MUSIC

When we consider the wide gulf which separates the Eastern and Western arts of music, it is difficult to realize that there could be any Arabian or Islamic legacy to music in Europe at all. We Europeans conceive music vertically whilst the Arabs apprehend it horizontally. That is, broadly, the cognizable difference between the harmonic and melodic principles which underlie the art of music in the West and East respectively. Further, the Arabian notions of a tonic, of rhythm, and of ornamenting the melody, are quite alien to ours. Before the tenth century, however, the separation between the two arts was not so great. Indeed, there was actually very little difference between them, since they could both be reduced to a common denominator. At one period they both had the same Pythagorean scale, and both had inherited certain Greek and Syrian elements. Above all, harmony, such as we understand the term to-day, was unknown. The outstanding difference between them was that the Arabs possessed a system of mensural music as well as a definite conception of the ‘gloss’ or ornament to the melody, both of which were eventually to influence the West.

The source of Arabian music was the Semitic theory and practice of an earlier date, both of which had influenced, if they had not been the actual foundations of, Greek theory and practice. At a period just prior to Islam, the Arab kingdoms of al-Hira and Ghassan were doubtless influenced by Persian and Byzantine customs respectively, and both probably possessed the Pythagorean scale, which had originally come from the Semites.

In the early days of Islam we find that al-Hijaz, then the political centre, had adopted mensural music which was called ispad or ‘rhythm’. About the same time the Arabs adopted a new theory of music at the hands of a musician named Ibn Misjah.

Music (d. c. 705–14). This theory contained both Persian and Byzantine elements, but, as the late Dr. J. P. N. Land remarked, ‘The Persian and Byzantine importations did not supersed the national music, but were engraven upon an Arabic root with a character of its own’. This system, the scale of which appears to have been Pythagorean, obtained until the fall of Baghdad (1258).

Meanwhile, several changes took place, and in the scale these were so disturbing that Iṣḥāq al-Mauṣili (d. 850) found it necessary to recast the theory in its former Pythagorean mould. This held good until the time of al-Iṣḥāḥānī (d. 967), when the above ideas again asserted themselves. These latter were the Zalzalian and Khurāsāni scales. What helped to keep the older system as the basis was the acquisition of ancient Greek theory by means of translations of Aristotle, Aristoxenus, Euclid (or pseudo-Euclid), Nicomachus, Ptolemy, and others. Yet, in spite of borrowings, we know from al-Kīndī (d. c. 874), al-Iṣḥāḥānī, and the Ikwān al-Ṣafī‘ (10th century), that the Arabian, Persian, and Byzantine systems of music were different. By the eleventh century Persian and Khurāsāni ideas had been adopted, noticeably in the modes. Later, a theorist named Ṣafī al-Dīn ‘Abd al-Mu‘min (d. 1294) introduced or systematized a new theory (the Systematist Theory), while before the close of the Middle Ages another scale found acceptance, the Quarter-Tone System, which obtains to-day among the Arabs of the East. That Arabian music was influenced by Persian and Byzantine practice is openly admitted by the Arabs. In turn, the Persians and Byzantines also borrowed from the Arabian art.

The Practice of Music

What music meant to the Arabs is illuminatingly revealed in the Thousand and One Nights. The best insight, however, into the Arab’s intense appreciation of the art is to be gained from such works as Ibn ‘Abd Rabbihi’s Unique Necklace, al-Iṣḥāḥānī’s
Music

Great Book of Songs, both written in the tenth century, and al-Nuwairi's *The Extreme Need*, composed in the thirteenth century, all of which, unfortunately, are still only available in Arabic. Here we see that music accompanied the Arab from the cradle to the grave, from the lullaby to the elegy. Every moment of his life seems to have had its particular music—joy and sorrow, work and play, battle-throw and religious exercise. Almost every Arab of substance in those days had his singing-girl, who appears to have been as much in evidence in the household as the pianoforte is with us to-day.

It is not, however, the music of 'the people' that we are primarily concerned with here. As Ibn Khaldūn (d. 1406) says, no art really begins until there are artists. We see a professional class of musician in pre-Islamic days, and with the rise of the caliphate, in spite of the ban of Islam which did not regard 'listening to music' with favour, this class was held in the highest esteem. Indeed, the cultivation of music by the Arabs in all its branches reduces to insignificance the recognition of the art in the history of any other country.

