later for this duty by the cornu which was also responsible for the sounding of the relief for the sentries. There were well-known calls. Pollux tells of

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1 Brendel has collected a number of examples in his article, ‘Immolatio Boum’, *Römische Mitteilungen*, xlv (Munich, 1930), p. 196.
3 See the Triumph of Marcus Aurelius in Strong, op. cit., fig. 162.
4 Quintilian, *Inst. orat.* ix. 4 i. 10.
5 H. Last, ‘The Servian Reforms’, in *Journal of Roman Studies*, xxxv (1945), p. 34, where the sources are discussed.
6 e.g. *C.I.L.* viii. 2564. There is a list of musicians in the army in *Ephemeris Epigraphica*, iv (Rome, 1881), p. 374, but it needs to be brought up to date.
8 This is a simplified account applicable to the Republican period; there were changes in procedure in later time. A convenient method of approach is to work through the articles on the separate instruments, so far as they are published, in the *Thesaurus Linguae Latinae* (Leipzig, 1900). Note also the different attempts to describe the sounds, e.g. Ennius on the tuba (tarantatara), frag. 143.
four for the trumpet: the setting off or attack, the call of encouragement during battle, the retreat, and the sign to halt or encamp. In the sixth century A.D. Procopius says that the Roman army in the old days had two calls: the charge and the retreat. Sometimes they must have been misunderstood, coming as they did from the same instrument. He therefore suggested to Belisarius that the cavalry trumpet, lighter in weight, being made of leather and thin wood, should sound the charge; while the bronze trumpet of the infantry, which would be of a different sound, should sound the retreat when a more distinctive call was necessary in the noise of battle.

Several stories are told of Roman generals who kept musicians in empty camps after the army had moved on; they remained sounding the regular calls to deceive the enemy. At other times a trumpet player would be sent by himself away from the main body so that the enemy would get a wrong impression of the position of the army. These were well-worn tricks and they show how the various calls were identified with army life. Frequently in literature, battle or camp life was described in terms of one or other of the instruments; thus in medias tubas would mean ‘into the midst of the battle’, and post lituos could be translated ‘after the battle was over’. In camp and on the march the cornu players stayed near the standards, giving the sign to move off and with the tuba encouraging the men in battle. Thus when the Temple of the Sun at Palmyra was pillaged by the aquiliferi, vexilliferi, and the draconarius (different kinds of standard bearers) in A.D. 272, under Aurelian, the players of the cornu and the litus of the legion also took part. In art the cornu players are usually placed hard by the standards.

Twice a year, on 23 March and 23 May, the sacred trumpets were symbolically purified at a ceremony called Tubilustrium. There is reason to believe that this originally had to do with the opening of the new campaigning season. It shows the intimate connexion that existed between the instrument and military life. In the navy, a comparatively late development with Rome, the need for call signs was not so great, though there is some evidence for the use of music to keep oarsmen

1 Pollux, iv. 85. 2 Procopius, Bell. Goth. vi. 23.
3 e.g. Frontinus, Strat. i. 5; Livy, ii. 64.
4 Claudian, de con. Stil. iii, pref. 12, 13. 5 Historia Augusta, Vita Aurel. xxxi. 7.
6 e.g. Trajan’s army marching over the bridge of boats across the Danube in Strong, op. cit., figs. 97/98. There is a novel view of this scene in La Colonna Traiana (Rome, 1942), pl. 15.
7 C.I.L. i, p. 313. Quasten, Musik und Gesang in den Kulten der heidnischen Antike und christlichen Frühzeit (Münster, 1930), esp. pp. 16-25, gives an account of Roman state music, including the Tubilustrium and the College of Pipers.
in time. Even though the *tuba* was to become a popular solo instrument and often heard with other instruments in the shows, this connexion with war was never forgotten. When L. Norbanus Flaccus, a keen player of the *tuba*, was heard practising on this instrument on the day he entered into his consulate in A.D. 19, it was taken as a bad omen that the consul should be heard playing on an instrument associated with war.

**MUSIC IN EVERYDAY LIFE**

Interest in music increased during the Empire. In private life, whether it was a little light music after supper at Pliny's villa or a noisy trumpet playing at Trimalchio's dinner party, music was in universal demand. The best entertainment, Martial believes, is where there is no piper to drown the conversation, implying that a man is fortunate if he finds that when he goes out to dinner he has no other piper to drown the conversation. Petronius tells of a man of fashion who possessed a clock in his dining room with a uniformed *bucina* player to tell him how much of his life was lost and gone. Music was employed at funerals from earliest Roman times; later no funeral was complete without wailing pipes and trumpets playing a last call to the dead. Trimalchio, very drunk, orders a mock funeral and the trumpeters break into a loud funeral march (*consonuere cornicines funebri strepitu*). The phrase, 'You may send for the trumpeters' (*ad tubicines mittas*) signifies 'prepare for the funeral’. So, too, at other ceremonies and on state occasions, music played an increasingly important part. Large choirs sang and more ensemble playing was demanded.

Indoor concerts took place in the houses of the rich. Pl. 12, a fresco found at Herculaneum, now in the Naples Museum, shows a duet between a piper and a *kithara* player. Before an attentive audience the piper vigorously plays her two very long straight pipes; she wears the usual mouth band, and her bulging cheeks and eyes

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1 Starr, *The Roman Imperial Navy* (Cornell, 1941), pp. 56 and 59.
2 Cassius Dio, lvii. 18.
3 Pliny, *Ep. ix. 36*. Petronius, *Satyricon (Cena Trimalchionis)*, e.g. c. 26. Coleman-Norton has made a study of musical terms and expressions from literature which were known or could have been known to Cicero in *Cicero Musicus*, *Journal of the American Musicological Society*, i (1948), pp. 3–22.
4 Martial, ix. 77.
5 Petronius, *Sat. 26*.
6 Ibid. 78.
7 Ibid. 129.
9 There is a charming painting from Ostia of a small group of boys singing in honour of Diana. This is reproduced in Strong, *Art in Ancient Rome*, ii (London, 1929), p. 28.
indicate the intensity of her performance. The *kithara* player uses the
developed form of the instrument; not so graceful and finely balanced
as the classical Greek version, it is of more solid construction and
capable of hard wear and tear. The arms are straight and there is a
strong cross-bar to hold the tuning pegs, seven of which are shown,
though the painter has indicated at least a dozen strings. The instru-
ment is held by an arm-strap, though this is not clear in the painting;
it is played with a plectrum in the right hand, the left hand plucking
or damping the strings as required. It will be noticed that the per-
formers do not play from notated music.

Small bands of street musicians paraded in the streets playing pipe,
cymbal, and tambourine. Jugglers and acrobats entertained the
crowds. The one-man band showed how feet, arms, hands, and voice
could be used at the same time. There is an interesting terra-cotta
from Alexandria, recently misunderstood, which is worth considering
in greater detail; it is 16.7 centimetres high and represents an old man
playing a large *syrinx* with his left hand. Under his left arm he presses
against his side a bag with a single pipe attached; he holds this pipe
with his right hand, playing a simple tune or drone; his right foot
plays a *scabellum*. There is no connexion between the bag and the
*syrinx*; this is not an early form of portable organ as has been sug-
gested; it is the bagpipe played with other instruments. A young
assistant claps a pair of miniature cymbals as his master plays.

**MUSIC IN THE THEATRE**

In 389 B.C. performances of simple stage plays with musical accom-
paniment (*saturae modis impletae*) took place, with Etruscan actors
brought to Rome to dance to music played on the pipes. This native
drama was driven off the stage by innovations from Greece and took
on a literary form. More music, with more than one kind of pipe,
came into use in Latin versions of Greek comedies. The prefaces to
Terence's plays tell of four kinds besides giving the name of the com-
poser. Music was played also during the intervals. *Atellana* and
mimes were broad farces, which tended to drive out comedy. Played
by a very few actors, male and female, they were vulgar and often
obscene but attracted great popularity.

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2 Livy, vii. 2.
3 E.g. *Didascalia* to Terence's *Phormio*: 'Modos fecit Flaccus Claudi tibiis inpari-
bus.'
A ROMAN CONCERT

Showing twin pipes and kithara. From a fresco at Herculaneum

See page 413
A most interesting papyrus gives a number of cues for the music.\textsuperscript{1} It dates from the second century or end of the first century A.D. The identification of the marks is far from certain, but they include cues for the drums, singly, five times or many times, for the striking of some instrument (perhaps cymbals or scabellum), and two others which cannot be explained with any degree of certainty, possibly for castanets and pipe. It must be explained that these are only cues; no fragments of the music, if indeed it ever consisted of more than percussion effects, exist.

The pantomime\textsuperscript{2} (pantomimus means the single actor who takes part) was quite different from the mime. Its themes were from mythology and it was essentially a dramatic dance for a single performer, accompanied by chorus and orchestra. The actors were male until very late times. Predominantly, though not exclusively, Roman, by the time of Augustus it was established in the capital. The orchestra included pipes, panpipes, cymbals, and stringed instruments; time was kept by the scabellum.\textsuperscript{3} In some respects the pantomime may be regarded as the successor to tragedy on the Roman stage. It made certain demands of the audience: the facts of the story must be known, the different steps of the dance had to be recognized; it required a cultivated taste and never became entertainment for the masses. The music took second place to the dancing. 'There reigns the art of dancing', says Plutarch, 'to which music is almost entirely subordinated.'\textsuperscript{4}

In the amphitheatre a show began with a procession. Led by trumpet and horn players, the principal performers with decorated helmets marched into the arena. The start of the performance was announced by the tuba and a small orchestra played in the background. Pl. 11 (b) shows part of a mosaic from Zliten in North Africa,\textsuperscript{5} with different kinds of gladiators. The orchestra consists of a water organ, a tuba player, and two cornu players. The organ is on a low stand; the reservoirs for the water are on either side. A number of surviving illustrations of similar scenes bear witness to the enormous popularity of the amphitheatre shows.

At times the desire for noise and large numbers of performers led

\textsuperscript{1} Greek Literary Papyri, Poetry, i, no. 76. Loeb Classical Library, ed. D. L. Page.
\textsuperscript{3} The players of the scabellum (scabellarii) had their own guild.
\textsuperscript{4} Plutarch, Quaest. conviv. ix. 15.
\textsuperscript{5} Aurigemma, 'I mosaici di Zliten' (Africa Italiana, ii, Rome, 1926). For the pompa and other scenes in the amphitheatre, see the long article 'Il relievio gladiatorio di Chieti' by Ghislanzoni in Monumenti Antichi (Rome), xix. 1908, col. 541.
to incredible extravagance. Ammianus Marcellinus tells of *kitharas* as large as carriages. In A.D. 284 Carinus gave a series of games to the Romans at which one hundred trumpets played together; others taking part included a hundred horn blowers and two hundred pipers of different kinds. It was the most-talked-of event of the year. The mania for novelty and large-scale entertainment was encouraged by those in authority, who saw in this a means of distracting the attention of the masses from action in the political field.

**Recitals and Virtuosi**

Authors 'published' by big public readings and there are numerous references to clients dutifully listening to their patron's dull books. Under the Empire dramatic recitals became popular, even of works which had never been intended for declamation to music. The Greek practice of singing and accompanying oneself on the *kithara* was known in the Greek cities of the south and to a lesser degree in Rome and the western provinces, but it was a foreign intrusion and, though actively sponsored by different emperors and despite hero-worship of the star performers, did not succeed in becoming Romanized. The principal performers and the best teachers, so far as we can tell, were Greek. This was the form of art that Nero wished to excel in.

Despite the amount of ensemble playing known to have existed, it was the soloist and, above all, the brilliant virtuoso who caught the fancy of the Romans. Successful individual players were mobbed by the crowd, paid fantastic engagement fees, and allowed to indulge in any amount of artistic temperament off stage or on stage. Such artists rarely settled in any place for long; they had full time-tables of bookings, and in any event it is doubtful whether there was enough popular demand for a man to remain very long in one place. These artists, too, banded themselves into professional groups not unlike trade unions, and by the second century A.D. had a practical monopoly. The artist, when he became well known, would be honoured by his native city and perhaps given honorary citizenships of other cities; statues would be set up to him.

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1. Ammianus Marcellinus, xiv. 6, 18.
2. *Vita Carini*, xix.
3. See p. 399.
On special occasions a star performer might receive a very large fee, in money or otherwise. Vespasian, for all his covetousness, rewarded his artists well. When the theatre of Marcellus was reopened he hired performers, paying no less than 400,000 sesterces to the tragic actor Apollinaris, 200,000 sesterces to Terpnus and Diodorus the citharoedi, as well as other lesser amounts to others who took part.¹ (For very rough calculation the sestertius was worth about 2d.) The amount of prize money a successful musician might win was considerable. Two inscriptions from Aphrodisias in Asia Minor² give lists of prize money for different contests; the highest prize was 3,250 denarii for the first citharoedus. It would not be safe to build much on so little evidence, but so far as they go, they are of importance at least for one part of the world.

Unfortunately we know practically nothing about the style of playing or what the music was like. Sometimes it was only a question of how loud and how long a note could be played, a test of physique and power of lung.³ There is little doubt, however, that the standard of performance was high and the technique elaborate. Competition was keen, and audiences were critical.⁴ Not even the hired claque, so commonly employed, would cover up poor playing or indifferent singing. Many of the pieces played were intimately known by the crowd and favourite tunes were hummed in the street.⁵

IMPERIAL AMATEURS

The amateur vied with the professional though there was always a social gap between the two. Society was shocked by Nero not because of his appearing as a musician, but because he posed as a professional artist. Many men and women of society became distinguished amateurs. The Augustan histories tell of many emperors who were good players. Hadrian⁶ boasted openly of his knowledge of kithara playing and singing; Verus⁷ travelled about through Corinth and Athens with instrumentalists and singers, and on his return from the Parthian war brought from Syria players of stringed instruments and pipers; Commodus⁸ is described as adept in certain arts not becoming to an emperor, one of which was singing; Elagabalus⁹ sang, danced,

¹ Suétone, Vesp. 19.
³ Galen, viii. 287.
⁴ In general, see the chapters in Friedländer, Darstellungen aus der Sittengeschichte Roms, ii (Leipzig, 9th-10th ed., 1921-3), pp. 161 ff.
⁵ Ibid., p. 175.
⁶ Vita Had. xiv. 9.
⁷ Vita Veri, vi. 9; viii. 11.
⁸ Vita Elagab., xxxii. 8.
declaimed to the pipes, played on the trumpet, the *pandura*, and the organ; Severus Alexander¹ had a taste for music and could play on the lyre, pipe, organ, and trumpet, though he never played the last when he became Emperor.

Others, from the first century, had been interested in the art, but none like Nero. He wished to be taken seriously as a musician and there is every reason to believe that he had considerable, though not exceptional, natural ability. Music was only one of his many interests, but he trained hard and practised diligently. The services of Terpnus, a well-known singer to the *kithara*, were obtained when he became Emperor and lessons went on late into the night. He endured bodily discomfort, lying on his back with a metal weight on his chest, taking purges, refraining from various fruits and meat that were supposed to injure the voice, indeed trying all the tricks of the profession to develop his voice. At one time he refused to address his soldiers in person so as to rest his voice, and he would have a singing teacher present to see that he never strained it. Before appearing in public he made detailed plans for his claque who, more than 5,000 strong, were divided into groups and taught the various kinds of applause that would ensure their master the success he so earnestly longed for. We are told of three kinds of applause; *bombi* (probably like the buzzing of bees), *imbrices* (like rain or hail on the roof), and *testae* (like the crashing of pots together). The whole account given by Suetonius in his life of Nero is most amusing. Extremely jealous of possible rivals, the Emperor was highly sensitive about his reputation as a musician. During the rebellion of Vindex nothing excited him so much as the low opinion Vindex expressed about him as a *kithara* player. To the very end of his life he was interested in new kinds of instruments and promised to appear in person at the victory games, playing on different instruments, among which were different kinds of organ and the bagpipe.²

Nero made his first public appearance in his own palace at Rome in A.D. 59, at the age of twenty-two. In 64 he took part in the contests at Naples, and in 65 appeared as a *citharoeus* (i.e. sang and played on the *kithara*) in the theatre of Pompey in Rome. Towards the end of 66 he went on a professional tour of Greece, returning publicly in the beginning of 68. No doubt the judges at the different contests in which he took part would hesitate before refusing a prize; his successes, therefore, need not be taken too seriously. Yet we know that

¹ *Vita Alex.* xxvii. 5, 9.
he kept to the rules, adopted a humble attitude, and on at least one occasion was very nervous lest a mistake he had just made should be noticed and lose him points.

MUSIC TEACHING

Details of what pay music teachers in schools received are not numerous, though there is a little information from Teos, in Asia Minor, in the late third or early second century B.C.¹ Three teachers of reading and writing in an elementary school were paid sums from 600 to 500 drachmas, the two teachers of gymnastics received 500, and the music teacher 700. His duties were to give instruction in music (i.e. theory) and in playing the *kithara* with the plectrum and with the fingers; no mention of instruction on the pipes or any other musical instrument; some of the boys were taught theory only; not all the boys in the school received music lessons. There was an examination in music at the end of the year to see how the pupils had benefited by the instruction. The salary mentioned was comparatively generous and indicates the importance attached to adequate musical training. (The salary of a skilled workman was about one drachma a day at this time; the highest recorded salary from the Hellenistic world is that of a doctor who received 1,000 drachmas a year.)²

From Alexandria comes a papyrus of unique interest³ of the year 13 B.C., in the form of an apprenticeship contract between the owner of a slave and a music teacher. The papyrus is not in good condition and there are several technical terms which are not yet fully understood. However, the boy was to be taught to play various tunes on specified instruments and also to be able to accompany other performers; he was to be tested by an independent body of three, suitably qualified. The payment of one hundred drachmas was to be made in two parts, and the period of the contract was a year. A lot had to be learnt in that time and it is likely the slave had some knowledge before he started.

There is reason to believe that music was learned not from a written text but by ear.⁴ This conclusion must be treated with reserve, but in art remains musicians are always represented as playing by ear or

memory. A number of paintings show scenes from mythology of master teaching pupil to play on the pipes or the lyre; the master explains, shows how the instrument should be held, then lets the pupil try for himself, gently controlling an awkward position by guiding the pupil's arms and hands. Other scenes depict the pupil imitating the master as he plays, carrying out with his fingers the action as he sees it. Although these are scenes from mythology, it is reasonable to suppose that the painters incorporated in their work scenes from everyday life.¹

There are many such gaps in our knowledge of Roman music, and we can only hope that new material will come to light. At present there is enough to see the main picture, though it be blurred in places and may always remain unfinished.

¹ e.g. paintings of Marsyas teaching Olympus to play the pipes.
XI

THE MUSIC OF ISLAM

By Henry George Farmer

ISLAMIC CIVILIZATION

In the history of civilization, Islam stands as the chief animating idea culturally between the Dark Ages and the Renaissance. Yet when one speaks of Islamic civilization a purely sociological connotation is implied, since in spite of its religious basis and its pristine insularity, it spread over and conditioned a quarter of the then known world, giving rise to a mode of life which became a cynosure for all eyes beyond its boundaries. The explanation of this is simple enough. When the revelations of Muhammad flashed on the world in the seventh century of the Christian era, a message was delivered which could not be confined to the Hijaz, the cradle of Islam. As a result, within three-quarters of a century, the banner of the Prophet was planted eastward at the extremities of Transoxiana, southward by the banks of the Indus, northward to the shores of the Black Sea, and westward on the slopes of the Pyrenees.

