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The Use of the Trombone in the Orchestra

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*Wind instruments
Trombone*

THE USE OF THE TROMBONE IN THE ORCHESTRA

By

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THE USE OF THE TROMBONE IN THE ORCHESTRA

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THE USE OF THE TROMBONE IN THE ORCHESTRA

The trombone, perhaps the earliest of the instruments in contemporary orchestral use to develop and retain a fundamental regularity of form, is based in principle upon the utilization of a telescopic slide in the production of chromatic tones.

The characteristics of the construction of a trombone are basically, and broadly, the same as for the modern trumpet: A mainly cylindrical body-tube, narrow in relation to its length; a bell section expanding in a gentle curve to a wide terminal flare; and a deep mouthpiece with a well-developed throat. The essential difference between the two instruments lies in a different arrangement of relative proportions in these three elements. The cylindrical diameter in the majority of trombones is usually, length for length greater than in the trumpet. The bell of the trombone takes up about one-third of the total, closed slide length of the instrument as opposed to one-fourth in the classic trumpet.¹ Finally, the trombone is possessed ordinarily of its most obvious characteristic, the telescopic slide, except in the case of the valve trombone.

¹Philip Bate, The Trumpet and Trombone, An Outline of their History, Development and Construction (London: Ernest Benn Ltd., 1966), pp. 46-47.

The body of the modern slide trombone consists of two straight cylindrical tubes, the mouthpipe and the middlepipe, and a bellpipe which may incorporate a small cylindrical length but usually includes the expanding part of the instrument only. These are parallel to each other and are connected by two roughly semicircular bows. In the earliest instruments, these bows were almost always of purely cylindrical bore owing to problems of manufacture; the limitation no longer exists and many makers prefer to use a tapered bell-bow so that the expansion of the bell actually begins somewhere in the bend; sometimes both bell and bow are produced in one piece. The greater part of the mouthpipe and the middlepipe form the inner of two pairs of closely fitting telescopic tubes, the outer members of which are connected by the second bow and which make up the slide. The slide is freely movable. The player has at his disposal the notes of a number of Harmonic Series proper to tubes of any length between the extremes given when the slide is closed or fully extended. In practice seven are required; hence, the seven slide "positions." Such construction is probably the nearest approach to theoretical perfection found in any orchestral instrument; its primary defect being the slight irregularity of bore between the two slide components. With modern thinwalled tubing, this irregularity is small and its musical effect negligible.²

²Ibid., pp. 47-48

It has been said that the trombone is the only wind instrument that can be played completely in tune all the time; the free slide gives the instrument a refinement of pitch which is found nowhere else in the orchestra except among the unfretted strings. There are, of course, mechanical drawbacks to the free slide. The tubes must fit very closely and slide effectively without appreciable air leakage. The problem of friction between the inner and outer slides has always been the greatest problem of trombone makers. Two solutions have been offered: The first calls for the fitting of short sleeves of very thin metal over the ends of the inner tubes; these sleeves are known as "stockings." Only the stockings make contact with the outer tube, thus greatly reducing the rubbing surfaces. In recent times, the stocking has been largely discarded due to advances in modern metallurgy which allow the instrument maker to use low-friction bronze alloys as well as with methods of surface plating which take advantage of the gliding properties of dissimilar metals. Only the natural inertia of the slide remains. Care must be taken to avoid denting the rather thin, delicate tubes of the trombone slide, since even the smallest dent can completely lock a slide.³ The use of lubricants on the inner slide surface is a common procedure; various types of slide lubricants are prepared commercially, although most trombonists favor a mixture of cold cream and water.

[#]Ibid., pp. 49-50.

The trombone is recorded pictorially as early as the lifetime of Matteo di Giovanni, who died in 1495, in a painting by Giovanni now owned by the National Gallery in London. There is considerable evidence of its existence as early as the fourteenth century, but the earliest surviving dated specimens range only to 1551.⁴

The trombone originated from the trumpet, as the name indicates; trombone, in Italian, is the augmentative form of tromba, and German posaune, the equivalent of Middle High German busune, is the augmentative form of busine. The English name, sackbut, is derived from a French word used in the fifteenth century: sacqueboute, "pull-push."⁵

The first recorded maker of the posaune was Hans Neuschel of Nurnberg. It is recorded that he made silver trombones for Pope Leo X. His sons, Hans the Younger and Jorg, made the second oldest posaune now known; it is, in most major respects save the less marked flare of the bell, essentially the same as its modern counterparts. The ivory mouthpiece of the instrument is possibly not contemporary.⁶

⁴Ibid., p. 130

⁵Curt Sachs, The History of Musical Instruments (W. W. Norton & Company, Inc., New York, 1940), p. 326.

⁶Bate, op. cit., p. 134.

The three major types of trombones are: (1) The tenor trombone, pitched in nine-foot B flat, which has remained the typical, standard slide trombone, usually made of brass, nickel, and chromium; (2) The alto trombone, a part now largely replaced in the orchestra by a second tenor trombone, pitched a perfect fourth above the tenor, its fundamental in closed position is E flat. Parts for the instrument are usually written in alto clef; probably one reason for the use of the alto clef in parts for first and second trombone in many orchestral works. This is a common practice among Russian composers. Occasionally, notes that are too high to be played on the tenor are given to the trumpet. (3) The bass trombone is pitched in F, a perfect fourth lower than the tenor. In England, the favored pitch is G, while in Germany in the nineteenth century bass trombones in E flat were widely used. Today, these instruments have been largely replaced by the tenor-bass trombone, a B flat instrument with a device known as an "F attachment," consisting of a loop of extra tubing within the upper U-bend of sufficient length to give the instrument a fundamental F when added to the main tubing. A rotary valve, operated by the left thumb, controls the addition of this extra tubing in the manner of a valve on the horn. When intended for use primarily as a bass trombone, this instrument is equipped with an enlarged bell, about $9\frac{1}{2}$ inches and the F tubing equipped with a slide which, when pulled out, lowers the F to E.⁷

⁷Walter Piston, Orchestration (New York: W. W. Norton & Company, 1955), pp. 267-71.

