

This will give me
the opportunity to speak
to you for the first time
after my return from
England.

"The Instruments of the Orchestra"

Ladies and Gentlemen,

It is with great pleasure that I have accepted the kind invitation of Mr. Ross Thomas to speak to you on the occasion of the projection of the film "Instruments of the Orchestra". Because I know ~~so~~ very well the London Symphony Orchestra, you are going to hear in this film, and the eminent Conductor ~~Dr.~~ now Sir, Malcolm Sargent. This is a film of an educational character, the principal aim of which is to present and describe the various instruments of the orchestra; their tone-colour, how they are played, and generally the role they have to play in the orchestra. Though Sir Malcolm Sargent will do this very clearly by showing the instruments themselves in the film, I shall try to treat the subject rather theoretically.

Orchestra, as you know, is a Greek word meaning originally the semicircular space of the ancient Greek theatres, where the chorus was standing or moving. In modern theatres orchestra is called the space assigned to the group of musicians accompanying the play. Usually this space is in front of the stage on a lower level than the ~~audience~~ space kept by the audience. Wagner, in his famous Festival Theatre in Bayreuth, put the orchestra under the stage. From this space where the performance of music was made came the use of the same term for the ensemble of the instruments and performers. Thus by "orchestra" we mean any combination of instruments, e.g. stringed orchestra.

The most interesting and indeed perfect combination is the so-called Symphony Orchestra or Philharmonic Orchestra e.g. L.S.O. or L.P.O. This is the type of orchestra we find in every musical centre and of which we have to speak. The Symphony Orchestra is formed with three main groups of instruments: a) the stringed instruments, b) the wind instruments, and c) the percussion. This classification is based on the distinction in the matter of tone-production. Thus, in the first group (the stringed instruments) the sound ^(the sense impression) is produced by setting in motion of stretched strings with a bow. In the second group, the wind instruments, the sound is caused by setting in vibration a column of air either in tubes of metal or in pipes of wood. And in the third by beating on elastic surfaces which are in contact with the air. *

The wind instruments are divided into two groups: the wood-wind and the brass.

* What is most important is that every group of the orchestra is harmonically self-contained; I mean that each group ^{separately} has a complete harmony of its own.

A few words for every group will be, I hope, of interest. To avoid any confusion I shall keep the same order set in the film. The first group with which Dr. Sargent begins is the wood-wind family. This group is formed of four different instruments: the flute, the oboe, the clarinet and the bassoon (fagotto). The difference between these instruments lies not only in the shape and the length

of the tube but also in the way of sound production. In the case ^{for instance} of the flute, which you know very well, the method of setting the air-column in vibration is to direct a stream of wind from the lips ~~across~~ across a circular hole bored in the pipe. In the orchestra use is ^{often} made ~~often~~ of a small flute ~~called~~ less than half the length of the ordinary flute, and called "piccolo", i.e. small (flute).

The second instrument of this group is the oboe with a very sweet and mellow sound. It is a small conically-bored pipe of ebony terminating at its lower end in "a bell". At its upper end a double-reed, made of two very fine and thin pieces of cane, is fitted. The player takes ^{puts} the double-reed between his lips and by the pressure of his lips and breath forces it to vibrate. This type of instrument is very ancient; on a stone of the 2nd century A.D. a Roman soldier is depicted playing ~~instrument~~ instrument of this sort. A popular instrument used by Turks (the ~~is~~ called "Zorne") is based on the same principle but its sound is rough and vulgar.

The clarinet is a well-known instrument; I may only add that it came in use about 1700, but we owe to Mozart's great love of this very rich instrument the first really artistic use of it, i.e. towards the end of the 18th cent. You have undoubtedly ^{noticed} that the clarinet has a single-reed which vibrates, rapidly opening and closing the aperture at the upper end. The bassoon is an unknown instrument in Cyprus. Its tube is much too long to be handled as a straight line and is bent back on itself with a curved

metal tube attached to the principal tube.