Out of this newly won empire arose a civilization which dwindled that of much of the rest of the world into insignificance. From Samarcand in the east to Cordova in the west, the grandeur of courts, the fame of colleges, and the wealth of bazaars became a byword. Not since the days of Grecian splendour had art, science, and literature shone with such radiance, nor had inventions, discoveries, and improvements excited so much wonderment. It was Islam in its sociological trend which produced this sublimation, although it was its religious basis that was the *causa causans*,¹ since it preached a universal brotherhood which knew no racial or national distinctions, and saw no geographical boundaries. Similarly, while it was an Arabian polity which made this cultural elevation possible, and while the medium of most of its dissemination was Arabic, many other peoples of the Near and Middle East, and even of the European West, were producers and partakers of this culture.

In such wide dominions it was inevitable that alien notions should impose themselves on the culture of the Arab conquerors and, in

¹ See the remarks of the editor of *The Legacy of Islam* (Oxford, 1931), p. v.
consequence, what was once purely Arabian became considerably modified, tempered, and even replaced by other cultures, yet it was this fusion of ideas that gave greater mobility to the new civilization which was to have so vital an influence on the western world. Many peoples of the Near and Middle East, and of western Europe also, contributed to this Islamic civilization: Arab, Turk, Kurd, Persian, Aramaean, Syrian, Egyptian, Greek, and Goth. In the East, two lands especially played a prominent part in the music of this new cultural uprising, Persia and Syria; and in the West, Spain. The role of Greece was more in the theoretical sphere, through the influence of the works of authors centuries dead.

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THE CULTURAL BACKGROUND

The idea that Arabia has ever been a land of nomads and barbarism has long disappeared. Archaeological remains have revealed traces of a high stage of civilization in the ancient Arabian past, and we now know that this land was once a trading centre of the world which had a profound influence on the destinies of the East.¹ This could scarcely have been otherwise, since not only Syria and Phoenicia, but much of Arabia, was under the irresistible influence of Mesopotamian culture

as far back as the third millennium B.C. While political and commercial ties between these lands, where practically the same tongue prevailed, must have contributed to a certain level of melioration, there was also a fundamental reason for the persistence of cultural conformity, in that the urban population of both the Mesopotamian and Syrian plains was being continually reinforced by nomadic and country elements from the peninsula itself, a flux which secured the maintenance and revitalizing of the pristine Semitic features of their culture.¹ What we know of the outward visible signs of music and religion in ancient Arabia, partly confirms the view that the Arabs of the peninsula were the inheritors and conservators of much of the great Mesopotamian culture of the past.

Music, as found in the towns and oases of pre-Islamic Arabia, was mainly practised by the women-folk, and especially by a class of singing-girls (qaināt) attached to households of the upper classes or employed at places of entertainment. The male musician (mughamni) and instrumentalist (ālātī) were not so common, although one writer, Ibn Mūsā al-Naṣībī (d. c. 860), wrote about them in a Book of Songs (Kitāb al-aghānī).² We know little of the nature of music in those days but, as in ancient Mesopotamia, the art was associated with joy and brightness, as etymology reveals. The word zahara meant ‘to shine brightly’, hence that which produced ‘brightness’, a tambourine, was called mizhar. The origin of musical instruments among the Arabs is not unlike the story of Genesis iv. 21. According to Ibn Khurdādhbih, Tūbal b. Lamak is to be credited with the invention of the tambourine (duff) and the drum (tabl), whilst his sister Dīlāl is claimed to have originated the lyre or kitārara (miʿzaf). Lamak himself was responsible for the lute (ʿūd), and Lot’s people are given the credit of the pandore (tunbūr). Likewise, the Kurds were thought to be the first to use the recorder (? saffāra) type of instrument, while upon the Persians was conferred the honour of devising the reed-pipe (nāy), the double-pipe (dūnāy), the shawm (surnāy), and the upper-chested harp (jank).³

In ‘Stony Arabia’, the kaʿba as a place of pilgrimage, and ‘Ukāz as the home of the fair, were centres where musicians and poets congregated to contest for supremacy in their arts, for even those ‘treasured poems’, the Muʿallaqāt, were sung as well as recited, just

as entire odes (qasā‘id) were sung in the desert in modern times.\(^1\) Tradition avers that singing (ghinā‘) arose from the caravan song (ḥudā‘). Out of this were developed the lament (biqā‘) and the elegy (nauh), until there was fashioned the secular song (našb).\(^2\) In ‘Happy Arabia’ we are told that two species of song were practised, the himyārī and the ānafi.\(^3\) What distinction existed between them we are not told, but the former was evidently that of the Himyarites, whilst the latter, of more recent origin perhaps, may have been religious music.\(^4\) It is in ‘Desert Arabia’, thanks to the poets, that we get a fuller and more colourful picture of music. They tell of the joy when listening to the tavern singing-girl (dājīna, qarīna), of the fascinating high trill (tudhīr), the swinging refrain (tārijī), and the antiphon (jawāb). The instruments were the lyre or kithara (mi‘zaf), certain kinds of lutes or pandores (muwattar, kīrān), probably with skin ‘bellies’, the flute (quṣṣāba), the reed-pipe (mizmār), the percussion wand (qadīb), and tambourines (duff, mizhar).\(^5\)

Judging by technical musical nomenclature, little alien influence had come to Arabia since the fall of the great Mesopotamian civilization. Where foreign influence did assert itself was at the perimeter, especially in those lands reached through two gaps in the desert to the north-west and north-east which, in the early years of the Christian era, were inhabited by two Arab peoples, the Nabaṭaeans and the Lakhmids, whose culture bore a fairly clear impress of Syria and Persia respectively. The former was a land which had, in the past, seduced Greece by the sounds of the sidonios nablas (Hebrew nebel), the kinyra (Hebrew kimmōr), and the sambykā (Aramaic šabbekā), as well as the phoinix.\(^6\) If we can believe the Syrian Bar Šalibi (d. 1171), ‘musical tunes and melodies, with canons, stichera, and the rest came to the Greeks from outsiders’.\(^7\) Even Rome was caught by the Syrian anbūba and the tibiae sarranea.\(^8\) The persistence of the more ancient Mesopotamian culture in Syria certainly shows itself in musical instruments, as in the Syriac abbūba, ŭabā, pelaggā, qarnā, and zemmōra. If Syria could influence Greece and Rome in music, peoples nearer home would certainly be affected more easily. The Nabaṭaeans Arabs

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3. Ibid., chap. i, passim.
5. Ibid., chap. i, passim.
8. Pélagaud, loc. cit.
at Petra, and later farther north as far as Palmyra, were a people of some political and commercial standing in the early years of the Christian era. That they used the Aramaic script is well testified. An inscription at Palmyra tells of the kennārā (kinōrā), and Strabo mentions the joy of music at their festivals. Their successors, the Arab Ghassanids (fifth–sixth centuries), who were phylarchs of the Byzantines, were passionately fond of music. The Arab poets have praised the Ghassanid courts, where singing-girls from Mecca, al-Ḥira, and Byzantium sang to the accompaniment of the barbat or lute. It was from this region, possibly, that the Arabs borrowed the reed-pipe called zanbaq, whose very name reveals its origin, in that it was made of sambucus wood. Indeed the Arabic harp-like instrument known as the wannaj may have been a phonetic borrowing from the Syro-Greek phoinix.

The other gap in the desert to the north-east, the land of the Arab Lakhmids of Mesopotamia, had been under Persian domination for centuries, yet Persia, like other lands, had felt the pressure of ancient Mesopotamian culture, as we have already seen. However, Persia was now the fount of culture, although with her grotesque fable was as persistent as with others on the origin of music which, according to the Dabistān, began in the misty Mahābād days at the beginning of time. Firdausi in his great epic, the Shāhnāma, dresses up the old stories of the mythical kings and their prodigious exploits, although much was claimed to have come from Pahlavi sources. The brilliant courts of the kings are made resplendent with music (ruḍ) and singing (sawwad), whilst the strings of the harp (chand), the pandore (tambūr), and lutes (barbat, rubāb), and the breath of pipe and reed (ruyin nāy, nāy) murmured their delightful notes. Of martial and processional sounds were the strident blasts of horns and trumpets (karrānāy, shaipūr, būq), the thundering of drums and kettle-drums (tabīra, kūs), and the noise of a tintinnabulating throng (hindi darāy, zang, ʂinj).

From Pahlavi sources we get safer news, in that we read of the upper-chested harp (chand), the lower-chested one (vön), the lute (barbūt), the pandore (tambūr), the kannār, the shishak, probably a

1 Farmer, History of Arabian Music, p. 5.
2 xvi, iv. 27.
4 J. Robson, Ancient Arabian Musical Instruments (Glasgow, 1938), pp. 16-17.
5 Al-Firuzabadi, Al-Qāmūs, s.v. Al-Masʿudi, op. cit. viii, p. 91 (for wannaj read wannaj).
6 See above, pp. 250 ff.
7 The Dabistān. Translated by D. Shea and A. Troyer (Paris, 1843), p. 32.
near cousin of the Sanskrit ghoshaka, and the drums (tumbak, dum-balak), all of which can be recognized by Persian equivalents.\footnote{1} Pahlavi contains many Semitic words, although karmār is the only one in the preceding list of instruments, yet the tabira, karranāy, and shaipūr of Firdausi reveal a genuine Mesopotamian lineage. Many of these instruments are delineated on the Tāq-i Bustān reliefs (A.D. 590–628)\footnote{2} and elsewhere.\footnote{3}

This was the flourishing period of the Sasanid dynasty (224–642). It was Shāpūr I (d. 272) who is said to have introduced the lute into his land.\footnote{4} Bahram Gūr (d. 438) was famed for his musical talents, and his famous singing-girl, Āzāda, with her harp, is one of the commonest themes with the old Persian painters.\footnote{5} Another king who was fond of music was Khusrau Parviz (d. 628), whose favoured singing-girl, Shīrīn, is extolled by Nidhāmī in his Khusrau va Shīrīn,\footnote{6} and portrayed by the painters.\footnote{7} Among the famed musicians of this time was Bārbad of Fars, whose melodies were being played in Merv in the tenth century.\footnote{8} Another was Angisiyyā (cf. Nigisā), who submitted melodies to measure.\footnote{9}

As for the scientific theory of music in Persia in those days nothing is known. The claims for the existence of treatises on music in pre-Islamic time,\footnote{10} have been shown to be myths;\footnote{11} there were no such books until long after Islam was established. Of practical theory there is some evidence, e.g. the dastānāt of Bārbad.\footnote{12} We read of seven modes before the time of Bārbad,\footnote{13} and of twelve and thirty during his time,\footnote{14} as well as 360 melodies of his,\footnote{15} all of which were possibly linked up with sidereal conceits (cf. the numbers), as in Mesopotamia of old.\footnote{16}

It was through al-Ḥira, the capital of the Lakhmids, that Persian musical practices filtered into Arab lands. These people, like their

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1 J. N. Unvalla, King Husrav and his Boy (Paris, 1921), pp. 27–29.
2 Farmer, Studies in Oriental Musical Instruments, ii (Glasgow, 1939) pp. 69–85.
3 A. U. Pope, op. cit., pls. 208A, 230B, 233B.
4 Abu'l-Fidā, Historia anteislamica (Leipzig, 1831), pp. 82–83.
5 A. U. Pope, op. cit., pls. 664, 672, 679.
7 A. U. Pope, op. cit., pls. 898, 1042, 1476c.
10 Albert de Lasalle, 'La Musique des Persans', La Chronique musicale (1864), p. 81.
14 Burhān-i ḍāṭi (Calcutta, 1818), s.v. 'laḥn'.
16 See p. 247.
THE CULTURAL BACKGROUND

suzerains, were great lovers of music, and earned some fame in this
case. Bahram Gur, as a prince, was sent to al-Ḥira to be educated,
probably with this latter accomplishment in mind. It was certainly
the most important centre of Arabian culture in pre-Islamic times, and
it was from al-Ḥira that Al-Naḍr b. al-Ḥāríth (d. 624) introduced
the lute (‘ūd) and the more artistic song (ghinâ’) into Mecca.1 Through
this corridor also came the Persian harp (chang, Arab. jank) and pan-
dore (tanbûr, Arab. ṭunbûr), as well as the shawm (surnây).

The part played by music in the peninsula as a whole during the
so-called ‘Days of Ignorance’, meaning ignorance of Islam, was little
different from its role in the earlier Semitic civilizations. If the Arabs
toiled for the Assyrians to the lilt of a song, they did likewise in dig-
ging the fosse at Al-Medina at the dawn of Islam.2 If the temples of
Ishtar and Yahveh had their chants, so possibly had the shrines of the
Arabs.3 If the Hebrews likened music at a banquet to ‘a carbuncle set
in gold’, so could the pagan Arabs refer to it as ‘painters’ work set
off with gold’.4

THE RISE OF ISLAMIC MUSIC

At the birth of Islam in the Hijaz, in the first year of the Hijra or
‘Flight’, which we know as A.D. 622, a new spiritual world dawned
in which naught else mattered but Islam. At first all was austerity.
When Muḥammad had passed to greater glory (632), his ‘Com-
panions’ sought, like the Prophet, to keep the mind of man away from
what was termed the malāḥi or ‘forbidden pleasures’ which, as of old,
included ‘wine, woman, and song’. The Qur’ān had not contained
a word against music, but the purists of Islam began to collect hadith or
‘sayings’ of Muḥammad which were supposed to condemn listening
to music, and these were used with considerable effect by the legists
(fiqhā) to forbid any kind of music save that which was known to
have been tolerated by the Prophet. Eventually, the four great legal
schools of Islam, the Ḥanafī, the Mālikī, the Shāfi’i, and the Ḥanbali,
decided, more or less, against ‘listening to music’ and a most inter-
esting controversial literature on its permissibility or otherwise
grew up.5

1 Al-Mas‘ūdi, op. cit. viii, pp. 93–94.
5 Farmer, The Sources of Arabian Music = Records of the Glasgow Bibliographical
Society, xiii (1939), pp. 92–93; History of Arabian Music, pp. 20–36; Music: The Price-
less Jewel (Bearsden, 1942), pp. 1–27; J. Robson, Tracts on Listening to Music (London,
1938).
As we have seen, music was in the hands of matrons and singing-girls, although a few of the latter were suppressed under the earlier of the Orthodox Caliphs (632–61). By the close of the reign of 'Uthmān (d. 646) the male musician and instrumentalist came to the fore in the person of Ṭuways (d. 710), who is claimed as the first male musician under Islam. He made his name by imitating the Persian melodies which could be heard on every hand from captives who had been brought to the Hijaz as slaves. Indeed, so popular had this music become, that Arab musicians found it necessary to become better acquainted with this Iranian art in order to satisfy their clients. At the same time, the Persian musicians, such as Nashīṭ, were compelled to include Arabian melodies in their repertory so as to please their patrons. Precisely the same thing happened in Persian lands, to which thousands of Arabs had migrated at the conquest. Here, Arabian music seems to have been as well known as the native art, and a century later, when Ibrāhīm al-Mausilī went to Persia, he was able to study both Persian and Arabian music there. The influence of Persian music on the Arabian practical art was considerable.

Under the Umayyad Caliphs (661–750) the capital was removed from al-Medina to Damascus in Syria, where their courts, unlike those of their predecessors, almost became conservatories of music. Yazīd I (d. 683) was the earliest to have court minstrels, much to the horror of the pious. He was 'apassioned of music'. Al-Walīd I (d. 715) was another music-lover and the patron of the famous singers and composers Ibn Suraīj (d. c. 726) and Ma'bad (d. 743). The former was the first to introduce the Persian lute into Mecca (c. 685), which was an important event since its accordatura (taswiyya) and frets (dasāṭīn) were the means of widening the gamut and generally consolidating Arabian music. Another great musician was Ibn Misjaḥ (d. c. 715) of al-Medina. He travelled in Syria, Persia, and elsewhere, and picked up much that was new in these lands. His contemporary, Ibn Muḥriz (d. 715), did very much the same. Other great artists of the period were Al-Ghariḍ (d. 716), Ibn 'Ā'isha (d. c. 743), and Mālik al-Ṭā'i (d. c. 754).

1 Farmer, History of Arabian Music, pp. 52–53; Encyclopaedia of Islam, iv, p. 283.
2 Farmer, History, p. 55.
3 Ibid., p. 116.
4 Ibid., pp. 48–49; Encyclopaedia of Islam, iii, p. 750.
6 Al-Mas'ūdī, op. cit. v. 156.
7 Farmer, An Old Moorish Lute Tutor (Glasgow, 1933), pp. 26–27.
8 Farmer, History of Arabian Music, pp. 69–70; Encyclopaedia of Islam, v, p. 94.
9 Farmer, History, p. 70.
10 Ibid., p. 80.
11 Ibid., pp. 82–83.
12 Encyclopaedia of Islam, iii, p. 211.
The early 'Abbāsid period (750–847) has well been called the 'Golden Age', and in music, as in art and letters, it certainly deserved this estimation. Although court demeanour reflected Persian custom on every side, in music, the old Arabian art, as established under the Umayyads, held complete sway. The greatest musician of his day, Ibrāhīm al-Maušīlī (d. 804) was a protagonist of the indigenous music,¹ as was his son Ishāq al-Maušīlī, perhaps the most famed musician in Islam.² At the court of Al-Mahdī (d. 785), 'music refined the age',³ and 'no man had a finer voice than he'.⁴ As for Hārun al-Rashid (d. 809), the pages of The Arabian Nights reveal the wide horizon of his musical interests.⁵ Besides those mentioned, such great minstrels as Ibn Jāmi', Zalzal, 'Allawaya, and Yahyā al-Makkī were among those patronized.⁶ Under Ma'mūn (d. 833) there flourished the famous Prince Ibrāhīm b. al-Mahdī (d. 839), with a wondrous voice of three octaves.⁷ It was this prince who led the Persian romantic school in music in opposition to the Arabian classical school of Ishāq al-Maušīlī.⁸ The craze lasted for a century, but when its course was run, much of the older music, which was only preserved viva voce had disappeared.⁹ In Spain the Umayyad courts at Cordova vied with Baghdad in their patronage of art and science.¹⁰ 'Alūn and Zarqūn were the favoured minstrels under Al-Ḥakam I (d. 822). Others were 'Abbās b. al-Nasāʾī and Mašūr al-Yahūdī.¹¹ When the great Ziryāb appeared at the court of 'Abd al-Raḥmān II (d. 852) all who had preceded sank into oblivion, for 'there never was, either before or after him, a man ... more admired'.¹² Here the old Arabian school flourished in the form which Ibn Misjaḥ had created it, and Ishāq al-Maušīlī had confirmed it.