Vocal music has always been more keenly appreciated by the Arabs than purely instrumental music. Their ardent taste for poetry determined this to some extent, although the pressure of legal opinion which frowned on instrumental music (per se), also contributed to the preference. Among the verse forms of vocal music there were, besides the ode or qasida, many shorter forms such as the qif'a or fragment, the ghazal or love song, and the more popular muwashshah. In the West, later forms, such as the za'jil and muwashshah, were introduced. The melody, which was set to certain modes or scales, might be in mensural form, i.e. set to rhythm (iqāṭ), or it might not. Every performer sang or played in unison or octave. Harmony was unknown in the form in which we understand the term. In its place the Arabs had the 'gloss' or ornamentation of the melody, which sometimes included the striking of a note of the melody simultaneously with its fourth, fifth, or octave, a procedure known as the tarkīb or compound. The instrumental accompaniment, which followed the melodic scheme, was invariably furnished by the lute (al-ud, from which our word is derived), pandore (lambūr), psaltery (qānūn), or lute (qājāba, nāy), whilst the drum (tabī), tambourine (dūff), or wand (qadīb) strengthened the rhythm. There were also instrumental pieces, but far oftener they were used as preludes or interludes to vocal items. Perhaps the most important musical form was the naʿūba, a sort of vocal and instrumental suite of several movements, which was especially developed in the West. So far, the music dealt with is what might be termed chamber-music, for although we sometimes read of very large orchestras, the general rule was for quite small numbers.

Open-air music, appropriate to a procession or military display, was usually confined to such instruments as the reed-pipe (zurnah, turnah), horn or clarion (būq), trumpet (nafir), drum (tabī), kettle-drum (naqqāra, quasi'a), and cymbal (kāsa). The military band played an important part in Muslim martial display, and it was recognized as a special part of military tactics. Senior officers had bands allotted to them, the size of which depended on their rank, as did also the number of movements or fanfares in the military naʿūba.

In spite of the legal condemnation of music and musical instruments, especially the latter, the spiritual effects of music were clearly recognized. The jāfi looked upon it as a means of revelation attained through ecstasy, whilst the dervish and marabout fraternities regulated their rituals by it. Al-Ghazālī quotes: 'Ecstasy means the state that comes from listening to music'. Elsewhere in his treatise on *Music and Ecstasy* he gives seven reasons for holding that singing is more potent in producing ecstasy than the Quran itself. As we read in the *Thousand and One Nights*: 'To some people music is meat, and to others medicine'. This conceit grew out of the doctrine of
the ‘influence of music’, which, with the belief in the principles of the ethos, the harmony of the spheres, and the theory of numbers, attracted unusual attention. This doctrine of musical therapeutics had a fairly wide acceptance.

Among the people at large on festive occasions all sorts of musical instruments were to be found, while with the women the tambourine was a special favourite. The itinerant minstrel also had his place. He was generally equipped with a tabor (jūd) and pipe (shābīn), one hand beating the former and the other fingering the latter, whilst he shook his head which was crowned by a cap furnished with small bells.

That the Arabs contributed to the practical art in the East there is ample evidence in the technical nomenclature from Samarkand to the Atlantic.

Musical Instruments

The names of musical instruments in Arabic are legion, and it would be impossible here to deal with even a tithe of them. The Arabs carried the manufacture of musical instruments to a fine art. Treatises were written on their manufacture, and some towns, like Seville, were famous for their production. In the lute family alone there were all sorts of species and sizes. Besides their pre-Islamic lute (mizzbār) with a skin belly, they had their classical lute (ṣūd gādim), which approximated to the modern mandoline, as well as a larger instrument called the perfect lute (ṣūd kāmil). Their shābīd was an archlute, and we have pictorial designs of some enormous instruments. In the pandore group they possessed instruments as large as the jāmbūr turki and as small as the jāmbūr bighilma. Then there was the guitar, known as the murabbā’. It was a flat-chested rectangular instrument. Later it came to be known as the qitārā. More important to us were their bowed instruments, known at first under the generic term rābāb. These, too, were found in all shapes and sizes, and among them those known as the kamānya...
and ghishak. Among the instruments with open strings were the harp (jank, tanj), psaltery (qânûn, nuqba), and dulcimer ( crimes ).

