

History of Trombone and the Tubas

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The Trombone

The trombone's earliest ancestors were, like those of all brass instruments, animal horns, hollow sticks, or other items with which the player produced a sound by buzzing the lips. People later learned to fashion more sophisticated instruments out of wood and/or metal.

By the thirteenth century a long, metal straight trumpet called the buisine was common. In the fourteenth century a single-slide instrument, known in musicological circles as the slide trumpet, is believed to have been in use (though the earliest surviving examples of such an instrument are from several centuries later). This instrument changed pitches/harmonic series by moving the entire body of the instrument back and forth along a single tube into which the mouthpiece was inserted.

By the mid-fifteenth century a double-slide instrument, called trombone in Italy, posauene in Germany, and sackbut in England and France, had appeared. These instruments were functionally almost identical to modern trombones, except that the bore, bell, and mouthpiece sizes were considerably smaller. The term sackbut is now commonly used to refer to these smaller predecessors of the modern trombone. The sound of these instruments was much softer and mellower than that of modern instruments, well-suited to doubling voices.

By 1500, trombones were in use throughout Europe, being most commonly used for church and civic functions, and often doubling vocal parts. An entire family of trombones, soprano in Bb or A, alto in F, Eb, or D, tenor in Bb or A, bass in F or Eb, and contrabass in BBb, was developed, but only the alto, tenor, and bass were commonly used, frequently doubling their corresponding vocal parts. The soprano appeared only sporadically and never really caught on; in trombone ensembles this role was most often filled by the cornett. The contrabass also was rare, and likely little more than a novelty.

In the early 1600s trombone usage remained much the same as it was in the previous century, with voice doubling in church music being its most common role. Early dramatic music, including Claudio Monteverdi's (1567-1643) famous opera L'Orfeo, used trombones rather prominently as well, often to symbolize death, the underworld, and/or religious themes. As the century progressed, however, trombone usage became increasingly rare, until the instrument nearly disappeared completely from England, France, Italy, and parts of northern Germany. Only in Austria did the instrument continue to thrive, and composers there used trombones very prominently in early eighteenth-century chamber music. In such works the alto trombone was the preferred solo trombone, though there is some debate among musicologists whether the

“alto” trombone of that time was indeed a trombone in F, Eb, or D, or if it was really a Bb (tenor) trombone equipped with a smaller mouthpiece and used to play in the alto register.

Beginning in the mid-eighteenth century Christoph Willibald von Gluck (1714-1787), Wolfgang Amadeus Mozart (1756-1791), and others began to exploit the trombone’s dramatic associations in operas and sacred works, and composers slowly began to use the instrument in serenades, divertimenti, and other instrumental works. Trombones became a standard part of the symphony orchestra after the early nineteenth century thanks largely to Ludwig van Beethoven’s (1770-1827) use of trombones in his fifth, sixth, and ninth symphonies.

The eighteenth century also saw a significant change in trombone construction, with larger bell flares and bore sizes more similar to those of modern instruments being introduced. In the early nineteenth century the tenor replaced the alto as the most common solo instrument, and the newly-invented valve was applied to some trombones, producing instruments similar to the F-attachment instruments widely used today. The valve trombone (no slide) was also invented during this century and for a time more common than the slide trombone in some locales, but never gained a long-term foothold in any country or genre. In the twentieth century an enlarged Bb tenor trombone with a bass trombone mouthpiece and usually two rotor valves came to almost completely replace the large and unwieldy F, Eb, and G bass trombones.

Trombone soloists became especially popular in the early nineteenth century in Leipzig, Germany, and surrounding areas. Prominent players such as Friedrich August Belcke (1795-1874) and Carl Traugott Queisser (1800-1846) were featured in concerts along with the finest string and piano soloists of the day. Later in the nineteenth and early twentieth centuries American soloists associated with the bands of John Philip Sousa (1854-1932), Arthur Pryor (1840-1942), and others demonstrated an unprecedented level of technical facility on the trombone. Pryor himself was the most famous of these soloists.