The second Baghdad period (847–945) saw the beginning of the decline of the Caliphate, and as the years crept on the great political empire of Islam gradually slipped away.¹³ The decay showed itself in music. Most of the caliphs still kept up huge musical establishments,

⁵ Farmer, History, pp. 113–23. ⁷ Ibid., pp. 120–1.
and some, Al-Muntasir (d. 862) and Al-Mu'tazz (d. 869), were gifted musicians, yet the brilliance was but reflected glory of the past. The minstrels, Ibn Bāna, Abū Ḥashīsha, and others, were second-rate. The last period of the 'Abbāsid Caliphate (945–1258) heralds the rapid decay and the fall of Baghdad and all its greatness. It opens with the political control of the caliphs by the Buwaihids (945) from Dailam. Music still flourished, since the Dailamī amirs, together with the caliphs, were as much addicted to all forms of the art and its concomitants as ever. With the coming of the Saljūqs (1037) from Turkestan, who became virtual masters of the Caliphate, a fresh cultural impingement began to show itself in Persia, Syria, and Mesopotamia which, as we shall see, developed elsewhere. In Egypt the Fāṭimid anti-Caliphate had been set up (909–1171), and its rulers, with but one exception, patronized music, literature, and science unstintedly. Al-Mustanṣir (d. 1094) even dared to say that his court music was 'pleasanter' than listening to the cantillation of the caller (mu' adhdhin) to prayer, while pictures of his dancing-girls, contrary to Islamic custom, adorned his palaces. Then came the Ayyūbid sultans (1169), bringing with them a Turkomanian influence which made itself felt in the arts in general. This alien influence displayed itself in music even more strongly under their successors, the Mamlûks (1252–1517), who were of Kurdish and Circassian breed, and delighted in Turkomanian instruments such as the qūpūz (mandore). In North Africa, the Berber Almoravides became a political force in 1056, and it is not unlikely that their dominion brought an indigenous music to the fore in Africa, and certainly we find that Spain was manufacturing special Berber instruments. Yet although the Berber Almoravides (1086) and Almohades (1130) became masters of Arab Spain, it is unlikely that their musical preferences had much sway over the accepted Arabian practice in the Iberian peninsula. If any extraneous inducements were likely in this respect, it would be from Christian Spain, and indeed this did show itself in Arab Andalusia in one or two instruments, the kaitūra (guitarra) and bandair (pandero). In the last Arab stronghold in Granada, the Naṣrid rulers (1232–1492) attempted to maintain the grandeur of the past, 'and for a time revived the splendour and distinction of Moorish Spain'.

1 Farmer, History, p. 140.  
2 Ibid., pp. 157–9.  
3 Ibid., pp. 179–80.  
5 Ibid., p. 191.  
6 Encyclopaedia of Islam, i, p. 223.  
8 Al-Maqqari, op. cit. i, p. 59.  
9 S. Lane-Poole, The Mohammadan Dynasties (London, 1894), p. 27.
know from Ibn al-Khaṭīb (d. 1374) what an important position the court singers held in his day. The end of Moorish Spain came in 1492 when Ferdinand and Isabella of Castile captured Granada.

In the east, where we last saw the Saljūqs in power, the situation of the Caliphate was rapidly deteriorating. Chaîning at the Saljūq bit, the Caliph Al-Nāṣir (d. 1225) begged the Khwārizmī Shāh to ease his condition, and in 1194 this was done. However, music was still one of the glories of the palaces of the last of the caliphs, Al-Musta'-ṣim (d. 1258); and the author of Al-Fakhrī tells us that this ruler would spend many of his leisure hours in its enjoyment. His chief court minstrel was the greatest musician of his age, Ṣafī al-Dīn 'Abd al-Mu'min (d. 1294).¹ In the year 1258 the Mughal hordes under Hūlagū put Baghdad to the sword, 'while the treasures, material, literary, and scientific, accumulated during the centuries while Baghdad was the metropolis of the vast empire of the 'Abbāsid Caliphs were plundered or destroyed'.² Thus closed one of the great and splendid civilizations of history. It is true that Egypt and Syria became, by virtue of the Arabic language, the pivot of the intellectual life of Islam, but here it was but a shadow of the past. The Mamlūk sultans maintained elaborate court music and splendid military bands, but all this came to an end when the Ottoman Turks conquered Egypt in the year 1517.³

After the fall of Baghdad, the axis of culture moved to the east, when Persian, instead of Arabic, became the lingua franca. Here the Mughal rulers, softened by Islam and Iran, became ardent and open-handed patrons of the arts. The great musician, Ṣafī al-Dīn 'Abd al-Mu'min, whose theoretical works on music dominated the Near and Middle East for over 300 years, was patronized by the Juwainī family in the service of Hūlagū.⁴ Ibn Taghribirdī tells us that the Il-Khān Abū Saʿīd (d. 1335) himself 'cultivated music, played well on the lute, and composed songs'.⁵ At the court of the Muẓaffarīd ruler Shāh Shu'jā' of Shīrāz (d. 1384) was the famed minstrel Yūsuf Shāh and the great scholar and music theorist Al-Jurjānī (d. 1413).⁶ With the Jalairids of Mesopotamia, Ḥusain (d. 1382) and Aḥmad (d. 1410), music seems to have been of as much import as politics.⁷ Here,

¹ Encyclopaedia of Islam, v, pp. 191-2.
⁴ Farmer, in 'Preface' to R. d'Erlanger, La Musique arabe, iii, pp. v–xiv.
⁶ Ibid., p. 2797; R. d'Erlanger, op. cit. iii, pp. xii–xiii.
⁷ Journal asiatique, ser. iv (1845), v, p. 448.
Ridwan Shâh and 'Abd al-Qâdir b. Ghaibi, the most famed musicians of the day, flourished. ¹ When the conquering Timur (d. 1405) appeared on the horizon, the Persian minor dynasties vanished. Samarcand, farther east, became the new cultural centre, and here 'Abd al-Qâdir b. Ghaibi (d. 1435) found shelter.² Yusuf-i Andakâni, who 'had no equal in the seven climes', was court minstrel to Shâh Rukh (d. 1408).³ Amîr Shâhi was favoured by Bâysungur (d. 1433) because of his threefold accomplishments as musician, poet, and painter.⁴ Even with the last of the Timûrids, Husain Mîrzâ Bâyqarâ (d. 1506), music was patronized without stint,⁵ and some of its exponents, such as Qul-i Muhammed, won celebrity far and wide.⁶ Under the Mughal II-Khâns and the Timûrîds, several new features appeared in eastern Islamic music. Among them were such Chinese instruments as the shidirghû, a long-necked lute, the yâtûghân, possibly a type of psaltery, the pipa or lute, and other instruments.⁷ These probably infused fresh sound effects, something which may find a parallel in painting; indeed the decorative feature in music, called the naqsh, may also be traced in the rhetorical prose of the period, and both may have been due to the same alien promptings.

Meanwhile the Ottoman Turks in Asia Minor had become the rising Islamic power in the Near East, and their conquests in eastern Europe, culminating in the capture of Constantinople (1453), gave them a terrific prestige which was soon to carry them to the walls of Vienna. Like other Islamic potentates, their sultans indulged in music and song to their fullest measure, and musicians found their courts a cornucopia. Here a son 'Abd al-'Azîz, and a grandson Mahmûd, of the great Persian musician 'Abd al-Qâdir b. Ghaibi, received the bounties of Muhammed II (d. 1481) and Bâyazid II (d. 1512) respectively, whilst many Arabic and Persian works on the theory of music were rendered into Turkish.⁸ Turkish influence on the instrumental music of the Near East and Balkans was considerable, but that is outside our purview.

Islamic music was born and cradled in Arabia, yet, under Persian,

¹ Encyclopaedia of Islam, v, pp. 4–5.
² Ibid., loc. cit.
⁴ Pope, op. cit., p. 2798.
⁷ Farmer, Studies in Oriental Musical Instruments, ii (Glasgow, 1939), pp. 15–17, pl. 10; Pope, op. cit. 633A, 778A.
Syrian, and Greek tutelage, it became a universal art. Its extrinsic character was changed when Şafî al-Din (d. 1294) introduced the Khurasâni scale. Then, under Mughal and Turkoman pressure, came other alien influences. These were followed, in the fourteenth century, by a reversion to the plain Pythagorean scale in Persia, to be spread elsewhere later. Finally came the adoption of the modern quarter-tone (rub) scale in the seventeenth century, which made the final break with the old Arabian-Persian-Syrian system of the ‘Golden Age’ of Islam. Only in al-Andalus of the West was this latter preserved, and today in Morocco one may still hear sometimes, perhaps, an echo of that music about which Shahrazad, although a Persian, whispers so enchantingly in The Arabian Nights.

SECULAR MUSIC

We read in one of those delightful nocturnes in The Arabian Nights: ‘To some people music is like food; to others like medicine; to others like a fan.’ This mention of music as ‘food’ has an esoteric significance, as will be shown later. The remark ‘like medicine’ is also strange, because the Oriental attitude towards music did not admit of the ‘appreciation’ of music as we understand the term. Aesthetics, the science of the beautiful, did not exist in Islamic conceptions. The chief reason for this was that the Orient, as we have seen in ancient Mesopotamia and Egypt, put great trust in the doctrine of ta‘thir (influence) in music, a dogma called by the Greeks the ethos. This belief, together with the accretion of anthropomorphism, reigned supreme, and one has but to read The Arabian Nights to appreciate its far-reaching effect. The delightful imagery in the ‘Song of the Lute’, is not mere metaphor but anthropopathy. Music was part of the macrocosmic system, and was accepted as such by many Islamic philosophers, astronomers, mathematicians, and physicians. For that reason the melodic modes (maqâmât) and rhythmic modes (iqâ‘ât) were closely linked up with the universe. It was because of this that the lute had ‘four strings, four sides, four parts, and four tied places (frets)’, and that the dimensions of instruments —which, incidentally, were given almost human attributes—were

2 Ibid., v, p. 294.
subject to mathematical formulas. In addition, all was related to, and conditioned by, cosmic things: the humours, the elements, the seasons, the winds, the planets, the zodiac, and so on. The hearing of special kinds of music at particular times of the day and month, under certain other conditions, became a part of therapeutics. It was used in hospitals, not so much for its soothing effect, but because of its geometrical proportion together with its astrological significance. Within such principles there could have been no room for aesthetics.

What is of greater interest is the more universal approval of music as the story-teller in The Arabian Nights puts it, likening the art to ‘a fan [on a sultry day]’. When a child was born into Islam the opening lines of the call to prayer (adhdhān) was chanted in its ear, whilst the neighbouring matrons assembled with their tambourines (dufū’) to herald joy. At the celebrations of circumcision there was further music and entertainment. Marriage occasioned an even greater display, since the procession had its shawms (zumūr) and drums (tubūl) in noisy service, while hired female musicians (mughanniyāt) performed less strident music in the courtyard. Even at the bier, the wailing (wilwāl) of the mourning women (naddābāt) and the thud of their tambourines, was followed by the chanting of the Qur’ān. Thus, between the cradle and the grave, music was ever present in Islam. All the great religious festivals encouraged public music, for the cry was ‘Gladden thine heart, drum thine drum, and pipe thine pipe’. Military and processional music was cultivated on a grandiose scale in the shape of trumpets (anfār), horns (büqāt), shawms (zumūr), drums (tubūl), kettledrums (naqqārāt), and cymbals (kasāt). Its performance of a divertimento (nauba) at certain prescribed hours of the day must have beckoned the crowd. In addition there was the attraction of the singing-girls (qaimāt) in the taverns, against which the pious raved in wrath, and the less scandalous story-teller (rāwi) and violist (rābābī) in the coffee-houses. The household in general found the matrons indulging in singing to the rhythm of the tambourine.

The music of the Islamic folk was little different then from what it is today. The toil song, a relic from the cradle of humanity, was practised by the boatman, the sailor, the porter, the weaver, the gleaner, and the rest, for its lilt and measure not only softened the

2 F. Dieterici, Die Propædeutik der Araber (Berlin, 1865), pp. 141–6.
4 Arabian Nights, ii, p. 413.
5 Encyclopaedia of Islam, v, pp. 217–22.
6 Dieterici, op. cit., p. 103.
sweat of toil but ordered it rhythmically. Then there was domestic music: the lullaby, the children’s ditties, the bridal song, and the elegy.¹ Nor was this simple homely art confined to the folk. The Caliph Hārūn delighted in listening to his minstrels repeating the songs of the people, as we know from the reception he gave Ibn Jāmil when he sang the song of the Yemenite negress, and Abū Ṣadaqa when he chanted the ditties of sailors and masons.²

With the middle and upper classes, music assumed a far different character, much of it being determined by the modes and tastes set by courtly procedure. The caliphs, nobility, and rich merchants kept musical establishments in which highly skilled singing-girls were part of the household.³ They usually came from music schools established specially for their training, and fabulous sums were sometimes paid for them,⁴ the price being determined by both physical and musical charms, although the Persian poet Sa‘dī said ‘a sweet voice is better than a beautiful face’.⁵ They were usually given an excellent education.⁶ The male musicians and those who were specifically instrumentalists, were usually freedmen (mawāli) of foreign extraction, mainly Persian, and the demand for them at the court and elsewhere was inordinate, while the gold and other gifts showered on them almost passes credence.⁷ Certainly the concerts given at court, which were staged with great lavishness, dwarfs anything else in the history of music.⁸ In Umayyad days these musicians, both male and female, were quite unrestrained in their public performances at court or elsewhere,⁹ but later a curtain shut them off from the audience, this provision satisfying the consciences of the auditors somewhat, in that if they heard this ‘forbidden pleasure’ (milhā, pl. malāhi), at least they did not see it.¹⁰ The truth was that in spite of all the condemnation of music by the puritans, ways and means were found, sometimes with the most delightful casuistry, to escape censure.¹¹

At concerts in Umayyad days (661–750) ‘the utmost propriety was observed’, and the slightest breach of decorum was reproved by the stroke of a stick.¹² The earliest minstrel, Ṭuwais, used to walk back-

¹ See Bibliography.
⁴ Ibid., pp. 86–87, 102, 132–6.
⁵ Gulistan, iii. 28.
⁹ Ibid., pp. 67–68.
¹⁰ Ibid., pp. 102–4.
wards and forwards along the lines of his audience. Al-Gharīḍ, before he gave a recital, would explain to his audience the type of music he was about to perform, adding some little history of the composer and author, together with something about its first performance and performers. The mannerisms of these musicians are not without interest. Yazīd Ḥaurā’ was given to attitudinizing and gesticulating while performing, which may have had an emotional or rhythmical effect; these affectations impressed the great Ibrāhīm al-Mausili, who made his singing-girls copy every movement of this artist. The famous Ishāq al-Mausili usually began his own songs on a high note with a terrific sforzando, hence his nickname al-malstū’ (‘stung by a scorpion’). Ziryāb, in Muslim Spain, practised some novel methods in teaching; for instance, bad articulation was remedied by the insertion of a piece of wood in the pupil’s mouth so as to keep the jaws apart; it was kept there night and day until cure was effected.

Methods of composition seem to us just as odd. Some composers, when in an inventive mood, took a rhythmic wand (qadib) to beat out a known rhythm, and then gave utterance to what was called an ‘improvised song’ (ghinā’ murtajal). Ma’bad, the spirit moving him to compose, would leap into a saddle and beat on the pommel with his wand in his chosen rhythm until his melody took definite shape. Ibn Suraij would put on a robe garnished with jingling grelots which, when he swayed in rhythm, helped him to fashion a new melody. When Ibrāhīm al-Mausili was asked how he composed he said that the first thing he did was to banish all thoughts of mundane affairs. This enabled him to lift his thoughts to the requisite emotional plane; his creative self emerged only when he could no longer see or hear anything external. When this sensation or transcendence was reached, he visualized his rhythm, and within its framework, his tonal images took shape. Ibrāhīm al-Mausili, his son Ishāq, and Ziryāb claimed to have been taught melodies by the devil and genii. The latter, when the jinn had been prompting him in his sleep, would jump out of bed, call his singing-girls, and get them to memorize the music while it was still fresh in his mind.

In early days, the more solemn rhythms (thaqāl) were preferred to

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2 Al-Iṣfahānī, op. cit. iii, p. 70.
3 Al-Maqqari, op. cit. ii, p. 121.
4 Al-Iṣfahānī, op. cit. v, p. 70.
5 Al-Iṣfahānī, op. cit. i, p. 21.
8 Al-Iṣfahānī, op. cit. v, p. 34.
the festive rhythms (ramal, hazaj, makhūrī). Under the later 'Abbāsid régime, the latter became very popular. Ḥakam al-Wādi, censured for pandering to the public taste by composing and singing in the lighter vein, said: ‘For thirty years I have sung in the thaqil rhythm and have hardly gained a living, yet in three years of singing in the hazaj rhythm I have earned more money than thou hast ever seen.’ That melodies and rhythms should be in conformity with the sentiment of the words was stressed by Ibn 'Abd Rabbīhi (d. 940), the Ikhwān al-Ṣafā’ (c. 961), and Ibn Sīda (d. 1066), and it is this which accounted for preferences in lighter music. We are told, however, that there were kinds of music designed for joy and sorrow, music for the tavern and flowing bowl, music for lovers and for mourners, music for the description of scenes as widely asunder as the hushed scented garden and the moving chase. Indeed, Iṣḥāq al-Mauṣili spoke of a composition of his in which he portrayed a game of ball with a stick, complete with the getting of a goal at the end. That is real programme music. Only those who have heard music in the Near and Middle East can possibly appreciate the wide dissimilarity of reaction to music between the Orient and the Occident. The rending of garments, and similar sudden, unpremeditated, and often violent acts, under music’s influence, are commonplaces in Arabic literature. Swooning is the general result of the ‘killing charm’ of music, as we read in The Arabian Nights, although death itself has been recorded several times.

The sums awarded to musicians, as recorded in the annals, are absurdly large if judged by our standards. The same may be said of the numbers of compositions said to be theirs or in their repertories. Badhl, a famous songstress, is alleged to have known 30,000 songs, and yet, prodigious as this may seem, there are still people who know the Qurān by heart. More modest was the accomplishment of 'Uraib, another songstress, who claimed 21,000, while Ziryāb in Spain knew only 10,000. The compositions of individual musicians do not ‘hit’ so high a mark, to use an Arabism, although Ibrāhīm al-Mauṣili boasted of 900 works. As with us in the West, certain songs became famous, such as the Seven Fortresses of Ma‘bad, the Seven Songs of Ibn Suraij, the Hundred Chosen Songs edited by Ibn Jāmi’, the song called ‘Three Maidens’, the words being attributed to

7 Ibid., pp. 130, 133.  8 Ibid., p. 117.  9 Ibid., p. 82.
10 Ibid., p. 80.  11 Farmer, Sources, p. 15.
the Caliph Hārūn, and the ‘Zayānib’ of Yūnus al-Kātib. Complete song collections existed in profusion, as well as biographies of singers, instrumentalists, and composers, together with popular story-books about music. It is humiliating to scan the pages of the Great Book of Songs (Kitāb al-aghānī al-kabīr) by Al-Iṣfahānī (d. 967), which took fifty years to compile, consisting of twenty-one volumes, containing nearly 2,000,000 words, dealing with the history of Arabian music and song up to the tenth century, and to compare it with similar Occidental achievement during the same period.