The wood-wind family included flutes in many sizes, from the nây bâmm and others, which were about three feet in length, to the smaller shabbâba and jawây, about a foot long and even less. The 'safrâ was a flute à bec. Among the reed-blown types were the samr, surnây, zulâtâ, and ghâša, as well as the reed-blown biq which was made of metal.

The term duff stood for any tambourine, but specifically it was the square instrument. The round instrument had a dozen different names according to its size or construction, such as târ, dâ'ira, &c. The drums, also, were to be found in many varieties under such names as tabl, naqqâra, qât'a, &c. The cymbal was the kása, a name also given to the bowl-shaped castanet, the flat form of which was called sinj.

Both the pneumatic organ (arghaːnân) and the hydraulis were known to the Arabs, and probably also the organistrum (dâlâb), well known in medieval European art and resembling the modern hurdy-gurdy, and the eschaoût (al-shaqura).

That the Arabs were both inventors and improvers of musical instruments we have various statements to prove. Al-Fârâbî (d. 950) is said to have 'invented' (? improved) the rabâb and qânûn; al-Zunâm (early 9th century) designed a wood-wind instrument called the nây zunâm or zulâmî; Zalzal (d. 791) introduced the 'ad al-shabbâ; al-Ḥakam II (d. 976) improved the reed-blown biq; Ziryâb (early 9th century) added to the range of the lute; both al-Bayyâbî and Abû'l-Majd (11th century) were organ constructors, whilst Šaft al-Dîn 'Abd al-Mu'mîn (d. 1294) invented a square psaltery called the nuqba, as well as an instrument known as the mughmî.

Although some sort of musical notation existed from the early years of the ninth century, most of the performers learned their music by ear. Some of the composers believed that their works were inspired by the genii. The dress and general appear-
ance of the Arab minstrel is worthy of notice. Long hair, painted face and hands, and bright colours, appear to have been affected by this class, a relic perhaps, of the effeminate mubtan-nathān of early Islamic days. Many of the singers were eviratai, some as a punishment, others probably because of the popularity of the boy’s voice. The singer was patronized at the caliph’s court not only on account of his art, but also because of his political use. The musician’s vocation took him into many households, where the wine-cup often revealed a secret of political import. Further, there was many an opinion that could be more effectively propagated by means of a song than otherwise, as the jongleurs of the heretical troubadours of Provence, who imitated the Arabs, found eventually to their cost.

Writers on Music

An enormous amount of Arabic literature was written about music—histories, collections of songs, books on musical instruments, the legal aspect of music, aesthetics, and the lives of musicians. The greatest of all these writers were al-Mas‘ūdī (d. c. 957) and al-Iṣfahānī (d. 967). In the former’s Meadows of Gold we get interesting data on the early practice of Arabian music, whilst in his other books the author dealt with the music of foreign lands. More valuable still is the monumental work of al-Iṣfahānī—the Great Book of Songs in twenty-one volumes, which Ibn Khaldūn has called ‘the diwan of the Arabs’. This author also wrote four other books on music. A mine of information regarding writers on the theory and science of music, as well as on the general literature of music, is The Index of Muḥammad ibn Ishāq al-Warrāq (d. c. 995-6).

In the West we have much the same. The Unique Necklace of Ibn ‘Abd Rabbihī (d. 940) contains the lives of the celebrated musicians, as well as a spirited defence of music against the puritans. Yahyā al-Khudūjī al-Mursī (12th century) wrote a Book of Songs in imitation of al-Iṣfahānī in the East. Ibn al-

‘Arabi (d. 1151) and others contributed works on the ‘permissibility’ of music, at the same time furnishing much information about musical instruments.

After the fall of Baghdad (1258) the ‘fine writers’ on music almost ceased to exist. Their place was taken by a host of legists who argued for or against the ‘permissibility’ of music. The few who did write on music in the older manner included it as part of a larger work, as we see in the Prolegomena of Ibn Khaldūn (d. 1406), and the Mustāṭraf of al-Iṣbūḥī (d. 1446).

Theorists

The first writer on the theory of music of whom we have definite information is Yūnūs al-Kātib (d. c. 765). He was followed by al-Khaṭīb (d. 791), the systematizer of Arabian prosody and the first Arabic lexicographer. His Book of Notes and Book of Rhythms are catalogued in The Index (late 10th century). Probably it was al-Khaṭīb’s theories that Ibn Fīrān (d. 888) introduced into Spain. The latter was ‘the first who taught the science of music in al-Andalus’. Ishāq al-Maṣūﬁ (d. 850) recast the ‘Old Arabian System’, and his theories were put forward in a Book of Notes and Rhythms.