We come now to the principal instruments of the orchestra: the violin-family. They form a complete harmony, as every other group. The violins are divided in first and second violins; the third part is played by the violas, big violins played in the same way. The fourth of the family is the Violoncello with its round and beautiful sound. A larger instrument is added to the group, the double-bass which is the lowest and heaviest of the string-family. A large Symphony Orchestra may have 14 to 21 first violins, an equal number of second violins, 10-12 violas, 10 cellos and 8 double-bases, i.e. about 60 strings.

The early history of the Violin-family begins in Asia long ago before the Christian era; it is known that bowed instruments are mentioned in the Sanskrit classics, while such instruments were unknown to ^{ancient} Greeks and Romans. It is supposed that the first bowed instruments were introduced ^{in Europe} by the Arabs through Spain. During the Middle-Ages a whole family of bowed instruments the so-called Viols, occupied the same position as that held in our own day by the Violin-group. The Viols were bigger instruments and were played like the Violoncello held between the knees. Though they are superseded by the Violin they continue to be played sometimes even now by some devoted lovers of old music, such as the famous Bolmetch family in England. I had the opportunity to hear the whole family, including the mother two daughters, the son (Carl Bolmetch) and his wife, at their house near London.

One of their ^{viols} instruments is perhaps the oldest in existence, dated from 1470.

The first violin came in use during the 16th century, and they were called ^{in Italy} violini (small viols); they were perfected by the famous Cremona makers, Amati, Guarnerius and Stradivarius ~~at the end of the 17th and the first half of the 18th century~~, from the 16th to the 18th cent.

Besides these stringed instruments of the orchestra there are 1-2 (rarely 4) other stringed instruments, the harps. You will have an excellent opportunity to hear the harp in the film, and see how it is played. It is one of the oldest instruments, widely known by almost all ancient peoples. In the British Museum there is a harp found in Egypt and dated of the third millennium before Christ. Paintings also of it have been discovered in the necropolis of Thebes. But though an ^{old} ancient instrument it remained imperfect until the beginning of the 19th cent. The great Classical Masters, Haydn, Mozart and Beethoven, did not make use of it, while now it plays an important part in modern orchestras.

We come now to the brass instruments. The Brass group contains usually 4 Valve-Horns, called French Horns. The French horn consists, as you will see in the film, of a spirally-coiled tube of brass some 7-8 feet long. Other instruments of this group are the trumpets and the trombones, both well-known to you, and the tuba, a heavy and very low brass instrument you will not fail,

to recognize in the film. The Classical Masters made sparing use of the Brass, but certain Romantic and Modern composers, beginning with Berlioz and, especially, Wagner, made extensive use of them.

The last group of the Orchestra is the percussion-group. The instruments of this group may be divided into two: a) those producing musical sound, and b) those producing sound of indefinite pitch.

The principal instruments you will see and hear are the drums (Kettle-drums) & the Xylophone belonging to the first ~~group~~^{class}, and the side-drum, the tambourine, the triangle, the cymbals, the Gong and the castanets belonging to the second class. The Gong came from China, and is a broad circular plate of thick hammered metal. The Castanets, as you know, are small cymbals, and they were in great use in ancient Egypt. The Moors (Arabs) introduced them in Spain where they were made of chestnut, which in Spanish is called "castagna", hence castagnettes, castanets.

All these instruments, stringed, wind and percussion, together with some other rarely used, form the modern Symphony Orchestra. This type of orchestra is not very old. In the 17th cent. various instruments without any proportion to their number and tone-colour were used to accompany the first operas in Italy. The orchestra at that time was placed behind the stage and was invisible. By the end of the 17th cent. great progress had been made. Instruments had been improved, as also the technique of performance on them, and effective combinations had been worked out. But the real beginning of the

modern orchestra occurs, we may say, in 1800, the year of Beethoven's First Symphony. During the 19th & 20th centuries most of the instruments, particularly the wind ^{instruments}, were improved and some others were added ~~to~~, but the fundamental principle of combining the instruments according to their tone-quality, as set down by the Classical Masters, and especially by Beethoven, remained unchanged.