RELIGIOUS MUSIC

That music played its part in religious ceremonial in ancient Arabia seems clear enough. St. Nilus speaks of the pagan Arabs chanting when encircling a stone. Noeldeke suggested that this was similar to the Islamic tahīl, a musical utterance which belonged to moon worship; it was used with the talbiyya, which is claimed to have been indulged in by Adam and Noah. Epiphanius avers that Dhu l-Shāra, a god of the Nabaṭaeans, was worshipped on his birthday ‘with hymns’. Indeed Hisham b. al-Kalbī tells us in his Book of Idols that ‘the melodies of mankind’ were due to the god named Al-Uqaysir. When Islam came to Arabia, Muḥammad cried anathema upon much of this, but from the Atlantic to the Oxus music and magic were closely connected. What was turned directly into Islamic practice were the tahīl and talbiyya. Similarly, the pagan songs during the pilgrimage (ḥajj) were given a new character and even allowed to be accompanied by fife (shāhīn) and drum (tabl). Islam strove to discredit the dance (raqs), and the literature in its condemnation is not inconsiderable. Ibn Taimiyya (d. 1328) scorned it as ‘proud walking upon the earth’, yet it was never eradicated. Today, among those Arabs who are far distant from the Occidentalized towns, one may still hear and see the choral dance which, while outwardly secular, still retains its religious mien. As we shall see later, the religious dance still exists.

Strictly speaking, however, Islam has no religious music in our

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1 Ibn al-Arabi, Al-futuhāt, ii (Cairo, A.H. 1329), p. 612.
2 Farmer, History, p. 80.
3 Ibid., pp. 88–89.
4 Farmer, Sources, pp. 89–90.
5 Ibid., pp. 90–93.
6 Migne, Patrologia latina, lxxi, p. 612.
9 Farmer, Sources of Arabian Music, p. 90.
normal sense of the term, since there is no service in the Muslim mosque comparable to that in the Christian church. Yet music in praise of Allâh has always found a place both inside and outside the Muslim places of worship, e.g. in the ‘reading’ (qirâ‘a) of the Qur’ân, the cantillation (talhîn) of the call to prayer (adhdhân), the ‘listening to music’ (al-samâ‘) of the Šûfî and Darwîsh fraternities, and the simple religious chants of the folk. The Qur’ân lent itself to cantillation because of its prosodic structure; much of it consists of rhymed prose (saj’), the assonance of which tempted the voice to use modulated sound in ‘reading’. Further, there was the hadîth which said, ‘Allâh listens more intently to a man with a beautiful voice reading the Qur’ân than does the owner of a singing-girl to her voice’.1 In this wise the cantillation of the Qur’ân became a necessity, and Ibn Qutaiba (d. 889) tells us that the earliest of these chanters who used melodies (alhân) was ‘Ubaidallâh b. Abî Bakr (fl. 669), though he informs us that this early cantillation was dirge-like and quite different from ordinary melody (lahn) in singing (ghinâ’).2 This distinction seems to have been a fiction created by the legists who, in their opposition to music, looked upon this singing as improper (mâkrâ‘h),3 and so discriminated between ‘cantillation’ (taghbir = ‘raising [the voice]’)4 and singing (ghinâ’).5 By the ninth century, however, even the melodies of popular ballads were being used in the cantillation of the Qur’ân.6 Despite the violent opposition of the purists to all music, the cantillation of the Qur’ân became one of its supreme religious and cultural accomplishments. While the prosodic vocalization and punctuation are strictly governed by rules laid down later by Ibn al-Jazari (d. 1429),7 the cantillation itself was not confined to any fixed melodic contour, and so, from the shores of Morocco to the Oxus, one may hear this cantillation today in almost as many patterns as there are mosques.8

The ‘call to prayer’ (adhdhân = ‘announcement’) was instituted in the first or second year of the Hijra (622–4) as a means of summoning the faithful to their religious duties. At first it was but a simple announcement in the streets,9 and it was thus that Bilâl, the first

1 Al-Ghazâlî, Ihûd ‘ulûm al-dîn, ii (Cairo, A.H. 1326), p. 185.
2 Ibn Coteiba’s Handbuch der Geschichte (Göttingen, 1850), p. 265.
4 Or ta’bir = ‘narration’.
6 Ibn Coteiba’s Handbuch der Geschichte, loc. cit.
7 Al-Suyûtî, Itqân, i (Cairo, A.H. 1278), p. 96.
8 For a modern plain example see E. W. Lane, Modern Egyptians (London, 1860), p. 376. A more ornate specimen has been recorded on H.M.V. 7–212104–5.
9 Encyclopaedia of Islam, iii, p. 373.
‘caller’ or muezzin (mu‘adhdhīn), performed it. Shortly after this we find it being called from the minaret of the mosque in a similar way to the cantillation of the Qur‘ān as a dirge-like chant, a character which persisted until the tenth century in Egypt, as Al-Muqaddasī (d. 946) tells us. Then, as with the ‘reading’ of the Qur‘ān, melody proper, indistinguishable from ordinary singing (ghinā‘), came into general use; the performance of this was known by the purely secular term tatrib; although we read at Fars in Persia that the ‘call’ was made without tatrib. In the Ḥijāz the office of muezzin was at first hereditary, but before long the duties became so onerous that several muezzins were to be found in each mosque, and by the ninth and tenth centuries, these were taking it in turns to make the ‘call’, while within the mosque itself they later joined in chorus when chanting the ‘second call’ (iqāma). As with the cantillation of the Qur‘ān, the ‘call’ is still to be heard in totally different styles, from the plain, ingenuous, unaffected chant, to highly festooned coloratura.

The Ṣūfī and Darwīsh conception of music as an aid or approach to religion is of the highest importance since they reveal how intimately their ideals are connected with ancient beliefs, although on a higher and more rationalized plane. Ibn Zaila (d. 1048) says: ‘Sound produces an influence in the soul in two ways: one on account of its musical structure [i.e. its physical structure], and the other because of its similarity to the soul [i.e. its spiritual structure].’ Śūfī disciples, such as the Persian Al-Hujwirī (eleventh century) and Al-Ghazālī (d. 1111), divide people influenced by music into two classes—those who hear the material sound, and those who apprehend its spiritual meaning. The latter, in Śūfī doctrine, do not hear notes or beats, melodies or rhythms, but music per se. Al-Hujwirī quotes the saying of the Prophet, ‘O Allāh, let us see things as they are’, and listening to music could alone accomplish that, since ‘right audition consists

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1 Ibn Sa‘d, Biographien Muhammeds, iii, i (Leiden, 1904), p. 165.  
2 Bibliotheca geographorum arabicorum, iii (Leiden, 1877), p. 205.  
3 Ibid. iii, p. 327.  
5 Ibid. iii, p. 439.  
6 Bibliotheca geographorum arabicorum, vii (Leiden, 1892), p. 111.  
7 Ibid. iii, p. 327.  
10 See above, pp. 231, 258.  
11 British Museum MS. Or. 2361, f. 220v.
of hearing everything as it is in quality and predicament'.¹ Thus Ṣūfī teaching reveals to us the meaning of music in almost the Schopenhauerian sense that it is the eternal will itself.² The Arab mystic, Abū Sa‘īd b. al-‘Arabī (d. 952), believed that ultimate truth could be apprehended only through divine ecstasy, and ‘ecstasy is lifting the curtain and witnessing the Watcher [Allāh]’. The most potent means to the attainment of ecstasy is ‘listening to music’, for as Dhu’ l-Nūn, the Egyptian mystic has said, we have in this ‘listening’ a power that ‘creates a divine influence which stirs the heart to seek Allāh’, and leads one ‘to find the existence of the Truth beside the Veil’, as Abu’ l-Ḥusain al-Darrāj has testified.³

It was from such beliefs and practices, although far less spiritual, that sprang the numerous Darwīsh orders, the Mevlevi (Maulaviyya), the Aissaoua (‘Isawiyya), and others, with whom music and dancing are used to create an hypnosis for the attainment of religious sublimation. The Mevlevi order, founded at Konia by Jalāl al-Dīn al-Rūmī (d. 1273), better known as the ‘dancing dervishes’, has a most interesting ceremonial dance of thirteen sections which have been described by Helmut Ritter.⁴ A somewhat analogous rite from Upper Egypt, consisting of seven sections, has been recorded by Victor Loret.⁵ The Aissaoua fraternity was founded in Morocco by Muḥammad b. ‘Īsā (d. 1524), hence its name, but since then it has spread to other parts of the Maghrib and Egypt.⁶ It still exists.⁷

Yet the religious music of Islam does not begin and end in pious edifices or institutions, since in every Muslim land the religious chant has been an integral part of social life. Just as the Calvinists were wont to indulge in psalm-singing as a secular pleasure, so the Muslims in their festivals found social pleasure in the religious chant. Wherever one looks in Islamic lands, the universality of hymns (nasha‘īd) and cantillation (talḥīn) is apparent. Indeed, in some instances, they have been a part of education, and this has prevailed in spite of the fact that there has always been a powerful group of

² Farmer, The Influence of Music: From Arabic Sources, p. 91.
⁶ Encyclopaedia of Islam, ii, pp. 527–8.
legists who strenuously opposed music in any form, if not always as something sinful (haram), at least as a diversion which was considered unpraiseworthy (makrûk).  

INSTRUMENTS OF MUSIC

The Arabs admitted that 'with the exception of the Persians and Byzantines, no people had a greater liking for musical instruments' than themselves. Certainly no other people ever wrote so enthusiastically about them. Many of the Arabic and Persian writers on music from Al-Fârâbî (d. c. 950) to 'Abd al-Qâdir b. Ghaibî (d. 1435), fully describe the instruments of their day. In Muslim Spain, where Seville was the centre of the instrument-making trade, there were 'works on the art of making instruments common amongst us', says Ibn Sa'id al-Maghribî (d. c. 1286).

One of the earliest of the instruments of the Arabs was the qadîb or rhythmic wand, whose tick-tick (taqṣaqa) the Prophet disliked. Hand-clapping was called taṣfaq, hence muṣāfaq or clappers, which to the Syrian Arabs were the shuqafât; the Persians called them the chârpâra or châlpâra. Small finger cymbals were the Arabic kâsât, which the Syrians termed šâjjât. Cymbals proper, when plate-shaped, were the gunûj, but if bowl-shaped were the ku'ûs or kâsât. Musical glasses (harmonica) called tusût, were known to Ibn Khaldûn (d. 1406), but the instrument was played with sticks. The Persian 'Abd al-Qâdir b. Ghaibî speaks of saz-i ūsât (musical cups) and sâz-i kâsât (musical bowls), as well as the sâz-i alwâḥ-i fûlad (instrument of slabs of steel), i.e. the glockenspiel. We first read of a metallophone in Ibn Sinâ and Ibn Zaila in the eleventh century, who term it the šaŋî ŝînî (Chinese šanţi).

The generic name for a drum was the Arabic ṭabl, which equated with the Persian duhul, and the Turkish dâwûl. In the specific sense it was a cylindrical drum with two heads. A waisted drum was the kûba. Among single-headed drums was the small vase-shaped

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1 Arabian Nights, vi, p. 59.
2 Al-Mas'ûdi, op. cit. viii, p. 93.
3 Al-Maqari, op. cit. i pp. 42, 58–59, 197.
4 Madrid MS. 603 (Arabic), fo. 79.
6 Encyclopædia of Islam, v, p. 196; Farmer, Sources, frontispiece; A. Lane, Early Islamic Pottery (London, 1948), pl. 49a.
7 T. Arnold and A. Guillaume, op. cit., fig. 91.
9 Bodleian MS. Marsh 282, ff. 78, 81.
10 R. d'Erlanger, La Musique arabe, ii, p. 234.
durrai,"1 while a larger type was the Berber agwal, and the Arabian darbakka or darbûka, which was identical with the Persian tunbûk.2 Kettledrums ranged from tiny naqârât, through medium-sized naqarât equating with the Turkish quddâm, to the larger kisât, and the monster Mughal kuwargâ or kûrgâ. Single kettledrums were the tabl shâmi, qaş'a, and tablî bâz.3 Tambourines were plentiful. Duff was the generic term for both the circular and rectangular kind; among the former was the mizhar, while with ‘snares’ across the skin it was the ghîrbâl because of its likeness to a ‘sieve’. In Muslim Spain the Christian pandero (bandair) was borrowed. It was somewhat like the preceding but when rings and sonnettes were added it was called the dâ’ira, or with jingling metal plates the târr.4

Among horns and trumpets the Arabic biq was generic for both, although the word was used particularly for the conical tube types, while the cylindrical tube was called nafîr. The Persian karnâ was extremely long and had the ‘bell’ turned back into an ‘S’ shape.5 Turks and Turkomans had the bûrû and bûrghû. The woodwind were covered by the term mizmûr in Arabic and nai in Persian, but the latter distinguished the flute and reedpipe as the nay-i safîd (white nai) and the nay-i siyâh (black nai). The Arabs used mizmûr or zamr specifically for the reedpipe, while they called the flute the qus-šâba. Smaller flutes were the Arabic shabbâba, the Persian pisha, and the Berber juwâq, the latter being the puzzling instrument written ẖumâqiy by a careless copyist of Al-Maqquirî. The panpipes had the name shu’aibîyya in Egypt, but elsewhere the more classical term mûsîqâl was used, hence the Turkish mithqâl.6 The balâban of the Persian and Turkoman was a cylindrical reed-pipe, while the conical shawm was the Persian surnâ, the Arabic surnây, and the Turkish zurnâ.7 Other varieties were the ghaitâ, nây zunâmî (vulg. zullâmî), and the biq [zamrî]. Double reedpipes, such as the Persian dûndy, the ‘Iraqian zammâra, the Maghribian maqrûn, and the Turkî gôshnây, belonged to the folk, as did the ‘drone’ type of the tîbiâe pares, as exemplified in the arghûl.8 An instrument of Chinese provenance

2 Farmer, Minstrelsy of the Arabian Nights, p. 36.
3 Encyclopaedia of Islam, v, pp. 215-17; Pope, op. cit., pl. 706; Farmer, Minstrelsy, pl. 11.
4 Encyclopaedia of Islam, v, pp. 73-75; Farmer, Minstrelsy, pls. 1, 9.
5 Encyclopaedia of Islam, v, pp. 42-44; Farmer, Turkish Instruments of Music in the Seventeenth Century (Glasgow, 1937), pp. 28-31, 47; Kissy, op. cit., p. 43, figs, 1, 3; T. Arnold and A. Guillaume, op. cit., fig. 91; Ars Asiatica, xiii (Paris, 1929), pl. iv.
6 Encyclopaedia of Islam, iii, pp. 541-2; Farmer, Studies, i, pp. 65-67; Minstrelsy, pls. 7, 8, 12.
7 Farmer, Turkish Instruments, pp. 23-27.
8 Encyclopaedia of Islam, iii, pp. 539-41.
was the mouth-organ of free reeds called the mushtak in Sasanid
days, and it was still thriving under the Mughals as the chubchiq.¹
That the Arabs knew of and constructed pneumatic and hydraulic
organs we know from the Muriṣṭus treatises, but both the former and
the hydraulus were early types. Their hydraulic organs were master-
pieces of mechanism, based mainly on the appliances of Philo, Hero,
and Archimedes. Their hydraulus was certainly of a type anterior
to Hero and Vitruvius.² The portative was known in Persia in the
fifteenth century.³

It is in chordophones that Islamic peoples gained world-wide
fame. The upper-chested harp or chang was the more favoured in
Persia; it was the Arabic jank, sometimes called sanj. Al-Farabi (d.
c. 950) mentions various methods of stringing and accordatura, one
with fifteen strings tuned diatonically from G to g¹, while another with
twenty-five strings was tuned chromatically from G to g¹.⁴ The
Persian Kanz al-tuhaf (fourteenth century) gives twenty-four strings
tuned diatonically from c to c⁰, while the Jami' al-akhlaq (1435)
describes the chang with thirty-five strings tuned enharmonically
for two octaves.⁵ It appears in both Arabian and Persian art.⁶
Persia had another harp which had a wooden face to the sound-
chest, instead of a parchment face as in the chang; it was called the
agri, but was tuned similarly to the chang.⁷ In Egypt was produced
another type called the jank misri which had a wooden sound-board
placed on one side of the strings for greater resonance.⁸ Off the
beaten track, in the Yemen and the Hijaz, the more primitive lyre
or kithara (?) known as the mi'zaf was still favoured in the tenth
century. In Baghdad it was laughed at as a ‘rat trap’,⁹ although Al-
Farabi recognized it.¹⁰

The psaltery was attributed to Al-Farabi,¹¹ but the instrument is
not mentioned by him under its millennium-old name of qanun.
Nor do Ibn Sinâ (d. 1037) or Ibn Zaila (d. 1048) mention it, yet it is
figured in its trapezoidal form in the tenth-century Syriac lexicons.¹²

¹ Farmer, Studies, ii, pp. 9–10.
² Farmer, The Organ of the Ancients: From Eastern Sources (London, 1931), passim.
³ Bodleian MS. Marsh 282, fo. 80.
⁴ R. d'Erlanger, La Musique arabe, i (Paris, 1930), pp. 286–94.
⁵ King’s College (Cambridge) Persian MS. 211, ff. 21v–22v.
⁶ A. U. Pope, op. cit., pls. 646a, 652, 727a, 1300a–b, 1808, 1330a, 1353b; see pl. 13 (c).
⁷ Bodleian MS. Marsh 282, fo. 78.
⁸ Glasgow University MS. Bi 22–23, 18, fo. 145.
⁹ Encyclopaedia of Islam, iii, pp. 528–30.
¹⁰ R. d'Erlanger, La Musique arabe, i, p. 286.
¹¹ Ibn Khallikân, op. cit. iii, p. 309.
As the qānūn it was known in Muslim Spain in the eleventh century, and in the fourteenth century it was mounted with sixty-four strings, tuned tricordally, in Persia, the latter being of twisted copper. Śaḍī al-Dīn 'Abd al-Mu’mīn (d. 1294) invented a rectangular psaltery of sixty-four strings called the nuzha. The names šantūr, sinjir, and such like variants, were given the dulcimer, possibly from the Aramaic. Ibn Khaldūn (d. 1406) mentions it in the Maghrib, but it fell into disuse generally among the Arabs, although much favoured in Persia. See pl. 13 (b).

Bowed instruments can only be definitely traced to the tenth century, when Al-Fārābī clearly mentions a rabāb being bowed. The rebec of Islamic peoples had many forms. The pear-shaped instrument was possibly the one which Al-Fārābī described, showing it to be mounted with from one to four strings. The boat-shaped type was a survival of the sound-chest of the old barbiton, and this may have been the rabāb of Muslim Spain praised by Yaḥyā b. Hudhail (d. 995) and Ibn Ḥazm (d. 1064). For centuries it had but two strings tuned a fifth apart, as was the rubēba of Jerome of Moravia (thirteenth century). The hemispherical-chested viol, with a long iron foot, has been more favoured in the Middle East; it is generally called the kamāncha (Ar. kamānja), and may have been the type to which Ibn al-Faqīh referred in 902–3 when speaking of its use by the Copts of Egypt and the people of Sind; it was usually found with two strings, tuned a fourth apart. A more elaborate instrument was the ghichak of Persia and beyond; it had a larger sound-chest than the kamāncha, and had eight sympathetic strings in addition. The shallow, rectangular sound-chest type, has long been a folk instrument; it is the one which the ancient poets may have used to accompany

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1 Shihāb al-Dīn, Saftat al-mulk (Cairo, 1891), p. 473.
2 Kings College (Cambridge) Persian MS. 211, ff. 23r–23v.
3 Bodleian MS. Marsh 282, fo. 78; Farmer, Studies, pp. 12–15.
5 Cf. Šantar in Chap. V, p. 245.
7 Farmer, Studies, i, pp. 101–3.
9 Kinsky, op. cit., p. 18, fig. 2.
10 Farmer, Studies, i, p. 106.
11 E. de Coussemaker, Scriptores de musica medii aevi, i (Paris 1864–76), p. 152.
12 Bibliotheca geographorum arabicorum, v (Leiden, 1885), p. 59; King’s College (Cambridge) Persian MS. 211, fo. 19v.
13 Bodleian MS. Marsh 282, fo. 78v.
their verses, and we know of its shape from the time of 'Abd al-Qādir b. Ghaibī (d. 1435), although it may be seen in the frescoes of Qusair 'Amra (eighth century), but here it is a plucked instrument.