Between the eighth and tenth centuries many of the treatises of the Greeks on the theory of music and the science of sound were translated into Arabic. A work attributed to Pythagoras was known in Arabic, as well as Plato’s Timaeus, the latter having been translated by Yūhannā ibn al-Batrīq (d. 815), and again by Ḥunain ibn Ishāq (d. 873). Among Aristotelian writings the Arabs possessed the Problemat and De anima, both translated by Ḥunain ibn Ishāq. Among the commentaries on De anima by Greek writers known in Arabic were those of Themistius and Simplicius, the former having been rendered by the same Hunain who was also responsible for Galen’s De voce. It was from these works that the Arabs derived their more scientific ideas on the theory of sound.
Aristoxenus was known in two works in Arabic—The Principles of Harmony and a book On Rhythm, the former title bearing out the opinion that the Elements of Harmony that we now possess in Greek was originally made up of two works—the Principles (ἀρχαὶ) and the Elements (ἐρωτήματα). In Arabic Euclid had two books on music attached to his name—The Introduction to Harmony and The Section of the Canon. Nicomachus was read in a Grand Book on Music and in several compendia, which seems to show that Nicomachus did write that ‘larger work’ which he refers to in his Manual of Harmony, the latter being made up of his compendia, as we know it in Greek. His Introduction to Arithmetic, which incidentally deals with music, was translated by Thabit ibn Qurra (d. 901). Ptolemy was known by a Book on Music, which was probably his Treatise on Harmony that we know to-day. Other works from the Greek that have come down to us in Arabic are the treatises on hydraulic organs attributed to Archimedes and Apollonius Pergaeus, and those by a certain writer known in Arabic as Murdus or Murustus, who wrote on the pneumatic organ, the hydraulics, and the chimes.

The earliest extant works on the theory of music in Arabic showing the influence of the Greek writers are those of al-Kindi (d. c. 874). Seven treatises on the theory of music were composed by him, and three, if not four, have been preserved, viz.: The Essentials of Knowledge in Music; On the Melodies; The Necessary Book in the Composition of Melodies, and another. Al-Sarakhsi (d. 899) and Mansur ibn Ta'lab ibn Tahir were his disciples. Contemporary theorists were Thabit ibn Qurra (d. 901), Muhammad ibn Zakariyya al-Razi (d. 923), and Qustal ibn Luqah (d. 932). These were followed by the greatest of all the Arabic theorists—al-Farabi. Among his books on music were the Grand Book on Music, Styles in Music, and On the Classification of Rhythm. Besides these, he dealt with music in two of his celebrated compendia of the sciences—The Classification of the Sciences and The Origin of the Sciences. Al-Farabi tells us that he wrote his Grand Book on Music because he found lacunae as well as obscurities in what the Greeks had written on music, at least as he found them in Arabic translation. After him came al-Buzjani (d. 998), the greatest of Arabic writers on mathematics, who composed a Compendium on the Science of Rhythm. At the same time there lived the encyclopaedists known as the Ikhwân al-Safâ (10th century) whose treatise on music was widely read, and Muhammad ibn Ahmad al-Khwârizmi (10th century), the author of the Keys of the Sciences, one of which unlocked the theory of music.

Of particular fame was Ibn Sinâ or Avicenna (d. 1037) who, after al-Farabi, contributed the most important works on the theory of music in Arabic. These are to be found in the Shifa and the Najât. He also wrote an Introduction to the Art of Music, whilst a few definitions are to be found in his Divisions of the Sciences. Ibn Zaila (d. 1048), his disciple, wrote a Book of Sufficiency in Music, whilst a contemporary, Ibn al-Hajjâm (d. 1039), a brilliant mathematician and physicist, compiled two studies of the works attributed to Euclid—a Commentary on the Introduction to Harmony, and a Commentary to the Section of the Canon. He wrote in Egypt where another gifted author, Abûl-Šalt Umâyya (d. 1134), composed a Treatise on Music. Other theorists who crowd into the twelfth century are Ibn al-Naqqash (d. 1178), al-Bâhili and his son Abûl-Majîd (d. 1180), and Ibn Man'a (b. 1156). The thirteenth century brought theorists of even greater renown. 'Alam al-Dîn Qaisar (d. 1251) was looked upon as the most eminent mathematician in Egypt and Syria, and was especially famed in the theory of music. Further east similar celebrity was accorded Naṣîr al-Dîn (d. 1274), whose fragment on music has been preserved.