In the twentieth century the trombone was more frequently used and used in more diverse roles than ever. Increasing amounts of solo and ensemble music were written for the instrument, and jazz opened up an entire new medium of performance. In the early twenty-first century fine trombonists were making a living as soloists, small and large ensemble performers, studio performers, recording artists, and teachers in the classical, jazz, and popular realms.

The Tuba

Tubas and their relatives were the latest instruments in the brass family to develop. Early technologies did not allow for a practical lower voice in the brass family, although there were several instruments that attempted to fill this role. Bass and (rarely) contrabass sackbuts/trombones existed, but the contrabass especially was quite rare and unwieldy, and the bass had neither the range nor the timbre to provide a solid foundation for the brass section in the way that the tuba later would.

The serpent, a low-pitched, relative of the cornett normally with six finger holes and/or keys, had been in use since the late sixteenth century. Although made of wood, this instrument had a cup-shaped mouthpiece, and thus the tone was produced using the same buzzing technique as on brass instruments. The serpent was quite effective in doubling voices in church services, but could not produce a substantial volume level. During the late eighteenth century metal serpents were made, with keys in addition to or replacing finger holes. Other models were made in the shape, more or less, of bassoons. These were somewhat louder than previous serpents and found some limited use in military bands, but the serpent was never truly adequate to provide a bass voice for the increasingly larger and louder brass sections of bands and orchestras.

During the late 1810s another keyed brass instrument, the ophicleide, was invented. Made of brass, this instrument very loosely resembles a metal bassoon, with a key system similar to that of the later saxophone. Most had anywhere from 9 to 12 keys. It was the preferred bass brass instrument of Hector Berlioz (1803-1869) for a time, and was used by Felix Mendelssohn (1809-1847), Richard Wagner (1813-1883), and others. As a keyed instrument, however, it lacked the capacity for projection enjoyed by the tuba, which these composers and their contemporaries quickly adopted after its invention.

The valve, invented by Heinrich Stölzel (1777-1844) and Friedrich Blühmel (1777-1845) in the mid-1810s, made the development of the tuba possible. Keyed instruments never produced sufficient volume to balance the band and orchestra, and making a functional bass brass instrument before the invention of the valve would have been difficult, if not impossible.

Prussian bandmaster Wilhelm Wieprecht (1802-1872) and instrument maker J.G. Moritz (1777-1840) are generally credited with the invention of the first bass tuba (in F), which was patented in 1835. It was fitted with five Berliner Pumpen, a type of piston valve of Wieprecht's invention. These valves were an improvement over earlier pistons, but were soon supplanted by piston valves designed by Etienne Périnet in 1838; this is the predominant piston valve design still in use today. Blühmel created the first rotary valve in the 1820's, and makers in Prague and Vienna quickly refined the design. Soon tubas (and all the other brasses) were available with piston or rotary valves, as is the case today.

A standard shape and valve arrangement for tubas did not develop initially, but eventually a design resembling that of the saxhorn family (named for its inventor, Adolphe Sax [1814-1894]) with three, four, five, or six valves became most common. Marching versions of the instrument such as the helicon and later sousaphone developed toward the end of the nineteenth century.

The invention of the tuba filled a definite void in band and orchestral instrumentation, and it should be no surprise that one or more of these instruments quickly became a standard part of these ensembles. Tubas and sousaphones played a vital role in early jazz, as well, since early recording technologies did not record string basses as easily as the louder and more direct sound of the tuba. As recording technology developed, the bass role in jazz ensembles was increasingly given to the string bass.

Today's tubas have anywhere from three to six valves, and use piston or rotary valves (or a combination of the two). The function of the first four valves has become standardized, but fifth and six valves, when employed, have different functions depending upon the particular instrument used. As a rule, tubas are available in the keys of BBb and CC (contrabass), and Eb and F (bass). The instrument used depends on the player's preference and the ensemble—bass tubas usually for small ensembles and most solo work, and contrabass tubas for large ensembles.

Tuba solos, except for novelty pieces such as Andrea Catozzi's *Beelzebub*, were rare for most of the twentieth century, but the composition of the one-movement *Concerto and Concerto Allegro* by Alexei Lebedev (1924- 1993) in 1947 and 1949, respectively, the *Concerto for Bass Tuba and Orchestra* by Ralph Vaughan Williams (1872-1958) in 1954, the *Sonata for Tuba and Piano* by Paul Hindemith (1895-1963) in 1955, and other works sparked a new (and continuing) interest in the tuba as a solo instrument.