The greatest of all the instruments of Islamic peoples was the 'ūd or lute. Its precursor was the Persian barbat, although there existed earlier lute types with parchment bellies. It was when the woodendbellied lute was adopted that the instrument was named the 'ūd (‘wood’). Before the Persian lute was adopted, the Arabs tuned their lute B♭—c—f—g, but the new Persian accordatura gave it G—c—f—b♭. By the ninth century a fifth string, eb', was added (see pl. 13 (a)). A lute of six strings, the shashtār, was introduced later, one species of which had sympathetic strings. From the tenth century the kaitāra was used in Muslim Spain, perhaps a borrowing from the Mozarabes. A diminutive of this name, kuwaitira (vulg. kuwitira: Span. guitarra), is still used in the Maghrib for a small lute. The shāhrūd was an archlute invented in the tenth century; it originally had a compass of three octaves. Another class of lute was the curiously shaped rubāb (not to be confused with the bowed rabāb as in a misprint in the Legacy of Islam, fig. 90), the lower part of the belly being of skin; it was mounted with three to five strings tuned in fourths and was most popular in Persia. The qūpūz was a Turko-Greek mandore, hollow throughout, including the neck, and had five double strings. The shidurghū, yāṭūghān, and pipa have already been described.

Among pandores the types were innumerable. Al-Fārābī mentions two, the ṭunbūr baghdādī (Baghdad pandore) or ṭunbūr mizānī (‘measured pandore’), and the ṭunbūr khurasānī (Khorasanian pandore). The former had two strings, variously tuned, with a fretted

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2 R. d'Erlanger (La Musique arabe, i, p. 323) thought that 'ūd was a translation of the Greek chelys which, he said, was a ‘tortoise’, but the Arabic lexica do not support this. Curt Sachs (History of Musical Instruments, p. 253) has attempted to connect the word 'ūd morphologically with the ‘musical bow’ of the primitives by making the word equate with ‘flexible stick’. This reading is also denied us by the lexicographers.
3 Farmer, Studies, ii, pp. 45–57. Farmer, Minstrels, pls. 1, 2, 9; R. Lachmann, Musik des Orients, pl. 11; T. Arnold and A. Guillaume, fig. 89; A. U. Pope, op. cit., pls. 832c, 850a, 900, 909, 1308, 1316, 1330a, 1353.
4 Bodleian MS. Marsh 282, fo. 77; Cairo MS. fo. j. 539, bab 4, maq. 2. Farmer, Turkish Instruments, p. 43.
5 Madrid MS. (Arabic), 603, fo. 15v.
7 Kings' College (Cambridge) Persian MS., 211, fo. 20; Bodleian MS. Marsh, 282, fo. 78; T. Arnold and A. Guillaume, op. cit., fig. 9; Encyclopaedia of Islam, iv, p. 987.
8 Encyclopaedia of Islam, iv, p. 986; Farmer, Turkish Instruments, pp. 36–37, and Studies, i, pp. 72–75, fig. 25; Bodleian MS. Marsh, 282, f. 77v.
neck which gave a ‘pagan scale’ of quartertones. The latter also had two strings, the frets being arranged in the order of limma, limma, and comma. In the fourteenth–fifteenth centuries there were innumerable pandores in use, and three may be mentioned. The tumbúr-i shirvinân (Shirvanian pandore) had a deep, pear-shaped sound-chest, with a long neck, its two strings being tuned a tone (204 cents) apart; the tumbúra-yi turki (Turkish pandore), with a smaller sound-chest but a longer neck, was mounted with two or three strings tuned a fourth (498 cents) apart; both of these were played with the fingers. The näy tumbúr, however, was played with a plectrum (mîdrâb) like the lute (‘ūd), and had two strings a fourth apart. The yînqär was a Turkish three-stringed pandore invented by Shamsî Chelebi, a son of the author (d. 1509) of Yûsuf va zulaika.

The names, forms, and varieties of instruments in the Islamic east and west of the past are legion, and several volumes would be required to enumerate and describe them fully. How much they were treasured by all, and how rapturously their music was appreciated, can be justly evaluated only by a perusal of the countless lines of poetry alone which have been devoted to their praises.

THE PRACTICAL ART

The chief characteristics of Islamic music were, and are, modal homophony, fioritura, and rhythm. From its earliest history this art had been modal, and its systemization with the Arabs seems to have been accomplished by Ibn Misjah (d. c. 715). In Syria we are told that he ‘took hold’ of the ideas of its lute players (barbatîyya) and theorists (ustûkhûsiyya = otrvvxuv), while in Iranian lands he learned some of their singing (ghinâ) and their rhythmic accompaniment (darb). When he returned to the Hijaz he adopted some of these things which he had learned abroad into a new system of music which he founded, although he ‘rejected what was disagreeable’ in the notes or melodic modes (nagham) of Syria and Persia which he considered were ‘alien to Arabian music’. We are told that the system formulated by him was thereafter accepted by the people.

Yet we see that in spite of these accretions to Arabian music there was still a characteristic indigenous basis.

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1 R. d’Erlanger, La Musique arabe, i, pp. 218–42.
2 Ibid. i, pp. 242–62.
3 Bodleian MS. Marsh 282, fo. 77v.
4 Encyclopaedia of Islam, v, pp. 251–3; Farmer, Turkish Instruments, pp. 34–35.
This modal system, which Ibn Misjah seems to have consolidated, consisted of eight ‘finger modes’ (aṣābi’), as we read in the earliest period of the Great Book of Songs (Kitāb al-aghānī al-kabīr) of Al-Iṣfahānī (d. 969), and each of these modes was classified according to its ‘course’ (majrā) either with the middle finger (wustā) on the lute, giving the minor third, or with the third finger (binšīr), giving the major third. That these modes may have been suggested by the Syrian ikhadas is most likely, but that they were not quite identical may be assumed from Al-Kindī, although the last word has not yet been said on this problem. These ‘finger modes’ dominated Arabian practical theory until the eleventh century when Persian ideas took a firmer hold on Islamic culture. They have been fully described by Ibn al-Munajjim (d. 912) in his Risāla fi’l-mūsīqī (Treatise about Music). With one exception (No. 7) all of these modes were identical with the Greek and church modes. They are given here with the fourth string taken as base (’imād):

1. Muṭlaq fi majrā al-wustā  G. A. Bṣ. c. d. e. f. g.
2. Muṭlaq fi majrā al-binšīr  G. A. B. c. d. e. f. g.
3. Sabbāha fi majrā al-wustā  A. Bṣ. c. d. e. f. g. a.
4. Sabbāha fi majrā al-binšīr  A. B. c. d. e. f. g. a.
5. Wustā fi majrāhā  Bṣ. c. d. e. f. g. a. bṣ.
6. Binšīr fi majrāhā  B. c. d. e. f. g. a. b.
7. Khinšīr fi majrā al-wustā  c. d. eṣ. f. g. a. b. c.
8. Khinšīr fi majrā al-binšīr  c. d. e. f. g. a. b. c.

The rhythmic modes (iqā’āt), and there were eight of these also, are described by Al-Kindī (d. c. 874) as follows:

1. Al-thaqlīl al-awwal
2. Al-thaqlīl al-thānī
3. Al-makhārī
4. Khafīf al-thaqlīl
5. Al-ramal
6. Khafīf al-ramal
7. Khafīf al-khafīf
8. Al-hazaj

Each of these modes is given above in its cycle (daur) or theme, which is repeated ad libitum. It could be varied in its character, as there were several species (anwā'), just as the order of the notes (naghamāt) in the melodic modes (ašābi') did not keep to their scale-like order in performance.

In Persia, as we shall see, the melodic modes were known by fanciful names rather than by descriptive ones, and by the time of Ibn Sinā (d. 1037) and Ibn Zaila (d. 1048) there were twelve in use. Before long we find these Persian titles being adopted by the Arabs, although one may assume from their names that some agreed with the older ‘finger modes’ in structure. By the thirteenth century these twelve modes were called magāmāt, and in addition there were six secondary modes called in Persian avāzāt. With Turkoman and Mughal sway came branch modes or modal formulas called shu'ab, and by the fifteenth century there was a total of forty-eight modes, now entitled shudūd. In Muslim Spain it had also become customary to give fanciful names to their twenty-four tubū or melodic modes, a title which discloses their cosmic affiliation with the four elements (tubū'). As in eastern practice, these western modes, in submission to the doctrine of the ethos, were allotted specific times of the day for their performance, a conceit which still prevails. Here are the twelve primary modes (magāmāt) used in Eastern Islamic lands from the thirteenth to the sixteenth century, seven of which have Persian names. They are based on the oldest known manuscript (dated 1276) of the Sharafiyya of Ṣafī al-Dīn 'Abd al-Mu'min preserved at Berlin. The enharmonic form of these modes is due to the adoption of the scale of the Systematists which proceeded by limma, limma, comma. For a clearer apprehension of these new modes a common tonic has been chosen, while the notes have been transcribed into their nearest Occidental equivalent, although the fretting of the lute on p. 463 should be consulted.

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\begin{array}{cccccc}
\U{0160}\text{Ushshāq} & \text{c.} & \text{d.} & \text{e.} & \text{f.} & \text{g.} & \text{a.} & \text{b}^\# & \text{c}. \\
\U{0160}\text{Nawā} & \text{c.} & \text{d.} & \text{ē.} & \text{f.} & \text{g.} & \text{ā.} & \text{b}^\# & \text{c}. \\
\U{0160}\text{Būsalik} & \text{c.} & \text{ē.} & \text{ēb.} & \text{f.} & \text{g}. & \text{ā.} & \text{b}^\# & \text{c}. \\
\U{0160}\text{Rāst} & \text{c.} & \text{d.} & \text{ēb.} & \text{f.} & \text{g.} & \text{b}^\# & \text{b}^\# & \text{b}^\#. \\
\end{array}
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1 See below.
2 R. d'Erlanger, op. cit. iii, pp. 135-6.
3 British Museum MS. Or. 2361, ff. 26-26*.
5 Farmer, History, p. 197.
7 Farmer, The Influence of Music: From Arabic Sources, passim.

B 3608  
G g
By the sixteenth century, under Persian influence, the old Pythagorean scale—already flourishing in Persia since the fourteenth century—found acceptance in the Near East. This meant that not only the notes of the maqāmāt, avāzāt, and shuʿāb were changed, but their forms also. They were now no longer 'modes' in the commonly understood sense of the term (i.e. scales within the gamut of which melodies were composed) but melodic patterns which became matrices for composition, as one may see from the examples given by Laborde, Villoteau, and Kiesewetter. It may be thought that these patterns restricted originality in composition, but actually they meant no more than the Occidental practice of fixed diatonic sequences.

The second element in Islamic music, fioriture (zawāʿid, tahāsin, zuwwāq), consisted of shakes, grace notes, the drawled scale, appoggiatura, and the tarkib. This last device was the occasional decoration of the melody, by striking certain notes simultaneously with their fourth, fifth, or octave. All of this ars Subs or festooning gave great licence to performers to display their artistry. Special syllables were set apart for the vocal decoration, such as lā and yā, although the more conventional yā laili would be just as often used. In the instrumental sphere, one form of decoration was the above-mentioned tarkib. Ibn Sinā (d. 1035) gave this name tarkib (lit. organum) to doubling simultaneously with the fifth, fourth, or other interval except the octave which was naturally termed the tād'if. The interval of the third is not mentioned specifically, but its use is obviously implied among those 'other' intervals. Many of these are given in a lute exercise by Al-Kindī (d. c. 874) which is contained in a unique manuscript in the Staatsbibliothek at Berlin (Ahlwardt, Verzeichniss, 5530, fo. 25–31) which is probably a fragment of the work entitled The Treatise on Music in Relation to the Corporeal Natures (Risāla fī... al-naghm... 'alā tabāʾī al-ashkās). In it are described two kinds of movements by the plectrum hand and fingers: one which struck

1 See Vol. II, pp. 42–43, for the parallel Byzantine practice.
two notes simultaneously 'with one movement', and another in which three notes were struck successively 'with three movements'. Here is this exercise. It opens with a phrase which shows these two movements. This is followed by three simultaneous unisons, obtained by the fourth finger on one string and the open string of another. (See pp. 446, 457.) The remaining phrases explain themselves. The exercise has been transposed.

Ex. 319

The third constituent was rhythm (iqlā'). By the third quarter of the seventh century this had already been systematized, since we read of four rhythmic modes, and under the Umayyad régime (661–750) two more had been added.¹ By the ninth or tenth century there were seven or eight principal (uṣūl) rhythmic modes used by the Mesopotamian and Syrian Arabs as described by Al-Kindi² and Al-Fārābī.³ By the days of Ṣafī al-Dīn ʿAbd al-Muʿmin (d. 1294), the Persians had added some modes of their own devising.⁴ When Turkomanian and Turkish influence made itself felt in the Near and Middle East, new rhythms in galore were tapped out, and the craze for novelty grew apace. By the fifteenth century there were no fewer than twenty-one rhythmic modes,⁵ while Al-Lādhiqī (c. 1481–1512) gives a total of thirty.⁶

In the eyes and ears of the Arabs, vocal music was superior to instrumental, and this preference lasted until the final scenes depicted in the monumental work of Al-İsfahānī (d. 967). After that, Persian, Turkomanian, Mughal, and Turkish tastes brought instrumental music more to the fore. How important was the vocal art may be gleaned from Al-Fārābī who devoted a section to 'production'—head notes, chest notes, nasalized notes, and so on; adverting to the glottal hiatus (nabarā), and the whys and hows of the staccato notes (shadharāt) and long-vowel notes (amālāt), as well as the various

¹ Farmer, History, p. 71. To Al-Khāli l (d. c. 791) a 'Book of Rhythm' (Kitāb al-iqlā') has been attributed. See Farmer, Sources, p. 14.
² Farmer, Saʿādyyah Gaon, pp. 78–99, which contains the notation of the rhythmic modes.
⁴ Ibid. iii, pp. 183–232.
⁵ Ibid. iii, pp. 172–8.
⁶ Ibid. iv, pp. 470–98.
forms of songs.\textsuperscript{1} Dynamics, as we understand the term, had no existence in Islamic music, which was essentially a quiescent art, and its instruments, whether for solo work or accompaniment were, of necessity, in accordance with this tranquility; indeed we must always think of this art in terms of chamber music.\textsuperscript{2} It is true that we sometimes read of fifty or so lutenists playing together, but such occurrences were unusual.\textsuperscript{3} Throughout the book of Al-Iṣfahānī it is generally the lute, flute, or reed-pipe that is displayed, and the well-known miniature which accompanies the story of Iṣḥāq al-Mauṣūlī in the \textit{Maqāmāt} of Al-Ḥarīrī (d. 1122) shows only a lute and reed-pipe.\textsuperscript{4} In the later \textit{Arabian Nights}\textsuperscript{5} and in the subsequent miniatures of Persian art, more bounteous instrumental displays are granted: the lute, flute, psaltery, reed-pipe, viol, and harp in concert. Of course, these combinations invariably included the tambourine or drum, since these determined the rhythm, although not all music was submitted to this mensural discipline.

The forms of musical composition were various. The \textit{nashid}, originally a nasal psalming was, in the time of Al-Fārābī, unrhythmic,\textsuperscript{6} but later it was submitted to rhythm.\textsuperscript{7} The \textit{basit}, of light character, was a vocal piece with an instrumental prelude (\textit{jāriqa}), although it was set later to more imposing rhythms.\textsuperscript{8} The \textit{darb} was a composition in which two rhythmic modes were used simultaneously. Some lengthy compositions were to be found in the \textit{kull al-ḍurūb} and the \textit{kull al-nagham}, which implied, respectively, the use of all the rhythmic modes and all the melodic modes in sequence.

Among the Persians, Khorasanians, and Turkomans of the tenth century, instrumental pieces known as the \textit{farāʾīq} and \textit{rawāsīn} were immensely popular.\textsuperscript{9} Later it was the \textit{'āmal}, \textit{naqsh}, \textit{saut}, \textit{hawāʾī}, and \textit{murāṣṣa} which were in demand. The first was of a composite nature and opened with a prelude. The second, as its name tells us, had ‘decoration’ as its characteristic. The last two had much in common by way of their fantasia-like construction. The most important of all was the ‘suite’ called the \textit{nauba}. This seems to have originated at the ‘Abbāsid court, where the performers who attended at special hours on particular days, played in succession (\textit{nauba}), and since each minstrel usually excelled in some particular type of music, a combination of these features into one performance or piece was named a

\begin{itemize}
  \item R. d'Erlanger, \textit{La Musique arabe}, ii, pp. 79 ff.
  \item Farmer, \textit{History}, pp. 72, 102.
  \item Ibid., p. 6.
  \item Ibid. iv, p. 233.
  \item Ibid. iv, p. 235.
\end{itemize}
nauba.¹ Up to the fourteenth century the nauba comprised four movements, the qa‘l, ghazal, tarāna, and furū‘-dāshīt, but in the year 1379, 'Abd al-Qādir b. Ghaibī introduced a fifth movement called the mustazād.² Each of these sections, which were vocal, was preceded by an instrumental prelude (tariqa). Later still, the instrumental chef d’œuvre known as the pishrev (Ar. bashrāu) was used as an overture to the nauba. In Muslim Spain the nauba gharnāṭi, as it is now called, was known in its twenty-four modes.³ The eastern nauba was carried on by the Ottoman Turks and had constituent parts not unlike the ‘suite’ of Persia.⁴

What the Islamic music of these days was actually like is not easy to determine because of the mere scrap which has come down to us, and even this presents on paper less vitality than our transcription of the neumatically notated compositions of the early Christian Church. It has been stated that the Great Book of Songs of Ishāq al-Mausili contained music.⁵ This is quite fallacious. At the same time it is equally erroneous to state that the ‘Arabs never had a musical notation’.⁶ In early days, neither the Arabs or Persians committed their compositions to paper as a general rule, although Ibn Sinā tells us that a stenography was used by practitioners for this purpose.⁷ Yet the theorists from the time of Al-Kindī used an alphabetic notation.⁸ It is not until the thirteenth century, however, that we have examples of music recorded by this means, and the present writer has published two specimens,⁹ while other examples exist in the works of 'Abd al-Qādir b. Ghaibī (d. 1435).¹⁰ In these compositions the pitch of the notes is determined by an alphabetic notation and the mensural values by a numerical one. Meanwhile a semi-staff notation arose farther east in Khwārizm where, in the time of the Shāh 'Alā al-Dīn Muḥammad (d. 1220), an eighteen-line stave was used to carry a pitch and mensural notation.¹¹ It was not unlike the early attempts of western Europe.¹² In Syria we know from

¹ Encyclopaedia of Islam, iii, pp. 855–7.
⁴ Encyclopaedia of Islam, iii, p. 386.
⁶ Grove’s Dictionary of Music (1940), i, p. 66.
⁷ Farmer, Historical Facts, p. 91.
⁸ Ibid., pp. 312 ff.
¹⁰ Bodleian MS. Marsh 282, ff. 93v–95.
¹² M. Gerbert, Scriptores (St. Blaise, 1784), i, p. 157.
a treatise by Shams al-Dīn al-Saʿdawī al-Dhahabī (16th. cent.) that a more practical scheme had been evolved in which a stave of seven to nine coloured horizontal lines served for this purpose, a device somewhat similar to that shown in eastern Europe by Vincenzo Galilei (1581) and Kircher (1650).