In Muslim Spain, after Ibn Firnas (d. 888), we read of Maslama al-Majrî (d. 1007) and al-Kirmânî (d. 1066), who popularized the treatises of the Ikhwân al-Safâ, whilst
other theorists were Aḥḥāl-Faḍl Ḥasan (11th century), a Jew, and Muḥammad ibn al-Ḥaddād (d. 1165). Greater merit as a writer on the theory of music was reserved for Ibn Bīja or Averno (d. 1138). His treatise on music enjoyed the same reputation in the West as that of al-Fārābī in the East. Ibn Rushd or Averroes (d. 1198) wrote the famous Commentary on Aristotle's De anima, dealing perspicuously with the theory of sound. In the thirteenth century there followed the famous Ibn Sabīn (d. 1265) and his contemporary al-Raqqī, who after the fall of Murcia to the Christians was engaged by them to teach the quadrivium.

In the thirteenth century the new Systematist School was founded by Ṣafī al-Dīn ʿAbd al-Muʾmin (d. 1294). His theories were expounded in the famous Sharaṣūryya and in a Book of Musical Modes. Ḥājī Khalīfa says that he was amongst those ‘taking the front rank’ in the writers on the theory of music. Most of the names that follow here belong to his school. Shams al-Dīn Muḥammad ibn al-Marhūm (c. 1320) wrote a treatise in verse entitled The Jewels of Arrangement in the Knowledge of the Melodies, and Muḥammad ibn ʿIsā ibn Karā (d. 1358) composed The End of the Enquiry into the Knowledge of the Melodies and the Rhythms.

More imposing was a treatise known as the Maulānā Mubārakshāb Commentary on the Musical Modes, dedicated to Shāh Shujaʿ (1359–84), which was one of the numerous commentaries written on the theories of Ṣafī al-Dīn ʿAbd al-Muʾmin. Another treatise dedicated to the same patron is the encyclopaedia known as the Discourses on the Sciences. It contains a section on music. The work was probably written by al-Jurjānī (d. 1377).

ʿAmr ibn Khiḍr al-Kurdi (c. 1397) was the author of The Treasure of the Enquiry into the Modes and the Rhythms. Ibn al-Fanārī (d. 1430) deals with music in his encyclopaedia of the sciences. Shams al-Dīn al-ʿAjamī (15th century) wrote a useful Epistle on the Science of the Melodies. Al-Lāḥiqī (d. 1445) com-posed an estimable work known as The Fathyya. Ḥājī Khalīfa appears to rank this writer with Ṣafī al-Dīn ʿAbd al-Muʾmin and ʿAbd al-Qādir ibn Ghāibī. Lastly, and probably the most important treatise since the works of the founder of the Systematist School, is the anonymous Muḥammad ibn Murād Trea-tise (c. 1421–51), now in the British Museum.

**Value of the Arabian Theorists**

Most of the Arabic theorists, being skilled in the quadrivium, were good mathematicians and physicists. The speculative theory of music and the physical bases of sound, which the Greek treatises had opened up to them, led many of these theorists to make experiments on their own account. That is one of the most interesting phases of their work. More than once we find them saying that they had put such and such a theory to practical test and experiment and found it wanting or otherwise. The criticisms of Ṣafī al-Dīn on the definitions of al-Fārābī and Ibn Sinā reveal the temper of these inquirers, who will not meekly bow the knee to the statements of their predecessors, however great their names, if they are not correct.

We have seen that both al-Fārābī and Ibn Sinā are claimed to have added to what the Greeks taught. Just as the Arabic astronomers corrected Ptolemy and others, so the Arabic musical-theorists improved on their Greek teachers. The Introduction to al-Fārābī's Grand Book on Music is certainly equal, if not superior, to anything that has come down to us from Greek sources. In the theory of the physical bases of sound the Arabs certainly made some advance, especially in the question of the spherical propagation of sound. Indeed, it is highly probable that when the works of the Arabic theorists have been edited with an adequate apparatus criticus,
many a debatable word or passage in the Greek writers will be illuminated.