With the orchestra is associated the function of the Conductor. ~~From~~ From this point of view ^{the} orchestral (or choral) forces are indeed ^{not} an instrument, a huge, complicated and multiform instrument on which the conductor, like a virtuoso, plays, in the same way as a pianist plays on his own instrument. These orchestral (or choral) forces have to be controlled so that they will combine together not only accurately but with unity of spirit as one ^{single} man. Such control implies of course great technique and a powerful personality endowed with keen sense to penetrate ^{into} the works of art, and a real genius for the interpretation of a composer's mind and soul.

The art of conducting, as we understand it at the present time, is little more than a century old. Time-beating, however, has been practised by musicians for the purpose of keeping the performers together for several centuries. I think that the ~~most~~ ^{oldest} ancestor of the conductor is to be found in the ancient Greek theatre where a special time-beater was used to give the rhythm by beating the time ^{with} ~~with~~ his foot on which a small metal piece was attached.

Evidence that time-beating was practised during the middle-ages may be found in altar-pieces, miniatures and other representations of musical performances, in which a leader is depicted with a hand raised as if in the act of beating time. The time-beating could be expressed either by visual or audible beats. Visual time-beats were made with the hand, a stick, or a roll of paper, a cloth or a handkerchief tied to the end of a stick. Audible time-beats were made by stamping (striking) on the floor with the foot or with a stick. If I tell you that according to a story the famous operatic composer Lully (1633-1687) died after a wound on his foot inflicted with his "stick" when conducting (if you will realize how heavy sticks were used and what noisy blows (strokes) accompanied the musical performance. Jean-Jacques Rousseau in his "Dictionary of Music", published as late as 1767, just 3 years before Beethoven's birth, speaks about the "unbearable noise of the ^{conductors} stick which covers up and deadens the whole effect of the orchestra". During the 18th cent. the conductor played on the harpsichord or the organ, and conducted at the same time. This practice continued until the time of Beethoven, who as a child of twelve ~~was appointed~~ acted as assistant choirmaster and organist. By the end of the 18th cent. and the beginning of the 19th, i.e. when Beethoven was at his thirties the old method of conducting gave little by little way to ~~the~~ ^{our} modern system. We read in a contemporary description how Beethoven used to conduct: "at a pianissimo Beethoven would crouch down

so as to be hidden by his desk, and then as the crescendos grew would gradually rise, beating all the time, until at the fortissimos he would spring into the air as if wishing to float on the clouds.

Mendelssohn was one of the first to use a baton when conducting. The ~~reverse~~ baton was ⁱⁿ general ^{use} after the middle of the 19th century. Within one hundred years orchestral conducting has grown from what can have been little more than mechanical time-beating to a highly complex art which requires such musical and personal ~~abilities~~ qualities ~~that~~ as are only rarely found in the same person. ~~On the aesthetic side, the requirements are~~

~~the recurring up at~~ ^{ideal} performance. In addition to technical ability, experience and sound musicianship, a conductor is now expected to show a personality which will colour every work he touches.

He is no longer a simple time-beater, but a real artist playing in an orchestra. Many famous names of a great generation of conductors have won special place in the history of music as pioneers and interpreters of music.

You will allow me to mention some of them: ^{Mendelssohn,} Liszt and Bülow (Cosima's first husband) in the 19th cent., Weingartner, Nikisch, Toscanini and others in the 20th century. There are some conductors who do not use a baton, but ^{they} conduct with the hands only; this practice was introduced by the famous Russian conductor Safonof, who died in 1918.

An attempt has been ^{made} ~~done~~ by various orchestras to play without a conductor. The first ^{such} orchestra ~~which~~ was formed in 1922 in Moscow; the theory of a conductorless orchestra was based ^{rather} ~~on~~ political views ~~rather~~ than on practical or musical necessity.