At the period when the Arabs and Persians wrote music by means of an alphabetic (abjadī) and numeric (ʿadādī) notation, the former stood for the pitch of the note (naghma) whilst the latter represented its mensural (mīzānī) extent. Reference to the fretting of the lute (ʿūd) on p. 463, where the accordatura (taswiyya) is G–c–f–b–b♭–eb♭, will explain the reason for introducing the special flat sign to indicate the minor tone of 180 cents which is a comma lower than the whole tone of 204 cents, reserving the ordinary flat b to indicate a note which is a limma of 90 cents.

Here is one verse (bait = stanza) of a song (ṣaut) taken from the Kitāb al-adwār, said to have been written before 1236, but more probably twenty years later, by Ṣafī al-Dīn ‘Abd al-Muʿmin (d. 1294). It is in the melodic mode (tariqa) of kuwāšt, set to the rhythmic mode (darb) of the ramal al-dīyyā, better known as the khafṣīf ramal. The transcription is made from the British Museum Manuscript Or. 2361, fo. 32, but with the copyist's errors rectified by comparison with other manuscripts. This has meant changing the minimis for the syllables ba-ti into crotchetts. That was necessary on account of the measure. The melody has been transposed. (See upper part of pl. 14(a).)

Ex. 320

('Desertion, by Allāh, I cannot abjure, Though some, the loss of a lover could endure!')

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The rhythmic modes had changed considerably since the time of Al-Kindi (see p. 448) and those shown in these examples on a single stave line under the melody, would have been performed on a tambourine (ḍā’ira) with jingling metal plates (ṣumūj) or bells (jalājil) in the frame, a drum (tabl), or tiny kettledrums (nuqairāt). Two or more tones were obtained on these instruments, one of them low and strong and the other high and weak. In addition to these the plectrum (midrāb), by which the strings of the lute were pulsed, also obeyed this rhythm when it was convenient. Since the rhythmic phrase (daur) of the ramal mode comprised twelve beats it has enabled us to submit the music to the un-Oriental custom of using a time signature and bars. Here is a theme in the old mode known as the mujannab al-ramal. (See lower part of pl. 14(a).)

Ex. 321

![Ex. 321](image)

The last example is the melody of a hemistich (ṣīra’) of the first verse of a song called ‘Alā ṣabbikum. It is in the naurūz melodic mode and the ramal rhythmic mode. This is also from the Kitāb al-adwār of Saḍi al-Dīn ‘Abd al-Mu’min, although the transcription is made from a different manuscript in the British Museum, viz. Or. 136, fo. 38v. The contour of the melody, being plain and simple, may appear to be quite uninteresting in itself. In performance, however, when the singer and players introduced fioriture, a far more intriguing picture would have been presented. These ornaments were termed tahāsin, and since the cleverness of singer and instrumentalist was judged by their ingenuity in the use of fioriture it is no wonder that ‘applause’ and ‘approbation’ went by the name of tahsīn. Here is this melody. (See pl. 14(b).)

Ex. 322

![Ex. 322](image)

In view of the above it is evident that we possess no written Arabian music earlier than the thirteenth century, no Persian before the fourteenth century, and no similar example of Turkish music prior to the seventeenth. On the other hand, there is an enormous
amount of music handed down orally and by rote. The Maulawiyya darwīsh fraternities claim to use music composed by Al-Fārābī. One of the movements of the Turkish suite (faṣl) known as the kiār contains, in most of its modes, examples of the works of 'Abd al-Qādir b. Ghaibī (d. 1435), and although these, like what has preceded, have also been handed down orally, they may be more authentic since the composer’s Treasury of Melodies (Kanz al-alḥān), which contained his compositions, existed until recent years. Lastly, the naubāt andalusiyya or gharnaṭiyya (i.e. of ‘Andalusia’ or ‘Granada’), still played in the Maghrib handed down by the refugees of the expulsions of the ‘Moors’ from Spain, exist in many specimens, although those in the sika and jahārka modes cannot be earlier than the sixteenth century and cannot be Andalusian.

Finally, there is the question of form. Since every verse in Arabic poetry contains a complete thought, a short melody was made to fit this alone, the same being repeated for each subsequent verse. It was Ibn Muḥriz (d. c. 715) who introduced a different melody for the second verse. When the refrain came into popularity, as in the zajal in Spain, this also necessitated a different melody. Yet although these short melodies were repeated times out of number, especially in a classical ode (qaṣida), they were not always used in precisely the same form, since it was in its variation that the singer, in his handling of the ‘gloss’ or fioritura, was able to display his artistry and originality. It was much the same in instrumental music.

THE THEORY OF MUSIC

That Islamic savants were supremely gifted in the field of mathematics is universally acknowledged, and they were especially so in the science of music (‘ilm al-mūsīqī). At the threshold we meet with what Al-Fārābī (d. c. 950) calls a ‘pagan scale’, i.e. a scale from pre-Islamic times. It was to be found on a fretted instrument called the ṭumbūr mizānī (measured pandore) or ṭumbūr baghdādī (Baghdad pandore). Its fingerboard was divided into forty equal parts, the frets giving a scale of quarter tones. Although this instrument and scale

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1 Encyclopaedia of Islam, ii, p. 54.
2 Personal information from the late Ra‘ūf Yektā Bey.
3 N. E. Yafī, Répertoire de musique arabe et maure (Algiers, 1904); Majmū‘ al-aghānī wa‘l-alḥān min kālīm al-andalus (Algiers, 1904); A. Chottin, Corpus de musique marocaine (Paris, 1931); Rouanet, op. cit., pp. 2845–77.
5 R. d’Erlanger, La Musique arabe, i, p. 227.
6 Ibid. i, p. 218. The interval was known to Eratosthenes. See Ptolemy, Harmonicorum (Oxford, 1682), ii, p. 14.
ARABIC INSTRUMENTS

(a) Lute of 5 double strings (A.D. 1333–4)
(b) Psaltery of 32 strings (A.D. 1333–4)
(c) Harp of 34 strings (A.D. 1326–7)

See also pages xvi and 462–3
persisted in Islamic civilization until the fifteenth century, seemingly only for the performance of those ‘pagan melodies’ of which Al-Fārābī speaks, its place in the evolution of the Arabian scale is vague. What sort of scale obtained in the early days of Islam, when the system of Ibn Misjah (d. c. 715) was established, we have no certain knowledge, but all evidence seems to show that it was the Pythagorean. It was not until the time of Ishāq al-Mausili (d. 850) that we get a complete view of the theory and scale of the Old Arabian School. Possibly two early works may have dealt with this system, the *Book of Melody* (*Kitāb al-naghm*) of Yūnus al-Kātib (d. c. 765) and the *Book of Melody* by the father of prosody Al-Khalil b. Ahmad (d. c. 791), but none of these has been spared for us.¹ In any case, these works would have been based on what I have frequently termed ‘practical theory’, in contradistinction from ‘scientific theory’. Indeed, a later writer, Ibn al-Munajjim (d. 912), very aptly distinguished between these two schools of theorists as ‘the masters of Arabian music (*ghinā*)’ and ‘the masters of [Greek] music (*müsiqî*)’.² In the Old Arabian School, all theory was made to conform to the lute, in the same way as the Greeks used the *kithara* for this purpose. According to Ishāq al-Mausili and his pupils Ibn al-Munajjim and Ibn Khurdādhbih, the scale of this school was Pythagorean, and here is the fretting of its lute in cents:³

<table>
<thead>
<tr>
<th>4th string (bamm)</th>
<th>3rd string (mathlah)</th>
<th>2nd string (mathla)</th>
<th>1st string (zir)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open string (<em>muṭlaq</em>)</td>
<td>0</td>
<td>498</td>
<td>996</td>
</tr>
<tr>
<td>1st finger (<em>sabbāba</em>)</td>
<td>204</td>
<td>702</td>
<td>1200</td>
</tr>
<tr>
<td>2nd finger (<em>wustā</em>)</td>
<td>294</td>
<td>792</td>
<td>90</td>
</tr>
<tr>
<td>3rd finger (<em>bīnsīr</em>)</td>
<td>408</td>
<td>906</td>
<td>204</td>
</tr>
<tr>
<td>4th finger (<em>khīnsīr</em>)</td>
<td>498</td>
<td>996</td>
<td>294</td>
</tr>
</tbody>
</table>

¹ *Itis,* xxxvi (1946), p. 128.
³ *Cents* are hundredths of an equal semitone. It has been stated that Ishāq al-Mausili’s accordatura of the Arabian lute gave a fifth (702 cents) between the third and second strings. I have shown this to be completely erroneous; the tuning was by fourths (498 cents) throughout. See my *Historical Facts for the Arabian Musical Influence* (London, 1930), pp. 280-5, and cf. the persistent views of Kathleen Schlesinger in *The Oxford*
Prior to this, certain alien elements had entered the scale. Persian practitioners had been using their own second finger fret (303 cents), and a certain instrumentalist at Baghdad, Zalzal (d. 791), had introduced a neutral third (355 cents). Confusion and embarrassment followed these innovations, and it was to rectify the position, it would seem, that Ishāq al-Ma‘ṣūlī recast the theory of the old Arabian school into its original Pythagorean mould, which was accomplished, we are told, without recourse to the Greek theorists who were unknown in Arabic at that date.¹

By the middle of the ninth century the famous treatises of the Greeks were translated, some through Syriac, into Arabic, and most of them had appeared before the close of the century. Aristotle's De anima, the Problematum, and other works of his were well known. The Harmonica of Aristoxenus which we possess today is known to have been constructed from two works, the στοιχεία and the ἀρχή.² That the latter was a separate work existing in the ninth century is evidenced by the translated Arabic work, the Kitāb al-rūḥūs, as was demonstrated in 1928.³ That his lost work on rhythm also existed in Arabic at this time is shown by his Kitāb al-iqā' (Book of Rhythm). Euclid was known by a Kitāb al-naghdh called al-mūṣiqî, which was obviously the Introductio harmonica, now attributed to Cleonides, and a Kitāb al-qānūn which was clearly the Sectio canonis. Nicomachus appeared in Arabic in more than one book. The present Enchiridion which we possess in Greek includes fragments from another treatise, unknown, but the Arabic book of Nicomachus, the Kitāb al-mūṣiqî al-kabîr (Opus Major on Music) proves that he did write that ‘larger work’ which he had promised in the Enchiridion. That the Harmonica of Ptolemy was also translated into Arabic there is considerable evidence, and it is likely that Aristides Quintilianus was similarly represented. In addition there were commentaries on Aristotle's De anima by Themistius and Alexander of Aphrodisias, as well as other works, that were known in Arabic.⁴

The first-fruits of this epoch-making harvest by the Bait al-hikma or ‘House of Wisdom’, as this school of translators at Baghdad was called, was the interest taken in music by the ‘philosopher of the Arabs’, Al-Kindî, whose extant treatises on the theory of music

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¹ Cf. pp. 342-3.
² Al-Iṣfahānī, op. cit. v, p. 53; British Museum MS. Or. 2361, f. 237v.
⁴ Farmer, Sources, pp. 23-30.
reveal his dependence on Greek theory.\(^1\) Other leading scholars then
crowded into the arena of music theory: Al-Sarakhsi (d. 899),
Thābit b. Qurra (d. 901), Muḥammad b. Zakariyya al-Rāzī (d. 932),
Qusṭa b. Lūqā (d. 932), and the famous Al-Fārābī.\(^2\) Only the works
of the first and last have survived the holocausts of the past. Al-
Kindī was well acquainted with Euclid, and probably with Ptolemy
also. Indeed his Book of the Division of the Canon (Kitāb fi qismat al-
gānūn) was most likely a commentary on Euclid’s work. Ziryāb, in
Muslim Spain, had already added a fifth string to the lute, and
Al-Kindī did likewise in the east, so as to enable him to reach the
jāmā’at al-tāmma (σύντημα τέλειον). He then sought to introduce a
semitonal fret called the ‘anterior’ (mujannab) between the nut and
the first finger fret, but owing to the fixed fretting of the lute, his
innovation presented a difficulty in that while the new fret, giving an
interval called the baqiyya (90 cents), i.e. the Greek limma, fitted in
admirably on the fourth, third, and second strings, it was flat by a
comma of 24 cents on the first and the new ‘extra’ strings. To obviate
this he added another fret of an interval called the infisal, the Pythagorean apotomē (114 cents) which, although not used on the three
lower strings, gave the desired notes on the two higher strings, thus:\(^3\)

<table>
<thead>
<tr>
<th></th>
<th>4th string</th>
<th>3rd string</th>
<th>2nd string</th>
<th>1st string</th>
<th>Extra string (24th)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open string (muqlaq)</td>
<td>0</td>
<td>498</td>
<td>996</td>
<td>294</td>
<td>792</td>
</tr>
<tr>
<td>1st finger (mujannab 1)</td>
<td>90</td>
<td>588</td>
<td>1086</td>
<td>[384]</td>
<td>[882]</td>
</tr>
<tr>
<td>1st finger (mujannab 2)</td>
<td>[114]</td>
<td>[612]</td>
<td>[1110]</td>
<td>408</td>
<td>906</td>
</tr>
<tr>
<td>1st finger (sabbāba)</td>
<td>204</td>
<td>702</td>
<td>1200</td>
<td>498</td>
<td>996</td>
</tr>
<tr>
<td>2nd finger (wustā)</td>
<td>294</td>
<td>792</td>
<td>90</td>
<td>588</td>
<td>1086</td>
</tr>
<tr>
<td>3rd finger (binšir)</td>
<td>408</td>
<td>906</td>
<td>204</td>
<td>702</td>
<td>1200</td>
</tr>
<tr>
<td>4th finger (khinšir)</td>
<td>498</td>
<td>996</td>
<td>294</td>
<td>792</td>
<td></td>
</tr>
</tbody>
</table>


\(^2\) Farmer, Sources, pp. 19-36.

Al-Kindi's scale reveals that the Persian and Zalzalian accretions at 303 and 355 cents had lost recognition in Mesopotamia, and this inhibition partly continued, as we know from the *Risālat al-mūsiqī* of the Ikhwān al-Ṣafā (c. 980).¹ In Syria, however, these anomalies were at least acknowledged, together with their concomitant notes, as we see in Al-Fārābī:²

<table>
<thead>
<tr>
<th></th>
<th>4th string</th>
<th>3rd string</th>
<th>2nd string</th>
<th>1st string</th>
<th>Extreme string (load)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open string (<em>mūlāq</em>)</td>
<td>0</td>
<td>498</td>
<td>996</td>
<td>294</td>
<td>792</td>
</tr>
<tr>
<td>1st finger (old <em>mujannab</em>)</td>
<td>90</td>
<td>588</td>
<td>1086</td>
<td>384</td>
<td>882</td>
</tr>
<tr>
<td>1st finger (Persian <em>mujannab</em>)</td>
<td>145</td>
<td>643</td>
<td>1141</td>
<td>439</td>
<td>937</td>
</tr>
<tr>
<td>1st finger (Zalzal's <em>mujannab</em>)</td>
<td>168</td>
<td>666</td>
<td>1164</td>
<td>462</td>
<td>960</td>
</tr>
<tr>
<td>1st finger (<em>sabbāba</em>)</td>
<td>204</td>
<td>702</td>
<td>1200</td>
<td>498</td>
<td>996</td>
</tr>
<tr>
<td>2nd finger (old <em>wustā</em>)</td>
<td>294</td>
<td>792</td>
<td>90</td>
<td>588</td>
<td>1086</td>
</tr>
<tr>
<td>2nd finger (Persian <em>wustā</em>)</td>
<td>303</td>
<td>801</td>
<td>99</td>
<td>597</td>
<td>1095</td>
</tr>
<tr>
<td>2nd finger (Zalzal's <em>wustā</em>)</td>
<td>355</td>
<td>853</td>
<td>151</td>
<td>649</td>
<td>1147</td>
</tr>
<tr>
<td>3rd finger (<em>binsīr</em>)</td>
<td>408</td>
<td>906</td>
<td>204</td>
<td>702</td>
<td>1200</td>
</tr>
<tr>
<td>4th finger (<em>khinṣīr</em>)</td>
<td>498</td>
<td>996</td>
<td>294</td>
<td>792</td>
<td></td>
</tr>
</tbody>
</table>

The above scheme represents all the intervals recognized in lute playing at this period, and does not necessarily imply that any one lute was so fretted. According to Muḥammad b. Aḥmad al-Khwārizmi (fl. 976–7), writing in Khorasan and Transoxiana, the Persian and Zalzalian thirds were being used in those lands, revealing how far afield they had been accepted.³ Al-Fārābī was a good mathematician and physicist, and his *Grand Book of Music* (*Kitāb al-mūsiqī al-kabīr*) is not only 'the most important treatise on the theory of Oriental music',⁴ but the greatest work on music which had been written up to his time. He was certainly in advance of the Greeks.⁵ Later came the Ikhwān al-Ṣafā (c. 980), whose contribution

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⁴ *Encyclopaedia of Islam*, ii, p. 54.
to acoustics is noteworthy. In Egypt a great physicist, the Alhazen of European fame, more properly Ibn al-Haitham (d. 1039), wrote a *Commentary on [Cleonides'] Harmonics (Maqāla fi sharḥ al-[a]r[mūn-iği)]* and a *Commentary on Euclid’s Canon (Kitāb sharḥ qānūn Uqładis)*, both of which have unfortunately perished.