The careful descriptions of musical instruments made by the Arabic theorists, which included measurements, enable us to know the precise scales used. We have instruments of the lute, pandore, harp, and wood-wind families described by al-Kindī (d. c. 874), al-Fārābī (d. c. 950), al-Khwārizmī (10th century), and the Ḥūwān al-Ṣafā’ (10th century), that are centuries before we have any such attempt made in Europe. That they were not content with Greek tuning is evident from their experiments with the neutral third of Zaṣzal (33) and the Persian third (33).

The Systematist School, fathered by Ṣafī al-Dīn (d. 1294), produced what Sir Hubert Parry considers to be ‘the most perfect scale ever devised’, whilst Helmholz says that ‘their use of the Major 7th of the scale as a leading note to the tonic marks a new conception, which admitted of being used for the further development of the tonal degrees of the scale, even within the domain of purely homophonic music’.

The Legacy of Arabian Music

The legacy left to the world of music by the Arabs was a substantial gift. Look where we will in the East, we find the influence of the Arabian practical art. That Persian, Turkish, and other theorists also benefited there is ample written evidence. In Persia the Gladness of the Soul of Abūd al-Munīn (12th century), the Assembling of the Sciences of Fakhr al-Dīn al-Rāzī (d. 1269), the Precious Sciences of Abūl-ʿAlāʾ (14th century), and the Assembling of the Melodies and other works of Abū al-Qādir ibn Ghālib (d. 1435) reveal the Arabian legacy. In Turkey, we find that the treatises of al-Fārābī, Ṣafī al-Dīn, and Abū al-Qādir were translated into Turkish. The son of the latter, Abū al-ʿAzīz, and a grandson, both of whom were in the service of the Uthmānī sultans, wrote treatises which show their dependence on their Arabic masters, as do the works of Khīḍr ibn Abīdallah

and Ahmad Ughīn Shukrullāh (15th century). Even in India we find that the Arabic treatises were drawn upon.

As for western Europe, the benefits which accrued from contact with Arabian culture were greater still. Europe received its legacy from the Arabs in two ways—(1) by means of the political contact, which brought the legacy of the practical art by hand and by word of mouth, and (2) by means of the literary and intellectual contact, which brought the bequest of the theoretical art through translations from the Arabic and viva voce through scholars who had studied at the Muslim schools in Spain and elsewhere.

In spite of the very considerable Arabic literature on the theory of music which existed in the Middle Ages, very little has come down to us in Latin or Hebrew translations. Of the Greeks, Aristotle’s De anima, translated by Johannes Hispanensis (d. 1157), and Galen’s De voce, of which we have a thirteenth-century MS., are known to have been rendered from the Arabic into Latin. Of the Arabs, the two encyclopaedias by al-Fārābī (d. 950) were translated into Latin by Johannes Hispanensis and Gerard of Cremona (d. 1187) as De scientiis and De oris scientiarum. Aricenna (d. 1057) was also known in Latin by his Compendium of Aristotle’s De anima which was done by Johannes Hispanensis. It was translated again by Andreas Alpagus (d. 1520), who also turned his encyclopedia into Latin as De divisione scientiarum. Of special value was the Great Commentary on Aristotle’s De anima by Averroes (d. 1198) which was拉丁ized by Michael Scot (d. 1232).

There was also much that appeared in Hebrew translation from the Arabic which became accessible to western Europe. Euclid’s Section of the Canon had evidently been translated into Hebrew from the Arabic, since we have a Commentary on the Canon by Isaiah ben Isaac. Moses ibn Tibbon (d. 1283) was responsible for a translation of the Problematum. There is also a work on music in the Vatican attributed to Abraham ibn Ḥiyya.
Music

(d. 1136) which is said to be a translation from the Arabic. Probably the *Treatise on Music* by Abū'l-Salt Umayyā (d. 1134) was also known in Hebrew. The Introduction to al-Fārābī’s *Grand Book on Music* is recommended by Ibn ‘Aqīn (fl. 1160–1226). Shem-Tob Isaac of Tortosa (d. c. 1267) translated the *Middle Commentary on Aristotle’s De anima* by Averroes. Kalonymus ben Kalonymus (d. c. 1328) made a version of al-Fārābī’s *Classification of the Sciences*.

A first glimpse of the transmission of the Arabian legacy in music by means of literary contact is to be seen in Constantine the African (d. 1087), one of the early translators of Arabic works into Latin, who introduces the Arabian theories on the influences of the planets and the curative effects of music in his *De humana natura* and *De morborum cognitione*. It had been a maxim of Avicenna ‘inter omnia exercititia sanitatis cantare melius est’.