The trombone was widely used during the Renaissance; many of the major writers of the day wrote with a full awareness of the instrument and its place in contemporary art. Praetorius, Mersenne, and Speer all utilized the trombone in their compositions; Mersenne, writing about the instrument, mentions the seven slide positions. The Church, Court, and municipal archives of England and Scotland abound in records of the use of the trombone and records of its players, their fees, liveries, etc. Praetorius named the groups of trombones as follows: Alto, in F or possibly in E flat; Tenor, in B flat; Bass, in F and E flat; and Contrabass in BB flat. Praetorius tells us that in his time the Contrabass was uncommon and that two varieties were known; one a double-sized tenor sounding an octave lower; the other, not so large over all, achieved its low pitch by the combination of a proportionately larger bore with a crook inserted between the slide and the bellpipe. His illustrations show all four instruments very clearly.⁸

Shortly before 1700, German makers began to produce small trombones pitched an octave above the B flat tenor. Purcell's "March and Canzona" written for the funeral of Queen Mary in 1695 is the earliest-known English composition in which some such feeble instrument was called for. Purcell specified four "Flat Trumpets" for use in the work. Various controversies have evolved from speculation arising as to the nature of these "Flat Trumpets," some authorities asserting that the instruments described were indeed treble sackbuts, while others discard this theory in light of strong similarities between the described instruments and the later English Slide Trumpet.⁹

⁸Bate, op. cit., pp. 134-5.

⁹Ibid., pp. 137-8.

The relatively few examples of mid-sixteenth century music in existence in their original notation indicate that a great deal of flexibility of articulation was expected of the contemporary trombonist; rapid changes of position, however, belong to a much later period. Despite its secular associations, the sackbut was readily adopted by Church composers, due in large measure to its ability to blend with and support voices and its warm though somber tone. Giovanni Gabrielli, the famous organist at St. Mark's in Venice, could command up to six trombones according to printed part books published in 1597 and in 1616.¹⁰

Monteverde and Cesti are the most original users of the trombone in the seventeenth century; although the instrument's appearances in the Operas and Oratorios of the period are rare. Monteverde's huge orchestra assembled for the first performance of *Orfeo* at Mantua in 1607, listed four trombones, but this was a special occasion and hardly typical of the age. Between Monteverde and Bach the employment of trombones changed little. Bach's trombone writing is one of the characteristics that most clearly place him among the conservatives of the eighteenth century; with the exceptions of Cantatas 25, 118, and 135, his trombones do little more than reinforce the vocal parts. With Handel, the use of the trombone is more "orchestral" in nature, although still infrequent. Trombone parts, due perhaps to the difficulty encountered in finding competent players, were often placed in an

¹⁰Ibid., p.217.

appendix to the score and regarded as "ad lib;" Handel's Oratorio Samson, first produced in 1741, was revived in 1749; the original "Dead March" was replaced by that from Saul, transposed up a tone and re-scored without trombones. ¹¹

A considerable change in the manner of using trombones may be noted in the eighteenth century "transition" composers, notably Gluck. Although still only occasionally employed, the treatment is mainly harmonic with the parts placed close together and generally higher than is common today. Unison trombones also form a feature as some of Gluck's scores, evidence of a new and quieter style of playing. ¹²

In the Haydn-Mozart and early Beethoven period, little change in trombone usage occurred. The instrument appears frequently in the scores of Operas, Oratorios, and Masses, but remained largely excluded from the concert orchestra. However, Beethoven utilized the trombone with genius in many works, the trombones being structurally essential in a number of his compositions; outstanding examples are the Funeral Equale and the Miserere and Amplius for four male voices and four trombones published posthumously in 1827.¹³ The mature works of Schubert and Weber seem to best exemplify the progressive use of trombones, especially in their employment of pianissimo brass and the use of trombones to emphasize detached chords and build climaxes.¹³

¹¹Ibid., p. 218

¹²Ibid., p. 218

¹³Ibid., p. 219-20.

The activities of the Military Band reformers in the years around 1820 were largely responsible for the development of the trombone as a melodic voice possessed of power and brilliance. The change in the instrument's "personality" amounted to a near-revolution in its utilization. The works of Halévy, Meyerbeer, and especially Berlioz are perhaps as theatrical and colorful as the lighter pieces performed in the Opera houses of the period. Berlioz utilized the best of the traditional and innovative techniques in his use of the trombone. It was at this time that the French composers adopted the group of three tenor trombones which has remained fairly standard until recently. Only the Germans of this period adhered to a sober style, reflected in the next generation by the rather heavy writing of Brahms and his followers.¹⁴ The contrabass trombone, pitched in B flat an octave below the tenor, underwent a modest revival in the works of Wagner, especially in the Ring des Nibelungen; the instrument was never considered satisfactory due to the strenuous physical demands it makes upon the player.¹⁵

The trombone, established as a major orchestral wind instrument, has found widespread use in the Twentieth Century, notably by composers such as Bartok, Hindemith, and Stravinsky, who scored L'Histoire du soldat for the rather interesting combination of clarinet, bassoon, cornet, trombone, violin, double bass and percussion.¹⁶

¹⁵Piston, Op. cit., p. 280.

¹⁶Sachs, Op. cit., p. 445.