In Persia there appeared the works of the famous Avicenna, i.e. Ibn Sinā (d. 1037), *The Cure (al-Shifā’)*, and *The Deliverance (al-Najāt)*, which contain full information on the state of musical theory in Iranian lands, as does the *Book of Sufficiency in Music (Kitāb al-kāfī fi’l-mūsği)* of Ibn Zaila (d. 1048). Ibn Sinā does not appear to have accepted Al-Kindī’s solution of the difficulty of the ‘anterior’ (mujannab) fret at 90 cents by duplicating it at 114 cents. Further, he assigns 343 cents for Zalzal’s second finger (wustā) fret, with its ‘anterior’ fellow at 139 cents. Nor does he admit the ‘anterior’ fret at 90 cents, but furnishes the just semitone of 112 cents in its place. Yet he realized that the normal tuning of the lute in fourths would not produce Zalzal’s second finger fret in the second octave, and to remedy this he suggested an alternative *accordatura* (taswīyya). By tuning the 1st string (zīr) a major third (408 cents) higher than the 2nd string (mathnā), instead of a fourth (498 cents), Zalzal’s intractable notes were regularized as follows:

<table>
<thead>
<tr>
<th>Open string (muṭlaq)</th>
<th>4th string</th>
<th>3rd string</th>
<th>2nd string</th>
<th>1st string</th>
<th>Extreme string</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>498</td>
<td>996</td>
<td>204</td>
<td>702</td>
</tr>
<tr>
<td>1st finger (mujannab)</td>
<td>112</td>
<td>610</td>
<td>1108</td>
<td>316</td>
<td>814</td>
</tr>
<tr>
<td>1st finger (Zalzal’s mujannab)</td>
<td>139</td>
<td>637</td>
<td>1135</td>
<td>343</td>
<td>841</td>
</tr>
<tr>
<td>1st finger (sabbāba)</td>
<td>204</td>
<td>702</td>
<td>1200</td>
<td>408</td>
<td>906</td>
</tr>
<tr>
<td>2nd finger (Persian wustā)</td>
<td>294</td>
<td>792</td>
<td>90</td>
<td>498</td>
<td>996</td>
</tr>
<tr>
<td>2nd finger (Zalzal’s wustā)</td>
<td>343</td>
<td>841</td>
<td>139</td>
<td>547</td>
<td>1045</td>
</tr>
<tr>
<td>3rd finger (binṣir)</td>
<td>408</td>
<td>906</td>
<td>204</td>
<td>612</td>
<td>1110</td>
</tr>
<tr>
<td>4th finger (khinṣir)</td>
<td>498</td>
<td>996</td>
<td>294</td>
<td>702</td>
<td>1200</td>
</tr>
</tbody>
</table>

1 *Encyclopaedia of Islam*, lli, p. 752.
In other parts of the Islamic East there were many more who were interested in music theory, and in Syria there flourished Ibn al-Naqqāš (d. 1178), Abu’l-Hakam al-Bāhili and his son Abu’l-Majd Muḥammad (d. 1180), as well as ‘Alam al-Dīn Qaṣār (d. 1251). In Muslim Spain there was a long run of theorists beginning with Ibn Firnās (d. 888), ‘the first who taught the science of music in al-Andalus’. In the tenth century (?), ‘Alī b. Sa’īd al-Andalusī compiled a book On the Composition of Melodies [Risāla fi ta’līf al-alḥān]. Greater still were the savants of the twelfth century, when Ibn Bājja or Avenpace (d. 1139) wrote a Book of Music (Kitāb al-mūsīqī), and the Commentary on Aristotle’s ‘De anima’ (Sharḥ fi’l-nafs li Aristū-fālib) of Ibn Rushd or Averroës (d. 1198) was famous in its day, especially in Latin. In the east both Fakhr al-Dīn al-Rāzī (d. 1209) and Naṣīr al-Dīn al-Ṭūsī (d. 1273) wrote on music, the contribution of the former being found in his Collector of the Sciences (Jāmi’ al-‘ulūm).

In Baghdad, in the service of the last of the ‘Abbāsid caliphs, was the greatest musician of his day, Ṣafī al-Dīn ‘Abd al-Mu’min (d. 1294), whose two works on theory, The Sharafian Treatise on Harmonic Relations (Risālat al-sharaṣīyya fi nisab al-ta’līfyya) and the Book of Modes (Kitāb al-adwar), made history. He was the founder, or organizer, of the Systematist school of music theory, a circumstance which has earned him the title of ‘the Zarlino of the Orient’, while Helmholtz considered his theories to be ‘noteworthy in the history of music’. He derived his scale from the Khorasanian pandore, whose successive frets of limma, limma, comma have been detailed by Al-Fārābī. How Ṣafī al-Dīn used it on the lute is shown on the opposite page. One can see at a glance that this scale affords consonances purer than our tempered system, and Sir Hubert Parry considered it ‘the most perfect scale ever devised’. It was this system that led so many writers to refer erroneously to the existence of ‘thirds of a tone’ in Arabian and Persian music.

2 Farmer, Sources, p. 39; and History, p. 177.
3 Farmer, Sources, p. 44.
4 British Museum MS. Or. 2972, ff. 151v–155v.
7 The Sensations of Tone (London, 1895), p. 283.
8 R. d’Erlanger, La Musique arabe, i, pp. 242–62.
<table>
<thead>
<tr>
<th>Finger</th>
<th>4th string</th>
<th>3rd string</th>
<th>2nd string</th>
<th>1st string</th>
<th>Extreme string</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open (muṭlaq)</td>
<td>0</td>
<td>996</td>
<td>294</td>
<td>792</td>
<td></td>
</tr>
<tr>
<td>1st finger (za'id)</td>
<td>90</td>
<td>588</td>
<td>1086</td>
<td>384</td>
<td>882</td>
</tr>
<tr>
<td>1st finger (muẓannab)</td>
<td>180</td>
<td>678</td>
<td>1176</td>
<td>474</td>
<td>972</td>
</tr>
<tr>
<td>1st finger (sabbāba)</td>
<td>204</td>
<td>702</td>
<td>1200</td>
<td>498</td>
<td>996</td>
</tr>
<tr>
<td>2nd finger (Persian wuṣṭā)</td>
<td>294</td>
<td>792</td>
<td>90</td>
<td>588</td>
<td>1086</td>
</tr>
<tr>
<td>2nd finger (Zalzal's wuṣṭā)</td>
<td>384</td>
<td>882</td>
<td>180</td>
<td>678</td>
<td>1176</td>
</tr>
<tr>
<td>3rd finger (binṣir)</td>
<td>408</td>
<td>906</td>
<td>204</td>
<td>702</td>
<td>1200</td>
</tr>
<tr>
<td>4th finger (khiṣir)</td>
<td>498</td>
<td>996</td>
<td>294</td>
<td>792</td>
<td></td>
</tr>
</tbody>
</table>

This theory soon enveloped both the Near and Middle East, where we see it fully utilized by the Persian theorists Quṭb al-Dīn al-Shirāzī (d. 1310) in his Jewel of the Crown (Durrat al-tāf)\(^1\) and by Muḥammad b. Maḥmūd al-Āmulī (fourteenth century) in his Precious Things of the Sciences (Nafā'is al-funūn).\(^2\) It was also the basis of the Persian Treasure-house of Rarities (Kanz al-tuḥaf) of the same century,\(^3\) and the prompting of that masterly Arabic treatise entitled the Maulānā Mubārak Shāh Commentary by Al-Jurjānī (d. 1413).\(^4\) It was the sheet-anchor of the Persian Collector of Melodies (Jāmi‘ al-alḥān) of 'Abd al-Qādir b. Ghaibī (d. 1435),\(^5\) the Arabic Muḥammad b. Murād Treatise,\(^6\) and the book called The Conqueror (Al-Fathiyya) by Al-Lādhīqī a few decades later.\(^7\) The same dependence is traceable in the Turkish Book of Modes (Kitāb al-adwār) of Khiḍr b. 'Abdallah,\(^8\) and the treatise of Aḥmad Uğlū Shukrallāh.\(^9\)

Side by side with this systematist theory there was still to be found the occasional expression in Persia of the less intricate teaching of the old Arabian school, the occurrence of which led Kiesewetter to

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2. Ibid., Add. 16827.
4. R. d'Erlanger, op. cit. iii, passim, especially the preface by the present writer.
5. Ibid., Or. 2361.
7. R. d'Erlanger, op. cit., iv, passim.
imagine that it was introduced by Christian missionaries. Yet, as Helmholtz said of this suggestion: ‘The Europeans of those days could teach the Orientals nothing that they did not know better themselves, except some rudiments of harmony which they did not want.’ The teachings of the systematist school lasted in the Near East until the sixteenth century when the old Arabian system, i.e., the Pythagorean, found acceptance once more. Yet the longing for the diverse chromaticisms of the past, especially such variants as the minor tone (180) and the Systematists Zalzalian third (384), which had coloured their music and charmed their ears in the past had not died, and it was that yearning which gave birth to the modern quarter-tone system.

THE INFLUENCE

Most historians have allowed that it was to the Arabs and Persians that ‘the mediaeval world, from Samarcand to Seville, for a very long time, owed its highest literary and scientific culture’. It would not be too much to add ‘artistic culture’. That this great artistic urge, which included music, should have made itself felt in the neighbouring east is easily understood, because many of these lands had much in common culturally. It is true that the Arabs borrowed a few technical musical words from the Persians, as well as the accomplishments which these terms implied, but the Persians returned the compliment by adopting the entire Arabic musical nomenclature. That both India and Turkestan borrowed innumerable instruments and technical practices through Arab–Persian persuasion is evident to this day. One can also appreciate why peoples culturally inferior, overwhelmed by the impact of Islam, should also be able to resist its musical influence. We find this with the Berbers of North Africa, the Negroes of the western Sudan, the Swahili on the East African coast, and the Malagasy, who have all been borrowers from this fount, while the names of musical instruments in distant Celebes, Borneo, Java, and even ‘Far Cathay’ carry evidence of their origin.

In Europe Islamic cultural influence took a different turn. Greece, at Europe’s eastern outpost, had always been absorbent of Oriental ideas, and so was Byzantium. Not a single Byzantine theoretical work

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1 Die Musik der Araber, pp. 14, 46–49. Through a misunderstanding of the Arabic term *mithl*, which Kiesewetter called *Messel*, a host of writers have given the unmeaning title of ‘Messel system’ to the theory standardized by Šafi’ al-Din ’Abd al-Mu’min, while prompting others to refer erroneously to the scale of the latter as comprising ‘third tones’ (Drittelöne).


ARABIC MUSIC MANUSCRIPTS

(a) Upper half: Song in the Kuwâsh mode
Lower half: Melody in the Mujannab al-ramal mode

(b) Melody in the Nawrûz mode. Late 13th century

For transcriptions see pages 454-5
on music was put forward from the time of Anonymus II (fourth century) until Psellus (fl. 1050); it was only the Arabic authors who were producing works of speculative theory.\(^1\) We know that it was the Greek Mūrisṭūs manuscripts, translated into Arabic, which brought about the revival of the *hydræulus* in Byzantium and western Europe, when Muslim constructors began to build this instrument from the long-forgotten Mūrisṭūs designs.\(^2\) Byzantium continued to be the highway by which many other ‘Saracen arts’ came to the West.\(^3\) As late as the Crusades Christian Europe, impressed by the use of the Saracen military band, made it a part of its own martial tactics.\(^4\)

The more important impress of Islamic civilization on Europe was due to the presence of Muslims in the Iberian peninsula, Sicily, and elsewhere. Spain, which was in Muslim hands, more or less, from the eighth to the fifteenth century, became the centre from which this new culture radiated to the rest of Europe. Indeed it is to this land that we must turn for some of the influences which directly affected the Renaissance.\(^5\) The poverty of Christian Europe in the sphere of music theory and its stagnation in the practical field are suggested by the fact that from the end of the sixth century to the mid-ninth century no work on theory appeared in western Europe.\(^6\) While Europe only knew the Greek theorists through scraps interpreted by Martianus Capella, Boëthius, and Cassiodorus, the Muslims possessed complete Arabic translations of Aristotle, Aristothenes, Nicomachus, Euclid, Cleonides, and probably Ptolemy and Aristides Quintilianus.\(^7\) Muslim theorists themselves, from Al-Kindî (d. c. 874) to Al-Jurjâni (d. 1413), had produced important works on the theory of music.\(^8\) What Al-Fârâbî and the Ikhwân al-Şafā in the tenth century had to say on acoustics was undoubtedly in advance of the Greeks. They certainly acknowledged the Greeks as their teachers, but they were critical enough to specify or to ignore some blunders. The Arabic commentaries on Euclid’s *Canon* and Aristotle’s *De anima* must surely have led to some advance in the speculative art.\(^9\)

\(^2\) Farmer, *The Organ of the Ancients*, chap. viii.
\(^3\) Cambridge Mediaeval History, ii, p. 592.
\(^7\) See above, p. 458.
\(^8\) Farmer, *Sources*, pp. 19–21, 56.
script and could not therefore have been generally available, but others were translated into Latin and Hebrew, and one can still read Averroës’ *Commentary on Aristotle’s ‘De anima’*, translated into Latin by Michael Scot, and benefit from what he tells us concerning the teachings of the Stagirite, including the theory of the spherical propagation of sound.

Two compendia of the arts and sciences, *De scientiis* by Alpharabius (Al-Fārābī) and *De ortu scientiarum*, both translated from the Arabic, became textbooks in European educational institutions, as did dozens of other Latin translations from the Arabic. We find quotations from, or references to, both these textbooks in the writings of Gundisalvus, Magister Lambert (Pseudo-Aristotle), Vincent de Beauvais, Roger Bacon, Jerome of Moravia, Walter Odington, and others.¹ Such works would probably urge scholars to seek the more extensive writings of Muslim authors for wider information; and even supposing that some of these were available only in Arabic, the mere fact that the Muslims and Mozárabes of Spain were using them must have produced some benefit, even though it came orally.

In the Islamic colleges in Spain, music was part of the ‘science of mathematics’, as in the Islamic East,² although the mysterious Virgilius Cordubensis would have us believe that it was a separate study at Toledo.³ We know from Ibn al-Hijārī (d. 1194) that ‘students from all parts of the world flocked . . . to learn the sciences of which Cordova was the most noble repository, and to derive knowledge from the doctors and *ūlamā* who swarmed in it’.⁴ There was good reason for the fame of the Islamic schools. Anthony à Wood tells us that Roger Bacon, using faulty Latin translations from the Arabic in lecturing to students at Oxford, was ridiculed by those who came from Spain, evidently because they knew the originals.⁵ Indeed both Bacon and Adelard of Bath recommended students to forsake the European schools for those of the Muslims. Yet, although the potentialities of Islamic influence on European musical theory were considerable, especially in view of the unmistakable proofs of influence in the other sciences of the *quadrivium*,⁶ the fact is that, beyond the quotations made by European theorists from Alpharabius, and

¹ See Farmer, *Al-Fārābī’s Arabic-Latin Writers on Music* (Glasgow, 1934), where the question is fully discussed.
the mere scraps on music and therapeutics from Alkindus, Haly, Avicenna, and Constantine the African,\(^1\) we have little positive evidence.

We have already seen the universality of the practical art among Muslims everywhere, and under their domination in European lands the same inordinate love of music sprang up among the Christian population. Some Christian rulers adorned their courts with Oriental musicians.\(^2\) It was the same with the people at large, who would gather at the zambrá (Ar. zumra) or festival, where they took delight in the new-fangled caña (ghaniyya), huda (hudā'), anaxir (nashīd), and the leile (laila), to become delirious with rapture as they listened to an exotic aravia or mourisca, whose very names tell of their paternity. That some of this Oriental art had infiltrated quite early into the north is evident from iconography, as we see in the instruments delineated in the St. Médard Evangeliarum (eighth century), the Psalterium Aureum (ninth century), and elsewhere.\(^3\) Much of this may have been due to emigrant Mozárabes,\(^4\) although the real disseminators were the minstrel class, whose showy habiliments, painted faces, and long hair, which were the mark of the Oriental minstrel,\(^5\) had already been borrowed. The Spanish word mascara, like the English ‘masker’ (play actor), was derived from the Arabic maskhara (buffoon). The hobby-horse and grelots were part of the impedimenta of the morris dancers, alias ‘Moorish Dancers’, who were still painting their faces like the ‘Moors’ in the time of Thoinot Arbeau (1589). The hobby-horse (kurraj) and its bells (jalājil) are mentioned by Jarir (d. c. 728), and is described among the Moors of North Africa by Ibn Khaldūn (d. 1406), and its Basque descendant, the zamalzain, is simply the Arabic zāmil al-zain (‘gala limping horse’).

What were the new arts which these minstrels spread abroad? Firstly, there were some novel Arab-Persian instruments of Spain, the best verbal display of which, although rather late, occurs in the fourteenth-century Libro de buen amor,\(^6\) while we have delineations of them a century earlier in the Cantigas de Santa María.\(^7\)

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them were the atambor (at-ṭunbūr), guitarra morisca (kaitūra 'arabiyya), laud (al-ʿūd), rabē (rabāḥ), canon (gānīn), sonajas de azofar (ṣunūj aṣ-ṣafir), axabeba (ash-shabbāba), annafil (an-nafīr), atambal (at-ṭabl), as well as the albugon (al-būq). Many of these, together with their names, spread throughout Europe, the lute, rybybe, canon, tabor, as well as the naker (naqqāra), finding acceptance in Britain. The Spanish laud and atambor, as well as the guitarra morisca, were among the novelties, as was the bowed rabē. The first named were especially interesting since their necks were fitted with frets (dasātin) discreetly measured so as to give the Pythagorean scale, which was common to both Muslim and Christian. Prior to this Europeans had only the rote and harp among stringed instruments, and had only their ears to guide them in tuning. All this was altered by the introduction of instruments with fretted necks. The existence of this Arab–Persian device of frets on the lute was once doubted, but the objection has been completely disproved.

It may have been from the Islamic lute that western Europe received an alphabetic notation for practical purposes, as we see in Hucbald’s De harmonica institutione, although we get no definite proof of Muslim influence in this respect until later when, in a Latin work on the Ars de pulsatione lambuti et aliorum similium instrumentorum, dated 1496–7, it is admitted that the tablature mentioned was invented by ‘a Moor of the Kingdom of Granada’. Although the Conde de Morphy considered that the Spanish lute tablature was only ‘probably of Oriental origin’, his assessor, the more erudite Gevaert, had little doubt that the Castilians and Aragonese ‘elaborated their tablature in imitation of that of the Muslims’.