Chamber ensembles of tuba and euphonium players are also now quite common, especially on American college and university campuses. These ensembles present challenging music to players whose parts in large ensembles tend to be rather boring, thus further developing their musicianship and at the same time increasing the visibility of the tuba family through performing opportunities of all types.

Euphonium & Baritone Horn

Like the tuba, to which they are closely related, the euphonium and baritone horn trace their lineage to the serpent and ophicleide (see the tuba reading for additional information), and were made possible by the invention of the valve in the mid-1810s. Wilhelm Wieprecht (1802-1872), one of the individuals credited with the invention of the tuba, developed instruments roughly analogous to the modern baritone horn and euphonium as early as 1828, though an inventor from Weimar named Ferdinand Sommer is generally credited with developing the immediate ancestor of the modern instruments in the early 1840s. Adolphe Sax (1814-1894) also played a pivotal role in the development of these instruments, as the modern baritone horn is essentially descended from Sax's baritone saxhorn, and the euphonium from his bass saxhorn. Following the invention of the compensating system by David Blaikley in the 1870s, a euphonium essentially the same as that preferred by modern professional players was introduced. (*The compensating system is a technology which corrects the inherent sharpness in certain valve combinations, and is used on practically all of the better modern euphoniums and on some tubas.)

The above information is somewhat simplified, and omits the several variations of these instruments which emerged during the nineteenth century. Perhaps the most important of these variations was the double-belled euphonium, an instrument which enabled the player to alternate between a large "euphonium" bell and a smaller "baritone horn" bell to create different tone colors. This instrument was preferred by prominent American euphoniumists during the

late nineteenth and early twentieth centuries, but was eventually supplanted by the British-style instruments beginning in the late 1940s; the British-style instruments are still preferred by practically all professional euphoniumists. Another of these variations was the “French C tuba,” a six-valve instrument pitched one whole-step higher than the modern euphonium, yet used as the lowest brass voice in French orchestras well into the twentieth century.

Baritone horns and euphoniums formed an integral part of the brass bands which emerged throughout Europe during the mid-nineteenth century. The euphonium especially became a frequently employed solo instrument in these ensembles, a situation which has continued into modern times. Although a few concert band composers have called for both the baritone horn and euphonium, usually only the latter instrument is employed in concert band scores (although with parts often confusingly marked “baritone”). As in the brass bands, concert bands have traditionally employed the euphonium as the preferred tenor soloist.

A few composers, including Gustav Holst (1874-1934) and Richard Strauss (1864-1949), have employed the euphonium (under the name “tenor tuba”) in orchestral works. A few players have used the euphonium instead of the tuba when playing ophicleide parts in early nineteenth-century works with success, but these parts are normally played on the tuba. The German tenorhorn, an instrument analogous to the baritone horn, is employed in works by Gustav Mahler (1860-1911) and Leoš Janáček (1854-1928). Nevertheless, neither the euphonium nor the baritone horn has been incorporated into the standard orchestral instrumentation.

As a solo instrument the euphonium has always enjoyed a sizable repertoire of showpieces for performance with concert band or brass band; many of the newer solo works for the instrument have come from composers associated with the British brass band tradition. Euphonium players have always borrowed solo repertoire from trombonists, cornetists, trumpeters, cellists, and bassoonists, often with considerable success. The baritone horn has little solo literature of its own, though a small number of British players are currently working to make a place for that instrument in a solo role.

Chamber ensembles of tuba and euphonium players are also now quite common, especially on American college and university campuses. These ensembles increase the visibility of the tuba and euphonium through performing opportunities of all types. A few individuals have experimented with using the baritone horn in these ensembles for certain works.

History of Jazz Trombone
Excerpted from David Wilken’s articles on Trombone.org

Although the trombone is less often heard as a solo instrument, many legendary performers have left distinctive marks on the history of jazz. Each of these trombonists is indebted to earlier trombonists and other musicians who influenced the styles of jazz trombone. This line of development can be traced from early Dixieland trombonists, such as Kid Ory and Miff Mole to

today's original sounding trombonists Ray Anderson and Craig Harris. Throughout the history and evolution of jazz, important trombonists influence the musicians who follow with developments in harmony, melody, rhythm, and technique.