Gundisalvus (fl. 1130–50) has a section on music in his *De divisione philosophiae*, much of which is a verbal reproduction from al-Fārābī’s *De scientiis* and *De ortu scientiarum*, which he may have had a hand in translating. Borrowings from the same source may be found in the treatise *De musica*, which bears the name of [pseudo-] Aristotle, and in the *Speculum doctrinale* of Vincent de Beauvais (d. 1264), where al-Fārābī is quoted with Boethius, Isidore of Seville, and Guido of Arezzo. From a definition in the *Ars musicae* of Johannes Ægidius (c. 1270), a Spanish theorist who was acquainted with the works of Constantine the African, it would appear that al-Fārābī was again the source. The same may be said of Robert Kilwardby (d. 1279), Raimundo Lull (d. 1315), Simon Tunstede (fl. 1300–69), and Adam de Fulda (c. 1490).

Roger Bacon (d. 1280) quotes al-Fārābī, in company with Ptolemy and Euclid, in the section on music in the *Opus tertium*, especially mentioning the book *De scientiis*. He also draws on Ibn Sinā on the question of the therapeutic value of music. The latter is also borrowed by Walter Odington (c. 1280) in his *De speculata musicae*, and by Engelbert (d. 1331) in his *De musica*. Jerome of Moravia (14th century) devotes a chapter to al-Fārābī in his *De musica*, whilst in another chapter he quotes him side by side with Boethius, Isidore, Hugo of St. Victor, Guido of Arezzo, and Johannes Garlanda. Al-Fārābī still continued to attract the attention of scholars until the seventeenth century, as we know from George Valla’s *De expetendi et fugiendi rebus* (1497–1501), George Reisch’s *Margarita philosophica* (1508), and Camerarius, who re-issued *De scientiis* (1638).

The benefits that resulted from the literary contact, as outlined above, were not considerable. Of far greater importance was the transmission of Arabian theory *viva voce*. Ibn al-Hijāri (d. 1194) says that during the Umayyad rule in Spain (8th–11th centuries) ‘students from all parts of the world flocked to learn the sciences of which Córdoba was the most noble repository’. Music, which was part of the *quadrivium*, was studied, and European students could have benefited from the Arabic fount direct, without the intermediary of Latin translations. Arabic was probably spoken by the Mozarabs (the Christians living under Muslim rule in Spain), and these people played an important part in the diffusion of the Arabian sciences. We know that Roger Bacon, when lecturing to Spanish students at Oxford, and using faulty Latin translations from the Arabic, was ridiculed by them because they knew his authorities *ab origine*. It is no wonder that the *doctor mirabilis*, like his predecessor Adelard of Bath (early 12th century), recommended his readers and listeners to abandon the European schools for those of the Arabs. Whilst European theorists only knew of Greek theory from Martianus Capella, Boethius, Cassiodorus, and Isidore, the Arabs possessed the works of Aristotle, Aristo- xenus, Euclid, Nicomachus, Ptolemy, and others. It would appear, therefore, that whether the best of the treatises on music
Music

in Arabic were known in Latin or not, the mere fact that the Arabs studied them must have yielded beneficial results.

That the Arabs influenced Europe in the question of solfeggio and an alphabetic notation cannot be said with any degree of certainty. In instrumental tablature the borrowing is far clearer, and it is openly acknowledged in the earliest Latin work on the subject that we possess, the Ars de pulsatione lambuti. As for a diastematic notation, the earliest use of it in the Islamic East only dates from about 1200.

Probably the most important legacy left to Europe by the Arabs was mensural music. Prior to Franco of Cologne (c. 1190?) the cantus mensurabilis, or measured song, was unknown. Under the name of ḍiqāʾ (pl. ḍiqāʾāt) or rhythm, it had been a constituent part of Arabian music since the seventh century, and we have it described in a work by al-Kindi (d. c. 874). Not only mensural values in the notes, but even the rhythmic modes that we see in Franco and his school, appear to have been derived originally from the Arabs. In the Latin treatise De mensuris et discentibus (c. 1273–86) we have particular kinds of notes bearing such names as elmubaym and elmuwārifa, which are of Arabic origin, whilst in Johannes de Muris (14th century) we have a reference to a device known as the alentrode, also of Arabian origin. The medieval bochet, which Robert de Hambro (c. 1320) says is ‘a combination of notes and pauses’, is the Arabic ḍiqāʾ āt, just as the Latin alibab in Avicenna’s Canon is the Arabic al-ʿishq.