What else emerged out of Islamic practice or theory is not always patent. Odo of Cluny (d. 942), in his section on the eight tones, annexes to the chordae names which have a decidedly Semitic physiognomy, three of them being Arabic, schembs (Ar. shams = ‘sun’), caemar (qamar = ‘moon’), and nar (nār = ‘fire’), all of which appears to have a raison d’être in the doctrine of the ethos, as

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1 For all these instruments see Grove’s Dictionary of Music (London, 1954), s.v.
5 Gerbert, op. cit. i, p. 118.
6 Jaime Villanueva, Viaje literario a las Iglesias de España (Valencia, 1821), xi.
in the Islamic melodic modes and the Syrian oktoechos.¹ Of the parts played by Gerbert of Aurillac (d. 1003), Hermannus Contractus (d. 1054), Constantine the African (d. 1087), and Alfred the Englishman (thirteenth century),² all of whom were connected with music and had contact with Islamic culture, we know but little, and yet this little is extremely suggestive. Indeed one lights upon a number of allusive points. Is it not strange, for example, that such words as conductus, estribillo, and stanza, should be identical in their pristine significance as in their artistic meaning with the Arabic majrā, maṭla' or markaz, and bait? The conductus³ was a form which, in spite of its later ecclesiastical harbouring, had a secular upbringing as a song form, and Anglès has recognized specimens as early as the ninth century.⁴ Yet outside the philological closeness of meaning we know of no musical identity between the Latin conductus and the Arabian majrā. Some of the conducti have the forms of the rondeau and ballade, which were within the ken of the troubadours, who may not have been the inventors of the gaya ciencia, since we have yet to discover where these people found this art,⁵ although both their verse and their lives tell much of Spain.⁶ J. B. Trend has suggested that they 'really derived much of their sense of form, and even their subject matter, from the Spanish Muslims',⁷ and their name certainly reminds one of the Arabic tarrāb (minstrel),⁸ a hint which has not passed unnoticed.⁹

It has long been speculated that when the Spaniards took the verse and rhyme in the songs of the Arabs, as they did in the villancico, they may also have adopted the music as well. This is quite understandable when we realize that it was often the stroke of the plectrum on the Islamic lute or pandore which enhanced the characteristic rhythm of the song. It was for that reason that the Arcipreste de Hita (fourteenth century) insisted that some instruments were inseparable from certain types of songs, and pointed out that the Spanish vihuela de arco, cinfonie, and the like, were alien to Arabian music, e.g. in the song called 'Caguil hallacao'.¹⁰ Certainly one of the

² Farmer, Historical Facts, pp. 32–37, 177–186.
⁴ El Códex musical de las Huelgas (Música a veus dels segles XIII–XIV), i (Barcelona, 1931), p. 25.
¹⁰ Juan Ruiz, op. cit., II. 1516–17.
intrinsic features of Islamic music which affected Spain, and even countries beyond, was the melisma or 'gloss' (zaïda), which J. B. Trend has graphically likened to arabesques in Mudéjar art. Indeed he suggests that 'the Moorish contribution to Spanish music . . . is the Mudéjar style, that is, a manner of performance rather than a type of musical construction',¹ an opinion with which most people will agree.²

At the same time there are strong reasons for believing that western Europe owes something to the Muslim theorists and practitioners in the sphere of rhythm. This was what Julian Ribera, the Spanish protagonist of Islamic influence, believed, although he built up his thesis on false premises. He amassed a splendid array of literary evidence on the Islamic influence in general which was fairly convincing,³ but his testimony from musical sources, the Cantigas de Santa Maria, was less telling. It may be true that the Arabic zajal is the parent of the virelai and ballade (perhaps even of the rondeau), and that they may be found in the Cantigas, but it does not necessarily follow that the music is of the same origin.⁴ It has been urged against Ribera’s thesis that there are no confirmatory Arabic musical documents. That may be passably true, since it has been shown (p. 453) that these do not exist before the mid-thirteenth century, yet the argumentum ex silentio is proverbially inconclusive. The real case against Ribera is his erroneous transcription of the rhythmic modes of the classical Arabic authorities, which considerably invalidates his versions of the Cantigas and of the music of the troubadours.⁵

In 1925, independently of Ribera, certain other clues for possible Islamic influence on medieval European mensuralists were brought forward.⁶ It was demonstrated that there were references in the Latin treatise by the so-called Anonymus IV (late thirteenth century) to new mensural note-values which bore such Arabic names as elmuahym and elmuarifa,⁷ and that Johannes de Muris (post 1325) described another notated device called the alentrade, also of seemingly Arabic

³ Ribera, La Música de las Cantigas, pp. 95 ff.; Music in Ancient Arabia, pp. 177 ff.
⁴ Gustave Reese, Music in the Middle Ages (New York, 1940), pp. 245–7, where the pros and cons of 'Islamic influence' are fairly presented.
origin. The two former were counted among the *currentes* or 'running notes' to which Gustave Reese has drawn attention in the melodies of Léonin of Paris, that same *optimus organista* praised by Anonymus IV. It was also suggested that the musical term *ochetus* (*hoquetus*) was derived from the Arabic *iqādāt* (rhythms), just as Avicenna is made to speak in the Latin *Canon of Medicine* of hash, which is the Arabic *'ishq*. Muslim rhythm was one of the features of the Oriental art that was quite novel to Europe, which listened in wonderment to a singer in one rhythm while the accompanying instrumentalist played in another. So far, only two musicologists have recognized these hints of 1925. Of course, it may be that these Arabisms crept in through some Mozárabian scribe; yet why should one have used Arabic if there had been a Latin term available? Anonymus IV was certainly well acquainted with Spanish and Pamplona manuscripts on musical theory.

If so many things are hidden from us in this vexed question of Islamic influence, there are a few which are not. One can safely say, for instance, that the old notion that we owed our syllables of solfeggio to an Arabic source is quite unlikely, although even the more accepted origin may be very doubtful. That the Muslims practised harmony, in our connotation of the term, as stated at length by Julian Ribera, is quite erroneous. That they permitted devices known as the *tarkibāt*, i.e. the simultaneous striking of the fourth, fifth, or octave with other notes, is true enough, but this was only an infrequent decoration (*za'id* or *za'idā*) of the melody. 'In view of their practice of the *tarkibāt*,' it may be asked, 'how was it that the Muslims did not develop harmony?' The answer is that, in our Middle Ages, the Muslims knew of the principles of harmony, in the Greek sense of *harmonia*, better than Europe did, but they viewed the laws of *harmonia* horizontally, and continued to do so, whereas Europe, since the tenth century, has apprehended a vertical harmony. The Muslims have advanced in their horizontal *harmonia* as much as the European west has developed in its vertical harmony, while in another sphere they have outstripped the Europeans, in the 'heartbeats of God', as the infinite, boundless, rhythms of the Muslims have been called.

1 Ibid., ii, p. 419.  
2 Ibid., i, p. 342; Reese, op. cit., p. 298.  
4 E. de Coussemaker, op. cit. i, p. 345.  
5 Farmer, *Historical Facts*, pp. 72–82.  
On the other hand, some Islamic peoples have advanced beyond the use of simultaneous fourths, fifths, and octaves merely as occasional fioriture, as the present writer has shown elsewhere.¹ Uspeński and Belaiev, in their Turkmenskaya Muzyka (Moscow, 1928), have given innumerable examples of the normal music of Turkomanian peoples which reveal the widespread use of consecutive fourths and fifths, in a way identical with the organum of medieval Europe. Belaiev, in dealing with the folk-music of Georgia—where he found the same technique—would have us believe that this feature antedates the organum of Europe and says that ‘Europe did not invent it but acquired it elsewhere in a ready-made form’.² The present writer had merely hinted at the probability that the ‘rudimentary tarkib’ of Islamic peoples was the ‘forerunner of the European organum’, whereas Belaiev voices a certainty.³ Laurence Picken⁴ has made comparable studies in rural Turkey where he found similar features to those of Uspeński and Belaiev in Turkestan. Their occurrence in Asia Minor, says Picken, shows ‘that... the practice of parallel fourths and fifths can exist side by side with more or less sophisticated homophony’ which is the norm in most Islamic lands. Like Belaiev⁵ Picken favours an indigenous origin for this early polyphony, i.e. organum, and suggests that since ‘long-necked lutes’, i.e. pandores, ‘have great antiquity’ in that area, we cannot rule out the possibility that ‘the ancient Hittite lutes (first millennium B.C.) should not have been played polyphonically’. Yet the fact remains that we have no documentary evidence of organum among any peoples of Islam before comparatively modern times, and that the use of simultaneous fourths, fifths, and octaves, was not known to them earlier than the ninth century A.D., and even then only occasionally as fioriture.

On the question of Moorish influence in Spain the Spaniards themselves are not in complete accord.⁶ If such authors as Menéndez y Pelayo⁷ and Mitjana y Gordan⁸ recognize that influence, some of the musicians, notably Pedrell and Falla, do not. Pedrell avers that Spanish music ‘has absorbed no influence from the Arabs’:

³ See Farmer, Historical Facts, p. 112
⁵ Christian Science Monitor, 8 Sept. 1927.
⁷ Antología de poetas líricos, ii (Madrid, 1903), p. 68.
although on another page he expresses less certainty when he says that it 'owes nothing essential to the Arabs or Moors', a statement which loses its conviction unless we know what he considered to be 'essential'. Pedrell would trace the orientalism in Spanish music to the Byzantine period, but does not produce that 'documentary evidence' which is always demanded from those who claim a Moorish influence. Falla, whilst admitting the oriental stratum in Spanish folk music, attributes some of it to the gipsies, seemingly because of the word flamenco, a term which, like canto jondo, is not a century old. Trend has dealt at considerable length with the views of Falla on this gipsy influence in his Manuel de Falla and Spanish Music (New York, 1929). Yet one is constrained to ask whether there is such a thing as gipsy music per se? The latter, like gipsy religion, is, to a considerable extent, determined by the culture and beliefs of the land in which the gipsy abides. If gipsy music exists, how is it that it has not influenced the music of Poland and Italy where there have been such large settlements of gipsies? Not that the flamenco, canto jondo, or siguiriya gitana reveal—in the contour of the melody or the swing of the rhythm—any clearly cut Moorish or Arabian features: since it is more the circumjacent, especially in the 'manner of performance', as Trend so acutely observes, which displays those elements. In these latter, we must inevitably allow, as Raoul Laparra has said, that 'the origin of this mentalité of the flamenco goes back to the domination of the Moors in the Iberian peninsula'.

During the past two decades there has been a marked change of view on the question of the Arabian or Moorish influence, although that modification has been mainly on the literary rather than the music claims. Yet a few are still adamant. While Isabel Pope thinks that the melodies of the Cantigas de Santa Maria 'display the influence of the Church combined with the influence of the folk song, both European and Oriental', Higini Anglès still holds an opposite view; he states that in the 423 melodies of the Cantigas he found not the slightest trace of Arabian influence. Jeanroy, on the other hand, who in 1899 had said that the Arabian hypothesis was 'a pure legend', had been compelled to confess in 1934 that 'it is no longer

1 Cancionero musical popular español, i (Valls, 1919), pp. 69, 84.
3 R. Laparra, 'La Musique et la danse populaires en Espagne', Lavignac and La Laurencie, op. cit. iv, pp. 2394 ff.
5 Die Musik in Geschichte und Gegenwart, ii (Kassel, 1952), col. 777.
possible to dismiss the hypothesis by a negation pure and simple'. That admission had been forced on him by the researches of a new generation of scholars, many of whom were not only competent in Romance literature but in Arabic. The several works of Alois R. Nykl had placed the problem on 'a solid basis', and those who had sneered at Ribera now found that later Spanish Arabists of the standing of A. González Palencia and E. García Gómez were supporting some of the theses of the older Arabist. The tempo of acceptance was speeded after the appearance of R. Menéndez Pidal's *Poesía árabe y poesía europea* (1938–41) and later works. Then followed the troubadour studies of Gustave Cohen, Nykl, and Henri Péres, while the contributions of Samuel Stern, Dámaso Alonso, and Leo Spitzer on the Mozarabic lyric—Arabic and Hebrew—shed further light on the subject.

The question of the Arabic *kharja*, i.e. the *coda* strophe in Oriental and Romance poetry, which had been raised by Stern, was emphasized by E. García Gómez, and it still exists, as a musical feature, in the Moroccan *khurūj*. One of the most interesting discoveries was that of Lévi-Provençal who, in 1954, demonstrated in a most positive way that Chanson V in Jeanroy's *Les Chansons de Guillaume IX* was not only wrongly transcribed but that it contained in its *coda* four lines of undiluted Arabic.

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2. The Dove's Necklace (Paris, 1931); *El canclonero de Aben Guzmán* (Madrid, 1933).
3. 'La Poesía arábigo andaluza y su influencia', *Revista Hispánica Moderna*, i (New York, 1934).
4. Published in *Bulletin hispanique*, xl (1938), and in 1941, with other studies, at Madrid.
6. 'Le Problème des origines arabes de la poésie provençale médiévale', *Bulletin de la classe des lettres ... de l'Académie royal de Belgique*, 5e série, xxxii (1946).
7. 'The latest in Troubadour studies', *Archivium Romanicum*, xix (Florence, 1935); L'influence arabe-andalouse sur les Troubadours', *Bulletin hispanique*, xlii (Bordeaux, 1939); *Hispano-Arabic Poetry in its Relation with the Old Provençal Troubadours* (Baltimore, 1946); *Speculum*, xxvi (1951), pp. 179–84.
10. 'Cancioncillos *De Amigo Mozarabes*, *Revista de Filología Española*, xxxiiii (1949).
From this we see that the oldest of the French troubadours not only came in touch with Eastern Oriental culture during the Crusades, but with the more potent civilization of Muslim Spain. How much the troubadours could have been influenced from the south is brilliantly revealed in an article entitled 'Concerning the Accessibility of Arabian Influence to the Earliest Provençal Troubadours' by A. J. Denomy.¹ For the latest opinions on the question of the Arabian influence see Pierre Le Gentil's *Le Virelai et le villancico: Le problème des origines arabes* (Paris, 1954), and Ettore Li Gotti's *La 'Tesa araba' sulle 'Origini' della lirica romanza* (Palermo, 1955).

On the terrain of actual examples of Arabian or Moorish music of the Middle Ages little has been revealed since the present writer called attention to existing examples in 1929,² although a recent writer, Isabel Pope, still believes that 'no examples . . . are known to survive'.³ In 1929, however, a doubtful attempt was made by Clifton J. Furness to solve the identity of a piece of thirteenth-century music which was considered by Bourdillon to have been originally 'an Arabian or Moorish chant'.⁴ The article by Furness was entitled 'The Interpretation and Probable Derivation of the Musical Notation in the *Aucassin et Nicolette* MS.'⁵ After having heard Tunisian music, in which a man and a boy performed a similar chante-fable, he concluded that it was no different from the type of performance which has been considered to have been practised in the *Aucassin et Nicolette* recital. His account was on all fours with that which Bourdillon,⁶ Gaston Paris,⁷ and Walter Pater⁸ had pictured. He even went so far as to identify the scale of the thirteenth-century music with the Algerian jahărka mode which he found in the present writer’s version of F. Salvador Daniel’s *La Musique arabe* (1863).⁹ The latter says that it was identical with the Aeolian mode, but his example in the song of the Banī 'Abbās, notated in the book quoted, shows that it was the Mixolydian, which would equate with the Muṭlaq fi majrā al-biņšir mode of Baghdād and Cordoba of old. Unfortunately the

¹ Medieval Studies, xv (Toronto, 1953).
² History of Arabian Music (1929), p. 203 and pl. 3.
³ Annales Musicologiques, ii, p. 212.
⁸ The Renaissance, i (of Works, London, 1900), p. 16.
name jahärka—in relation to a mode—was unknown in the Maghrib before the opening of the sixteenth century, although it was used in the Near East from the fifteenth century. There is no jahärka mode—by name—in Tunisia, but in Egypt it is practically identical with our major mode. On the other hand there is obviously nothing particularly Oriental about the mode itself, although the airs of Aucassin and Nicolette may have Oriental features. Strange as it may seem, an unusual—although only partial—confirmation of the latter appeared in that same year, 1929, when Arnold Dolmetsch undertook a musical pilgrimage to Morocco where he frequented native musical assemblies. On one such occasion he was asked to play something on the lute from his own land. Among other items which he and his son Carl played in response to that invitation was the music of Aucassin et Nicolette. The old blind Moorish lutenist who led the native musicians hailed the music with delight saying, ‘I know that tune, only we would embroider it thus’. The item was then performed in the Moorish way, which was, as Mrs. Mabel Dolmetsch put it, ‘what we would call divisions on a ground’, although the latter did not suspect that the term ‘divisions’ (taqāsim) had been favoured by Arabic-speaking peoples for centuries before Simpson issued his Division Violist (1659), and the taqāsim is still the most favoured instrumental form in the Near East.

More important was a discovery by the distinguished Arabist Louis Massignon in 1949. This was reported by Isabel Pope to be ‘a collection of Arabic music with notation’ found in two manuscripts of the Andalusian poet Al-Shushtari (d. 1269) at Aleppo and Cairo. It would appear, however, that these latter, neither of them very old copies, simply show some of the songs rubricated with the names of the modes, i.e. the talāḥin (melodic modes or ‘patterns’) and the ḏurūb (rhythmic modes) to which they were sung. Among the former are some very old names, e.g. ʿṭrāq, ḥijāţ, ḥusainī, and ʿushshāq, although others, such as diṭa, siqā, and jahärka, were scarcely known in Al-Shushtari’s day. Yet we know, on the authority of Ibn ʿAbbād al-Nafzī (d. 1390), that music had been set to these verses. Since by that time all of the above

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1 R. d’Erlanger, La Musique arabe, iv, pp. 133–4.
2 Ibid., v, figs. 144–7.
5 Recueil des travaux du Congrès de Musique arabe (Cairo, 1934), pp. 112–13, 170.
6 ‘Investigaciones sobre Šustari’, Al-Andalus, xiv (1949).
7 Annales musicologiques, ii, p. 214.
8 Encyclopaedia of Islam (Leiden, 1913–38), iv, 393.
modes had become melody 'patterns' we can form as general an idea of the contour of the melodies of Al-Shushtari's *muwashshahāt* as of that of neum-written music of the early Christian Church.

Whatever may be our certainties and doubts concerning the extent of Islamic influence on European culture, we must remember that for 700 years at least it was the Muslims and Mozárabes of Spain who, in the earlier centuries undoubtedly, 'alone held the torch of learning and civilization bright and shining before the western world',¹ and it was this glow that helped to light the way for Europe's progress in music.

¹ S. Lane-Poole, *The Moors in Spain* (London, 1890), p. 43.
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CHAPTER XI

THE MUSIC OF ISLAM

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LIST OF CONTENTS OF
THE HISTORY OF MUSIC IN SOUND
VOLUME I

The History of Music in Sound is a series of volumes of gramophone records, with
explanatory booklets, designed as a companion series to the New Oxford History
of Music. Each volume covers the same ground as the corresponding volume in
the New Oxford History of Music, and is designed as far as possible to illustrate
the music discussed therein. The records are issued in England by The Gramo-
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booklets are published by the Oxford University Press. The editor of Volume I of
The History of Music in Sound is Egon Wellesz.

The side numbers given below are those of the 78 r.p.m. edition.

Side 1. CHINA (1): THREE ANCIENT MELODIES
(a) Tsui Wong Chan (The Strumming of an Elderly Gentleman)
(b) Lang Tau Sha (Waves Washing the Beach)
(c) Nan Tsin Kong (Entering the Palace)

Side 2. CHINA (2): INSTRUMENTAL AND DRAMATIC MUSIC
(a) The Poet Rides
(b) Meihua San Nonq (Plum Blossom)
(c) Duet from Hsiao Fang Niu (The Little Shepherd)
(d) Excerpt from Mou-Tan T'ing (The Lotus Pavilion)

Side 3. CHINA (3): OPERA
(a) Excerpt from Pai Shê Chuan (The White Serpent)
(b) Excerpt from Wu Chia P'o (Lady Precious Stream)
(c) Excerpt from Yuan-Mên Chan Tzû (Beheading a Son)
(d) Excerpt from T's'ao Ch'iao Kuan (Thatched Bridge Pass)

Side 4. TIBET
(a) Lamaist Instrumental Ensemble
(b) Lamaist Chanting
(c) Hymn by Two Nuns

Side 5. CAMBODIA
(a) Bampe (Lullaby)

MADAGASCAR
(b) Raivo

Side 6. LAOS
(a) Song of Nam-N gum Bargeman
(b) Mengphoutomdok (Buzzing of Bees)
(c) Laoh-Tenh (old dance)
(d) Thoum (Court of Love)
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