In the early 1900s to the 1920s a style of music developed in New Orleans spread to other parts of the country, particularly Chicago. This new music, often labeled as Dixieland, was the first example of what is generally classified as "jazz." Dixieland jazz was performed by smaller groups, usually for dancing purposes. The band--usually a trombonist, cornetist, clarinetist, bass instrument (either a tuba or double bass), chordal instrument (either a banjo or piano), and a drummer--would advertise their dance by marching in parades or playing in a wagon pulled around the street of New Orleans. The trombonist, in order to have enough room to maneuver his slide, would sit at the back of the wagon, giving the name "tailgate trombone" to this style. Dixieland was primarily improvised music. The trombone would either outline the chords by playing something similar to a tuba or bass, or--more likely--play a countermelody to the cornet. The most striking feature of the countermelody was the glissandos and other raucous effects that could be produced with the slide trombone. While the trombonist was improvising a countermelody, the clarinetist would play an obligato line above the cornet melody. The rhythm section supported these three separate lines with a march-like beat. Trombone soloists in these early jazz bands used lots of glissandos and growls, with less subtlety than the cornet and clarinet solos.

Beginning in the early 1930s jazz reached its most popular era - the Swing Era. Swing differed from Dixieland in several ways. The most obvious difference is the number of musicians performing. While Dixieland bands were small combos consisting of about six to eight musicians, a swing era big band usually had four trumpets, three or four trombones, four or five saxophones, piano, bass, drums, and sometimes a guitar. As with Dixieland, dancing was the primary focus of the music. Another difference in the two styles lies with in the method of performance. In the Swing Era, the majority of the music was arranged previous to the performance, due to the larger nature of the band. A Dixieland ensemble would improvise much if not all of their performance.

Trombonists enjoyed a prominent role in the jazz ensemble of the swing era. Not only was the trombone often featured as a soloist, but many trombonists formed their own bands and built careers on not only their leadership but also their soloistic prowess.

In the early 1940's a new style of jazz began to develop. This style, which became known as Bebop, slowly broke away from Swing and began to emerge as a completely separate entity. Prior to Bebop, jazz styles were performed for dancing. With the emergence of Bebop, jazz was written and performed for its own sake.

Bebop differs from Swing in several respects. The most obvious difference is in the size of the group. Bebop ensembles were small combos, as opposed to big bands. Reasons for this include: economical concerns--it is cheaper to pay a smaller band, and population changes--with the army drafting so many men to fight in World War II it became difficult to fill a

big band with good players. In addition, many jazz musicians wanted to play with more freedom than a big band format would allow. The average Bebop group usually consisted of piano, bass, and drums for a rhythm section, and one or two horns such as a trumpet, saxophone, or trombone.

Tempos of Bebop tunes are either very fast--showing off the virtuosity of the Bebop improvisers, or very slow--allowing the soloists to play fast "double-time" passages. The melodic lines are fast and highly ornamented with "creation of interest by means of melodic and rhythmic discontinuity." (Bourgeois, 1986, p. 10) Bebop musicians often took the chord progressions from Swing tunes and composed new melodies, often embellishing the original changes. This practice not only makes the music more interesting, but also discourages the weaker musicians from sitting in.

The pioneers of the Bebop style were alto saxophonist Charlie Parker and trumpeter Dizzy Gillespie. Both Parker and Gillespie began their careers playing in Swing big bands before playing together in the 1940s in New York. Utilizing their technical command of their instruments, Parker and Gillespie influenced virtually every Bebop musician with their mastery of improvisation.

Because of the extremely fast lines found in Bebop, it seemed impossible to play in this style on the slide trombone. Some trombonists began to play the valve trombone in order to play the difficult lines. However, the most accomplished trombonists of Bebop learned to work with the slide and pushed forward the technical limits of the trombone. By the 1950's trombonists had once again secured their position as innovators of jazz, and continued to pioneer new trends in music.