The Practical Art

The diffusion of the Arabian practical art was due to the minstrel class who were the real disseminators of music in the Middle Ages. Perhaps the gaudy raiment of the Occidental musicians, their long hair and painted faces were due to Oriental influences. The Morris dancers, i.e. Moorish dancers, with their hobby-horse and bells, are certainly reminiscent of the Arab minstrels, and as late as Thoinot Arbeau (1589) these Morris dancers still dyed their faces in imitation of the Moors. The Basque name for the hobby-horse—zamalkuzin—simply the Arabic zamīl al-zain (‘gala limping horse’). The Spanish word mascara, like the English masker (‘play actor’), is the Arabic maskhara (‘buffoon’). There are dozens of words connected with music in the Iberian peninsula, such as zambrá, zarabanda, buda, mourisca, which are apparently of Arabic origin.

The superior culture enjoyed by the Arabs was bound to be reflected in western Europe. We know that the Spaniards were imitating Arabian models in rhyme and metre in the ninth century, and in the tenth century even the Jews were influenced. Obviously, the music that accompanied the verse was also borrowed since the two were inseparable. We see both the Arab and the Jew among the juglaret of Christian Spain, and in the twelfth century, when the Counts of Barcelona became the rulers of Provence, the troubadour (a word which may have been derived from the Arabic ṣarrāb ‘minstrel’) and his jongleur re-acted the parts of the Arab amīr and his muqarrabān.

The legacy to western Europe in musical instruments and in instrumental music was of the greatest importance. That the Arabs were responsible for the names and even the actual types of a number of musical instruments in western Europe is generally acknowledged. The origin of the words lute, rebec, guitar, and naker, from the Arabic al-ʿud, rabāb, qīṭāra, and naqqāra, is well established.

Much of the alien nomenclature adopted by Europe does not always represent fresh types of instruments being adopted. It may have been due to political pressure. There were many distinctly novel Arabian types introduced, and these were of considerable moment to European music. Firstly, there arrived a whole family of stringed instruments of the lute, pandore, and guitar groups. Secondly, there came bowed instruments of various types. Of the early diffusion of these we have the evi-
Music
dence of the St. Médard Evangel (8th century), and the Lothair and Laboe Notker Psalters (9th–10th centuries).

With these instruments came several material benefits. European minstrels, prior to the Arabian contact, only had the cithara and harp among stringed instruments, and they only had their ears to guide them when tuning. The Arabs brought to Europe their lutes, pandores, and guitars, with the places of the notes fixed on the finger-board by means of frets (cf. Arab. ʿarbaʿa, ʿarab) which were determined by measurement. This alone was a noteworthy advance. Indeed, it was perhaps the fretting of the Arabian lute that registered the employment of the major mode for Europe.

Of course the greatest of the benefits which accrued from the Arab contact was undoubtedly the acquisition of mensural music, which must have been passed on by the minstrels long before the theorists took cognizance of it. Secondly, the ‘gloss’ or adornment of the melody, the counterpart of ars nova in the other arts, was placed under contribution. It was the type of ‘gloss’ known as the ʿurūbah or ‘compound’, which was the striking of a note simultaneously with its fourth, fifth, or octave, that probably gave Europe its first prompting towards harmony. It is also worthy of notice that the word conductus, a medieval form of composition, is identical with the Arabic majrā. It was the Arabian lute perfected by the Spanish masters that led to the musica ficta.

With the fall of Baghadād to the Mongols (1258), the capitulation of Granada to the Christians (1492), and the surrender of Egypt to the Turks (1517), the political and cultural superiority of Arabic-speaking peoples ceased. Art and politics may appear to be poles asunder, but the truth is that they are closely bound together. Irrespective of this, Europe had taken the lead in the world’s culture long before the last-mentioned date.

From time to time attempts have been made to introduce Arabian and Muslim melodies and ‘oriental’ effects of orchestra-
tion into Western music. In the nineteenth century experiments in this direction were made by Rubinstein, Félicien David, and Saint-Saëns; while later composers have also attacked the problem. A study of their endeavours might be of considerable interest, but it would be too long and too technical to undertake in this essay.

H. G. Farmer.